

Validation documentation  
*APIs & excipients, liquid/semi-solid (with analysis  
certificate)*

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## Introduction

The unequivocal proof of the identity of pharmaceutical raw materials based on a monograph or traditional alternative methods is work-intensive, time-intensive and economically often no longer makes sense. Near-infrared spectroscopy (NIR) provides a new means here. It enables relatively easy, fast and nonetheless safe identity testing via the preparation and evaluation of spectra.

The analysis system *Apo-Ident* was developed specially for pharmacy use. Pharmacists have the duty to check the identity of all raw materials for extemporaneous products in their pharmacies. This normally takes place based on the monographs for the respective substances in the European Pharmacopoeia. But also NIR spectroscopy is described in the European Pharmacopoeia as an identification method which, as opposed to the methods incorporated in the respective monographs, is approved for testing [1] (quotation translated)

*with the prerequisite that the same results (“namely the determination of the identity” [2]), (quotation translated) are achieved as with the described methods and instruments.*

The *Apo-Ident* analysis system serves to identify raw materials for prescriptions in the defined manner according to *ApBetrO* [Pharmacies Rules and Regulations] §§ 6 and 11 at pharmacies (NIR spectroscopy as an alternative testing method). *Apo-Ident* consists of three components:

- An *NIR spectrometer*, which records the spectra of non-preprocessed raw materials in a measuring glass in diffuse reflection or transfection.
- The *QuickStep* spectroscopy software controls the instrument and records the spectra and user inputs via a pharmacy-specific software plug-in. It also generates the test protocol for documentation of the testing and storage of the printout to be signed in the pharmacy.
- The software module *IdentModule* incorporates *reference databases*. The spectra from the *QuickStep* software are presented to it for evaluation.

NIR spectroscopy is a very powerful analytical method. It is also able to establish the identity of several chemical compounds and mixes in as far as an appropriate database (technically correct: a [chemometric model](#)) was created. Identity testing with *Apo-Ident* is a very safe, very fast and easy to operate analytical method for testing a large number of raw materials.

## Context of this document

The suitability of the instrument, method and database is proven as follows:

- *NIR spectroscopy as a method for identity testing*: The *Ph. Eur.* [3] describes NIR spectroscopy in *Section 2.2.40* as an analytical method which is also suitable for the identification of raw materials. Therefore, validation of the method as such is not necessary.
- *Performance of the instrument*: The *Ph. Eur.* [3] furthermore describes the apparatus and the testing of its performance in *Section 2.2.40*. The document *Erfüllung von 2.2.40 Ph. Eur. durch Apo-Ident* [4] compares the implementation by *Apo-Ident* with this monograph in order to prove that *Apo-Ident* meets the specifications of the Pharmacopoeia. Each individual instrument delivered to a pharmacy is qualified in accordance with the tests described in “*Control of Instrument Performance*”. In this test, the unit consisting of analysis instrument hardware and the *QuickStep* spectroscopy software is assessed. The result is documented in a test protocol which is kept at the pharmacy.
- *Validation of the database* is documented separately for each substance class. The report at hand documents the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*.

The *Arbeitsgemeinschaft der Pharmazieräte Deutschlands (APD)* [Working Group of German Pharmacy Inspectors] has clarified the following in its resolution dated October 16, 2013 ([5], quotation translated):

*NIR is a testing method incorporated in the Pharmacopoeia. The testing quality depends on the quality of the database stored. The APD views the use of NIR instruments in case of ensured validation of the databases used in conjunction with it as one of several options for identity testing.*

The APD defined more precisely ([6], quotation translated) on October 1, 2014:

*The use of near-infrared is a recognised testing method according to Ph. Eur. 8. For the use of NIR instruments in pharmacies for testing the identity of raw materials, sufficient and verifiable validation of the instrument used is required. The quality of the database stored by the instrument manufacturer is decisive for quality. Batch-specific differences with the same original substances must be taken into account if present.*

So NIR is basically suitable. The validity of the reference database is proven with the existing validation documentation.

## Criteria for the inclusion of substances

This validation documentation describes the results of the validation of the reference database for the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Validation documentation is created for each published version of the reference database for all substance classes incorporated.

The reference database is incorporated in the software module *IdentModule*. During identification testing with *Apo-Ident*, spectra which are used for evaluation purposes are presented to it by the *QuickStep* software. In the same manner, the *IdentModule* is presented all validation spectra successively during the validation runs for evaluation purposes. The *IdentModule* responds respectively (without taking the initial assumption into account) with the identified substance or rejects it as unknown. The correctness of this response is checked for each possible initial assumption and counted.

The results are summarised for each substance and reproduced in this document. The core statement of this validation report is that the following criteria must be fulfilled for each database entry, so that *Apo-Ident* offers verification of identity by means of NIR for the relevant substance/substance group:

- The database is exclusively generated from spectra which have been recorded by *HiperScan GmbH* on traceable samples in pharmaceutical quality.
  - The samples are procured via typical pharmacy sources (*DAC III.2.: Bezugsquellennachweis für Rezepturbestandteile [reference source for prescription components]* [7]).
  - A valid manufacturer's certificate exists (content, purity and identity of the batch).
  - The identity was confirmed by a certified test laboratory or *HiperScan GmbH*.
- Each version of the reference database (every update) is validated in-full.
  - Calibration spectra (*Type A*), other spectra recorded under the control of *HiperScan GmbH* (*Type B*), and spectra from the field (*Type C*) are presented to the *IdentModule* for evaluation in three separately evaluated validation runs.
  - Here, no single *false positive* result may arise.
  - Here, the various substance classes are also tested for reciprocal rejection, where this is objectively justified (see *Summary* section).
- In the validation with spectra recorded under the control of *HiperScan GmbH*, spectra of at least one independent sample must be considered, i.e. spectra from a batch whose spectra have not been used for the generation of the database. In addition, the set of *Type A* and *Type B* spectra must originate from at least three different batches.
- Spectra of additional substances may be used for the generation of the database even though they will not be offered for identification by this database. The purpose is the reliable distinction from these substances.



- Any positive result of *Apo-Ident* confirms the identity of the substance/substance group and distinguishes it from all other substances of the database. In the case of substance groups, the result is ambiguous: Distinction from all substances not belonging to the group is proven. The substance is identified as a member of this group. However, within the substance group, it is not possible to reliably classify which substance has been tested.
- The criteria for clear identifiability are a [specificity](#) of 100 % ([true negative rate](#)) and a minimum distance in the distance matrix. See 2. d) under [Model creation procedure and validation runs](#).

## Validation concept

[Chemometrics](#) is a statistical technique for the extraction of relevant chemical information from spectra. In mathematics, this method is described as *multivariate data analysis*. Chemometrics proceeds here as follows:

1. Collection of spectra for the *calibration sample*. The results (identities) of the calibration sample must be known. The calibration samples must be representative for the samples which are to be evaluated later. Therefore, they must take the various possible (physical) compositions into account. (Therefore, sourcing calibration samples for NIR from the specialist trade is superior to the use of CRS reference substances.)
2. The first mathematical step is *calibration*. Here, the [chemometric model](#) is calculated from the *calibration sample spectra* ([reference spectra](#)) and limits as well as some parameters are stipulated. The chemometric model is used later to calculate the analysis result (*prediction*).
3. Collection of further spectra for the *validation sample* which should be independent of the *calibration sample*. The results (identities) of the *validation sample* must also be known. The textbook suggests a random sample with a normal scope of 25 % to 50 % of the *calibration sample* [8].
4. The second technical data step is *validation*. Here, the [chemometric model](#) created is evaluated based on the spectra of the *validation samples*. As validation parameters for the identification, the *Ph. Eur. Section 2.2.40* [3] specifies the [specificity](#) and [robustness](#).

The validation step according to the textbook has the target of estimating the performance capability of the model created based on a random sample. In order to achieve the best possible precision, attention is paid to the calibration sample. In the field of pharmaceuticals, the safety of the method has priority. In order to be able to [validate](#) the model within the regulatory scope, the validation step must include probative force. For this purpose, the validation sample must be *representative and complete* in order to enable the testing of all cases.

A *sufficient number of batches* must be secured for validation because validation finally proves whether the number of batches in calibration suffices.

Each substance is validated individually. The validation results are documented per substance in this document. Moreover, the documents show how many and which batches have been used for creating the model or model validation.

At least one certificate is taken in for each substance from an accredited test laboratory for the independent testing of identity of the sample. The identification number of the corresponding test certificate is listed in the report, enabling traceability of a substance tested according to the monographs in the Pharmacopoeia.

## Model creation procedure and validation runs

The safety of the [chemometric models](#) is guaranteed by several measures during model creation, of which the validation step is the final one. Normally, the procedure is as follows. It is in particular valid for the active pharmaceutical ingredients (APIs) *solid API excipients, liquid/semi-solid API excipients (with a test certificate), narcotics - solid medicinal substances and drugs*. If, for individual substance classes, variations are required, they are depicted in the section [Particularities of individual substance classes](#).

## 1. Collecting the reference spectra (calibration sample)

- a) Procurement of the samples from the same sources from which pharmacies source their raw material for compounding (Caelo, Fagron, Euro-OTC, ..., see also *DAC III.2. Bezugsquellen-nachweis für Rezepturbestandteile* [Sources of supply for compounding] [7]).
- b) Testing the suitability according to *ApBetrO* [Pharmacies Rules and Regulations] §§ 6, 11, that is to say the availability of a valid manufacturer certificates via identity, purity and contents of the batch.
- c) Recording standard 40 spectra of the sample in different positions, as a standard on four instruments. Here, handling and presentation of the samples as later in the pharmacy.
- d) Visual checking for anomalies in the spectra. In case of indications of measurement errors, measurement must be repeated. If a signature is missing in the spectrum, the substance may be excluded from the start as not promising (the spectra are nonetheless entered in the database validation as independent *Type B* spectra).
- e) Testing identity. For each substance, a certificate of correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the respective following substance page of this validation documentation the *Mahalanobis distance* to this reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance. Such samples underline the statistical spread of the original reference substance, but cannot add any new characteristics of the substance.

*HiperScan GmbH* cooperates with some suppliers as follows: the raw materials supplier takes a sufficiently large sample in his incoming goods area so that part of it can be used for recording the NIR spectra. The remainder of the sample goes to analytics for market approval. The manufacturer's batch certificate emerges from these identity, contents and purity tests, which consequently also prove the correct identity of the NIR reference sample. Therefore, the NIR spectra are suitable for structuring the database (*Type A*) and can also optionally be used for validation (*Type B*). The samples which this applies to are marked in the validation report with a footnote.

- f) If the identity of the new sample is proven, it is declared as a reference sample and the spectra are approved for structuring the database.

## 2. Generating the chemometric models (calibration)

- a) Determination of the transformation matrix from the reference spectra using variance maximisation [8, 9]. (All reference spectra are always included, even if only a few spectra are added for an update.) All reference spectra receive the same data pre-treatment, which is also later applied to all measurement spectra in the field (in the pharmacies).
- b) Checking that the number of principal components used is still sufficient.
- c) Calculating the limits for each substance from the spread of the reference spectra. The calculation regulation is identical for each substance in a substance class.
- d) Überprüfen der Abstände zwischen den Grenzen der trennbaren Substanzen: Die Distanzmatrix enthält die *Mahalanobis-Abstände* von jeder Substanz zu jeder anderen. Die Werte hin und zurück sind jeweils unterschiedlich, weil die Streuung der Ausgangssubstanz eingeht. Ist eine Distanz kleiner als der Mindestabstand, so gelten die Substanzen als nicht sicher trennbar. Der Mindestabstand ist auf 9 festgelegt. Der Entwickler des Modells darf einen größeren Mindestabstand festlegen (ein Wert für das gesamte *chemometrische Modell*), um die Trennschärfe zu erhöhen.
- e) Überprüfung des Modells anhand der Referenzspektren. Es sind keine *falsch-positiven* Ergebnisse erlaubt.

f) Wird eines der Kriterien verletzt (d) *Unterschnittener Mindestabstand zwischen zwei Substanzen* oder (e) *Eine Substanz wird als eine andere identifiziert*, entscheidet der Entwickler der Datenbank, welche der folgenden Optionen er anwendet:

- Er nimmt beide Substanzen aus der Datenbank. (Die Spektren bleiben in der Validierung und dürfen auch in den Aufbau eingehen. Sie werden aber nicht zur Prüfung angeboten.)
- Er bildet eine Substanzgruppe mehrerer nicht sicher trennbarer Substanzen. Dann ist das Ergebnis mehrdeutig: Das chemometrische Modell stellt fest, dass es sich bei der Probe um eine der Substanzen aus der Gruppe handelt und dass es sich um keine andere Substanz handelt. Es kann aber nicht sagen, um welche der Substanzen es sich handelt. Um die eindeutige Identität festzustellen, muss der Anwender eine geeignete ergänzende Prüfung durchführen.
- Er erstellt ein weiteres *chemometrisches Modell* mit geringerem Umfang, in das mindestens alle Substanzen der nicht sicher trennbaren Substanzgruppe eingehen (Zweite-Stufe-Modell). Zweite-Stufe-Modelle werden nur aufgerufen, wenn die erste Stufe festgestellt hat, dass es sich nur um eine der Substanzen handeln kann, die in den Aufbau der Zweiten Stufe eingegangen ist. Die Zweite-Stufe-Modelle sind im Anhang *Zusatz zu den Modellen der zweiten Stufe* dokumentiert.

### 3. Set of validation spectra (validation samples)

The following is provided for validation:

- a) *Type A*: The reference spectra = calibration spectra from which the database was generated. These also include spectra from substances which the *chemometric model* should not identify, but were also recorded during generation in order to increase selectivity. (As a result, the model “learns” to differentiate from other substances which are actually unknown to it.)
- b) *Type B*: Spectra recorded under the control of *HiperScan GmbH* and not used for the generation of the database. These also include reference spectra of other substance classes, and spectra that are not used as reference spectra. Samples are considered to be independent, if they originate from a batch, of which no spectra have been used for the generation of the database. (Up to *IdentModule 2018-01*, samples were still considered independent if the sampling was done independently, i.e. if they originate from another sales container.)
- c) *Type C*: Spectra from the field, which have not been recorded under the control of *HiperScan GmbH* and have not been used for the generation of the database. The spectra include not only substances of the substance class to be tested, but also substances from other classes.

All manufacturers’ batches from which spectra are used for the validation are listed by substance in this document: for substances included in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)* in the respective validation reports; otherwise in attachments *A*, *B* and *C*.

Furthermore remains valid: validation spectra may only be removed if a error in the spectrum can be proven. Here, the spectra are not deleted, but instead placed on a *blacklist* incorporating the reason, date and initials in the commentary.

The section *Particularities of individual substance classes* treats the other substance classes from which *Type B* and *Type C* spectra are cited for validation purposes.

### 4. Validation runs and approval

- a) Validation spectra are transferred holistically to the *IdentModule* for evaluation in the same way as the spectroscopy software *QuickStep* transfers measured spectra.
- b) Following the provision of each spectrum, the *IdentModule* responds as to whether it has recognised a substance and which substance was recognised.
- c) The correctness of this response is checked for each possible initial assumption (each measurable substance with the substance class) and counted according to *true negative*, *false negative*, *true positive* and *false positive*. These figures are provided for each substance and additionally in the section *Summary*, separated according to types *A*, *B* and *C*.

- d) No *false positive* results whatsoever are permissible.
- e) If the criterion is also met for all substance classes, the *IdentModule* is approved.

## Particularities of individual substance classes

Basically, *HiperScan GmbH* procures and tests the manufacturer's certificate for the batch, commissions external testing of the identity of the sample or carries it out independently and stores the certificates. As described, this process is established for the Pharmacopoeia substances, that is to say for substance classes **APIs & excipients, solid**, **APIs & excipients, liquid/semi-solid (with analysis certificate)**, **Narcotic substances, liquid/semi-solid** and **Drugs**. Therefore, *HiperScan GmbH* is able to furnish proof of the identity of the reference samples. In case of manufacturer-specific substance classes and others, individual steps are organised differently in-part:

The substance class **APIs & excipients, liquid/semi-solid (other)** (often described as cosmetics) incorporates substances for which no specification of the requirements of the pharmaceutical quality is determined, neither in a Pharmacopoeia monograph, a DAC/NRF monograph nor via a manufacturer's specification. Consequently, neither the identity nor contents can be tested independently. No certificates whatsoever exist for the reference samples. So here, merely the matching of the sample with former samples of this product is established and confusion with the other substances is ruled-out. (If the manufacturer of such a substance prepares a specification, determines testing methods and provides manufacturer's certificates in accordance with *ApBetrO* [Pharmacies Rules and Regulations] §§ 6, 11, *HiperScan GmbH* can assign the substance to the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)* again in the future).

Substance class **HCK – nutritional supplements (Hepart)** contains the HCK micro-nutrients from the Swiss company *Hepart AG*. *HiperScan GmbH* receives the reference samples directly from the manufacturer. For each reference sample, *HiperScan GmbH* also receives manufacturer's certificates and keeps these. New checking of the identity of the reference sample is not carried out by *HiperScan GmbH*. The identity of the reference samples is therefore documented by *Hepart AG*. The spectra of all batches provided by *Hepart AG* are recorded by *HiperScan GmbH* and entered in the database.

All the manufacturer's batches are used for the generation and validation of the substance class **HCK**. The expected variation is also represented in the generation and validation if there are less than three batches.

Also, for the substance class **PhytoComm** (TCM-Granulated herbal extracts of the manufacturer *PhytoComm*) spectra for all useable batches are recorded by *HiperScan GmbH* and entered in the database. The supplier organises the respective tests themselves and keeps the test certificates.

A new evaluation option was created for the class *PhytoComm* with the update 2016-01. As the risks are considerably fewer than those from chemical agents, the pharmacist can specify a reasonable criterion for the *specificity* in accordance with internal risk estimation. The database for this is created without taking safety distances into account and no criterion is determined in advance for the *specificity*. Instead, the *specificity* for testing the identity with this concrete substance is calculated in the validation for each substance and provided with the measurement result. The pharmacist then judges himself whether this safety is reasonable with regard to the risk of the substance.

Additionally, a statistical forecast is provided for the *specificity* which is determined according to the *Rule of Three* [10, 11]. For this forecast, it is assumed that there would have been three wrong results more and is provided with a lower limit for *specificity*. This value has a special meaning if a *specificity* of 100 % is achieved for a substance during validation. In this case, the lower limit allows conclusions regarding the scale of existing safety for which with an endless number of validation spectra a value of less than 100 % is to be assumed.

If, for example 14000 spectra not belonging to the substance are presented and no *false positive* classification is made, a hypothetical number of three *false positive* results is assumed (*Rule of Three* [10, 11]) and the *specificity* is defined with 100.0000 % (> 99.9786 %). Here, it applies that the higher the number of validation spectra which form the statistical basis, the better the *specificity* calculated via the lower *specificity* limit will be approximated.

The positive result of the identity test using *Apo-Ident* establishes that the sample spectrum is in accordance with a batch of the specified granulate from the supplier *PhytoComm*, whereby all useable batches from the supplier are known.

The *PhytoComm* class can only confirm the identity of batches that have been used for the generation of the database. As a consequence there cannot be any validation spectra of other batches. Therefore, the criterion reads that two samples (from different sales containers) from each batch must exist, one for the structure of the database (*Type A*) and one for the validation (*Type B*).

## Significance of testing with *Apo-Ident*

The analysis result is determined using sophisticated statistical methods according to state-of-the-art science and technology. Chemical and pharmaceutical knowledge is applied for the selection of the samples from which the calibration spectra and validation spectra are recorded. Otherwise it does not influence the further steps of model creation.

Verbally, the statement of the analysis result can be expressed as follows. Here “*the spectra match*” means that the criteria *Mahalanobis distance*, *outlier analysis* and *correlation* are met as shown in *Erfüllung von 2.2.40 Ph. Eur. durch Apo-Ident* [4]. “The spectra do not match”, on the other hand, means that at least the criterion *Mahalanobis distance* is not met.

The positive analysis result “*was identified as ...*” is very meaningful because both the quantity of substances to be taken into account and the number of underlying samples is very comprehensive.

1. The spectrum of the sample measured matches spectra of the defined substance.
2. The spectrum of the sample measured does not match any spectrum of any other substance in this substance class. Therefore, all other substances can be clearly ruled-out.
3. As the spectra from other substance classes were used for validation, it is proven that no spectrum of one of these other substances matches the defined substance. (All substance classes with which a spectrum comparison is possible and makes sense are used for validation. This is documented for each substance class in the section *Summary*.)
4. If the defined substance belongs to a *substance group* which in itself is not clearly separable with *Apo-Ident*, matching with the spectra of one or several substances in this group is confirmed. Which of these substances it actually is cannot be determined clearly. All other substances are excluded analogous to 2 and 3.

On the other hand, a negative analysis result “*was not identified as ...*” means:

1. The substance offered could not be recognised based on the spectrum of this sample.
2. The identity of this sample is not confirmed.
3. Testing must be repeated in accordance with the specifications of the Pharmacopoeia.

## Conclusion

NIR spectroscopy is a testing method incorporated in the Pharmacopoeia. In case of successful database validation, it is a possible method for identity testing [5]. *Apo-Ident* meets the criteria of the *European Pharmacopoeia* as a near-infrared spectrometer and proves the validity of the reference database with the existing validation documentation. This means that *Apo-Ident* can be used as an alternative testing method for testing raw materials at pharmacies.



## Explanation of terminology

The following section serves to explain or define specialist terminology which is required in order to understand this document. If necessary, definitions for the analysis system *Apo-Ident* are defined more precisely.

**The term database** is used in this document exactly as in the *Ph. Eur. Section 2.2.40* [3] synonymous with [chemometric model](#). In order to differentiate the databases which are relatively independent of each other, *HiperScan GmbH* frequently also uses the term [substance class](#) (primarily in the plural). On the other hand, the spectra used to structure the database are termed spectrum collection and not database.

**Substance classes** are units of the organisational structure of the *IdentModule*. The substance classes are substance [databases](#) which are also broadly independently subscribable. On the one hand, the liquid and semi-solid substances are separated from the solid powders because they are measured against different references and therefore the spectra cannot be compared. On the other hand, for example the Pharmacopoeia substances are kept separated from the manufacturer-specific database *PhytoComm* for TCM (traditional Chinese medicine) raw materials.

The individual substance classes need only be limited against each other in-part. Often, no risk of confusion exists because they can only be procured from different sources. On the other hand, in several cases we handle substances which need not be distinguished. For example, em Huang Qi granulate from the company *PhytoComm* neither needs to be delimited from *Huang Qi* granulate from the company *HerbaSinica* nor is matching required. Respectively one single [chemometric model](#) is behind a substance class. (Even if several reciprocally secured chemometric models would be permissible.) The terms *substance class*, *chemometric model* and *databases* are mostly used here as synonyms.

**A substance group** respectively summarises all the substances within a [substance class](#) which cannot safely be distinguished from one another based on their NIR spectra. However, all the other substances in the database can be excluded.

**The formation of subgroups** is mentioned in the *Ph. Eur. Section 2.2.40* [3]. In this manner, technical restrictions in case of extensive databases can be avoided and it is possible to prepare individual subgroups with different spectrum pre-treatment. Validation of the subgroups against each other is required. *HiperScan GmbH* has solved these technical restrictions and doesn't use any subgroups within a substance class any longer.

**Principal component analysis (PCA)** [8, 9] is a multivariate statistics process or multivariate data analysis. It serves to structure, simplify and illustrate comprehensive data records by describing a large number of statistical variables by describing a lower number of linear combinations (the *principal components*) which are as significant as possible. In the *Apo-Ident IdentModule*, *PCA* is used to evaluate the recorded spectrum data (corresponding with *Ph. Eur. 2.2.40* [3]).

**The term validation** is defined in both relevant contexts here with different (even if related) meanings.

Within the sense of the expert discipline of *chemometrics*, validation is a process step when creating a [chemometric model](#): after a transformation matrix, limits and various parameters have been calculated or determined from a set of reference spectra during the course of the calibration step [8, 9], the validation step determines the performance capability of the model (selectivity, precision, ...) based on the validation spectra. Normally, random sampling is planned here. In order for the validation to gain strength of proof, the validation spectrum set must be selected with an appropriately wide scope (*representative* and *complete*). The terms *validation run* and *validation step* always actually mean the process step in this sense.

In the regulatory sense (of pharmaceutical production), validation is the documented proof that a process or system meets the previously specified requirements reproducibly when applied practi-

cally. In this sense, the *Apo-Ident* databases only become validated databases with the validation documentation, which this document is part of.

The *European Pharmacopeia* uses the term validation in *Section 2.2.40* within the sense of the specialist discipline of *chemometrics* [3].

**The robustness** of a process is the property of only being influenced by environmental fluctuations (e.g. temperature or humidity) a little. A method is robust if the environmental conditions do not or hardly falsify the final result.

**The specificity** of a classification (of a [chemometric model](#)) is the [true negative rate](#).

**The recognition rate** (also sensitivity) is the [true positive rate](#). It defines in how many percent of cases a correctly set up substance is actually confirmed.

**The true negative rate** describes the share of spectra correctly classified as non-identity during validation. This is equivalent to correct classification. It means that a substance *A* within identity checking as substance *B* is judged as “*not identified*”. The *true negative rate* is equivalent to the conditional frequency

$$h(\text{rejected}|\text{genuinely no identity}) = \frac{r_n}{r_n + f_p}$$

with  $r_n$  as the total number of *true negative* classifications and  $f_p$  as the total number of *false positive* classifications. For successful validation of an *IdentModule*, all spectra presented belonging to this category must be classified as *not in accordance*.

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of this number. The weight of each spectrum of a substance/substance group *i* therefore results as

$$w_i = \frac{1}{n_i}$$

with  $n_i$  number of spectra in this substance/substance group. This weighting ensures that the overall result cannot be enhanced by adding especially large numbers of spectra from easily separable substances.

**The true positive rate** describes the share of spectra correctly classified as identity during validation. This is equivalent to correct classification. It means that a substance *A* within identity checking as substance *A* is judged as “*identified*”. The *true positive rate* is equivalent to the conditional frequency

$$h(\text{identified}|\text{genuine identity}) = \frac{r_p}{r_p + f_n}$$

with  $r_p$  as the total number of *true positive* classifications and  $f_n$  as the total number of *false negative* classifications. The *true positive rate* is a measure for the recognition rate of the validated *Apo-Ident IdentModule*.

In order to ensure that each substance is received with the same weight, the spectra are weighted as described for the [true negative rate](#).

**The true negative result** describes a spectrum correctly classified as non-identity during validation. It is equivalent to correct classification. It means that a substance *A* within identity checking as substance *B* is judged as “*not identified*”.

**The false positive result** describes a spectrum falsely classified as non-identity during validation. This is the most critical type of possible false classification. It means that a substance *A* within identity checking as substance *B* is judged as “*identified*”. For successful validation of an *IdentModule*, a number of false positive events of zero are demanded for all spectra entering the validation. The exception to this restriction is the class of TCM granulates from the company *PhytoComm* as described under [Particularities of individual substance classes](#).

**The true positive result** describes a spectrum correctly classified as identity during validation. It is equivalent to correct classification. It means that a substance *A* within identity checking as substance *A* is judged as “*identified*”.

**The false negative result** describes a spectrum falsely classified as non-identity during validation. It is equivalent to false classification. It means that a substance *A* within identity checking as substance *A* is judged as “*not identified*”.

**The ‘Rule of Three’** says that with a probability of 95 % the next random sample of the same size no more than three false results are to be expected if no false result existed in the existing random sample [10, 11].

The *specificity* and *recognition rate* are determined both globally and from the validation runs for all substances. The information is supplemented with the hypothetical value if there had been three false results more. The percent information is provided in parentheses with the “greater than” symbol ‘>’, e.g. *specificity* 100.000 % (>99.983 %) if 17 567 false spectra have been presented without one single *false positive* result. The larger the statistical basis, the lower the influence of the hypothetical false results.

**The Mahalanobis distance** is a distance measure between two points in *n*-dimensional vector space. Here, the respective direction component of the distance to *standard deviation* [12] of an *n*-dimensional distribution is standardised. In case of the *principal component analysis* [8, 9] this standardisation relates to the distribution of the respective calibration data set for a classification (substance/substance group) in the *principal component space* [8]. The *Mahalanobis distance* of a point (mapping of a spectrum)  $\vec{y}$  in the *n*-dimensional principal component space to the expected value of an *n*-dimensional distribution  $\mathbf{X}$  then results as

$$d(\mathbf{X}, \vec{y}) = \sqrt{(\bar{\mathbf{X}} - \vec{y})^T \mathbf{S}^{-1} (\bar{\mathbf{X}} - \vec{y})} \quad \text{with} \quad \mathbf{X} \in \mathbb{R}^{m \times n}, \vec{y} \in \mathbb{R}^m$$

[13]. Here, *m* is equivalent to the number of principal components used (dimension of the principal component space) and *n* the number of measurements existing in the calibration data set (spectra).  $\bar{\mathbf{X}}$  is the expected value of the resulting distribution for the calibration data set (the average value of *n* measurements received).  $\mathbf{S}^{-1}$  is the inverse covariance matrix [12] for distribution  $\mathbf{X}$ .

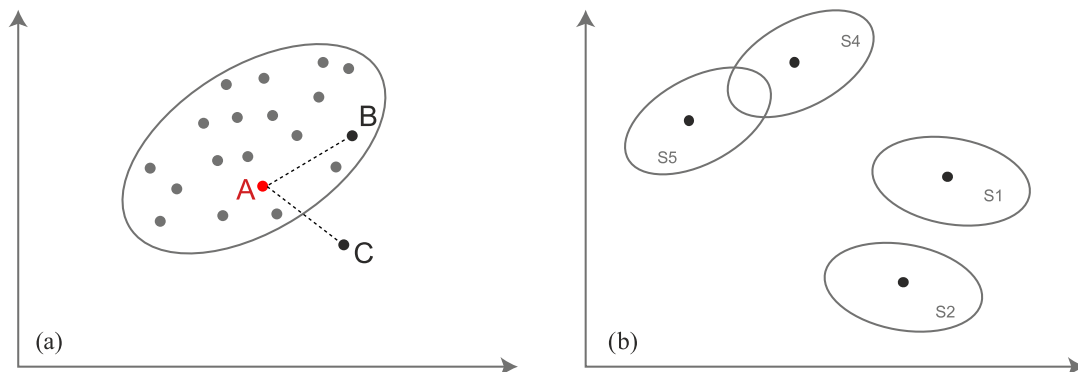


**Figure 1:** (a) The *Mahalanobis distance* from *A* to *B* is less than from *A* to *C*. However, the Euclidean distances are identical. (b) The *Mahalanobis distance* between the two measurement series *S4* and *S5* is smaller than between *S1* and *S2*. However, the Euclidean distances are identical.

The *Mahalanobis distance* offers advantages compared to the *Euclidean distance*: For the calculation of the distance it takes the statistical properties of a data point distribution (measurement series), i.e. average value, variance and covariance of the data points [14] into account. The *Mahalanobis distance* is applied while creating the reference database for evaluating the spectra from different samples of a substance.



**A chemometric model** is a classifier based on statistical methods [8, 9]. Through the respective algorithm used (e.g. *Principal Component Analysis*, *Cluster Analysis*), a maximum of chemical information is extracted from measurement data. Here, systematical or physical disturbances are eliminated using appropriate data pre-processing [15, 16].

At several places in this document, in order to simplify understanding, the term **database** is used instead of *chemometric model* – in the same manner as in the *Ph. Eur. Section 2.2.40* [3].

**A sample** (with its own sample ID) refers to substance in a sales container. Repeated sampling from the same sales container is listed under the same sample ID. (The suffix “SI” is not part of the sample ID.) Several samples may originate from the same batch. Samples are called “independent”, if they originate from a batch, of which no spectra have been used for the generation of the database. (Up to *IdentModule 2018-01*, samples from different sales packages were considered to be independent.) The information above the list of validation spectra now includes also the number of batches that deliver independent samples for the validation (for both *Type B* and *Type C*).

In case a supplier takes a sample for testing from its incoming goods and splits it to multiple laboratory containers, the substance in all laboratory containers will still be ascribed to the same sample. *HiperScan GmbH* only uses one of the subsamples.

**Reference samples** are used to structure the database. The *reference spectra* originate from these samples. In chemometric technical jargon you would normally say: For *calibration*, a **chemometric model** is generated from the *calibration spectra* recorded from the *calibration samples*, whose quality is subsequently assessed in **validation**.

*Reference samples* are procured via typical pharmacy sources. Their identity is tested. The *reference spectra* are recorded by *HiperScan GmbH*. The documentation also includes the manufacturer’s name and batch number.

*Reference samples* are clearly identified by a sample ID. Samples without sample ID may not be used as *reference samples*.



## Summary

A total of 396 793 spectra from 51 152 different batches for a total of 421 substances were used to validate the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*.

## Validation samples

The validation samples can be categorised as follows:

**Typ A** Calibration spectra. These are the spectra used to generate the chemometric model. They were recorded by *HiperScan GmbH*. Detailed information regarding the batches or samples can be found in the following validation reports under *calibration samples* and under *Type A*. Further information is listed in [Appendix A](#).

| Substance class                                                  | Substances | Batches | Spectra |
|------------------------------------------------------------------|------------|---------|---------|
| APIs & excipients, liquid/semi-solid (with analysis certificate) | 224        | 1307    | 63 939  |

From category *A* a total of 63 939 spectra from 1307 batches for a total of 224 substances were taken into account for validation.

**Typ B** Spectra from independent samples which are not included in database generation. These spectra were recorded by *HiperScan GmbH*. Detailed information regarding the batches or samples can be found in the following validation reports in the section *Type B* or in [Appendix B](#).

| Substance class                                                  | Substances | Batches | Spectra |
|------------------------------------------------------------------|------------|---------|---------|
| APIs & excipients, liquid/semi-solid (with analysis certificate) | 346        | 2017    | 91 491  |

From category *B* a total of 91 491 spectra from 2017 batches for a total of 346 substances were taken into account for validation.

**Typ C** Spectra from independent samples which are not included in database generation. *Apo-Ident* customers carried out the measurements. Detailed information regarding the batches or samples can be found in the following validation reports in the section *Type C* or in [Appendix C](#).

| Substance class                                                  | Substances | Batches | Spectra |
|------------------------------------------------------------------|------------|---------|---------|
| APIs & excipients, liquid/semi-solid (with analysis certificate) | 343        | 48 561  | 241 363 |

From category *C* a total of 241 363 spectra from 48 561 batches for a total of 343 substances were taken into account for validation.

## Validation results

The validation runs checked whether all substances/substance groups in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, the matching of all relevant spectra of various substances with the substances/substance groups in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)* was checked and the correctness of the results was evaluated. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 63 847        | 12             | 8 567 906     |
| Type B | 0              | 83 855        | 181            | 12 265 242    |
| Type C | 0              | 220 969       | 4603           | 32 345 841    |

All substances/substance groups in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)* can be clearly distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|       | Specificity                  | Recognition rate            |
|-------|------------------------------|-----------------------------|
| Typ A | 100.000 00 % (> 99.999 85 %) | 99.984 26 % (> 99.974 75 %) |
| Typ B | 100.000 00 % (> 99.999 75 %) | 98.979 14 % (> 98.959 81 %) |
| Typ C | 100.000 00 % (> 99.997 67 %) | 97.881 70 % (> 97.808 64 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group (s)-Lactic acid  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30021-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

(s)-Lactic acid; Acidum (s)-lacticum

### Special notes

When selecting the (s)-Lactic acid substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| (s)-Lactic acid           | 4      | 3      | 163    |

## Second-stage model

For differentiation of the substance/substance group (s)-Lactic acid the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group (s)-Lactic acid:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate        |
|----------|-----------------|----------|-----------|---------|--------------------|
| Caelo    | (s)-Lactic acid | 12142108 | 30734     | 39      | AR-14-FG-012230-01 |
| Caelo    | (s)-Lactic acid | 13317311 | 31436     | 60      | 20131011           |
| Caelo    | (s)-Lactic acid | 16144212 | 33271     | 40      | 20160527           |
| Caelo    | (s)-Lactic acid | 190447   | 34456     | 40      | 20190416*          |
| Caelo    | (s)-Lactic acid | 190447   | 34739     | 40      | 20190416*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 219 spectra of 5 reference samples from the substance/substance group (s)-Lactic acid. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 720 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group (s)-Lactic acid.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | (s)-Lactic acid | 90646219 | 30021     | 40      |
| Caelo    | (s)-Lactic acid | 172176   | 33694     | 40      |
| Caelo    | (s)-Lactic acid | 20000605 | 35019     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1430 spectra from 744 *Apo-Ident* customers from 168 batches from the substance/substance group (s)-Lactic acid.
- Among them are spectra of independent samples from 163 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance       | Batch               | Spectra |
|-----------------------|-----------------|---------------------|---------|
| A.H.D.                | (s)-Lactic acid | 15150402            | 1       |
| AHD                   | (s)-Lactic acid | 18034005            | 1       |
| AHD                   | (s)-Lactic acid | 190447005           | 3       |
| Euro OTC              | (s)-Lactic acid | 16144210            | 1       |
| AHD, 25.11.13         | (s)-Lactic acid | 1302011             | 1       |
| AHD; 20.7.15; 5.84EUR | (s)-Lactic acid | 15150402            | 1       |
| Alliance Healthcare   | (s)-Lactic acid | 19044701            | 1       |
| Anzag                 | (s)-Lactic acid | 16144210            | 1       |
| Audor Pharma          | (s)-Lactic acid | APDP-DNL/11/17/001D | 2       |
| Bombastus             | (s)-Lactic acid | 10323202            | 1       |
| Bombastus             | (s)-Lactic acid | 12142108            | 2       |
| Caeleo/ Krieger       | (s)-Lactic acid | 19044701            | 1       |
| Caelo                 | (s)-Lactic acid | 133173082x          | 1       |
| Caelo                 | (s)-Lactic acid | 11179207            | 2       |
| Caelo                 | (s)-Lactic acid | 11179209            | 1       |
| Caelo                 | (s)-Lactic acid | 1309211034          | 1       |
| Caelo                 | (s)-Lactic acid | 2101202             | 1       |
| Caelo                 | (s)-Lactic acid | 11179214            | 1       |
| Caelo                 | (s)-Lactic acid | 2710Q-01034         | 1       |
| Caelo                 | (s)-Lactic acid | 9321404             | 1       |
| Caelo                 | (s)-Lactic acid | 20221110-4          | 1       |
| Caelo                 | (s)-Lactic acid | 9321408             | 2       |
| Caelo                 | (s)-Lactic acid | 11179201            | 2       |
| Caelo                 | (s)-Lactic acid | 13020201            | 21      |
| Caelo                 | (s)-Lactic acid | 11111644            | 1       |
| Caelo                 | (s)-Lactic acid | A-310513-1          | 1       |
| Caelo                 | (s)-Lactic acid | A-220413-3          | 1       |
| Caelo                 | (s)-Lactic acid | 1302021             | 1       |
| Caelo                 | (s)-Lactic acid | 13020211            | 18      |
| Caelo                 | (s)-Lactic acid | 10323202            | 1       |
| Caelo                 | (s)-Lactic acid | 13020213            | 1       |
| Caelo                 | (s)-Lactic acid | 9321419             | 1       |
| Caelo                 | (s)-Lactic acid | 1062014C            | 1       |
| Caelo                 | (s)-Lactic acid | 5031301             | 1       |
| Caelo                 | (s)-Lactic acid | 81302029            | 1       |

*continued on the next page*

*continued from previous page*

| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | (s)-Lactic acid  | 13317308             | 9              |
| Caelo           | (s)-Lactic acid  | 13030201             | 1              |
| Caelo           | (s)-Lactic acid  | 2182                 | 1              |
| Caelo           | (s)-Lactic acid  | 14112107             | 13             |
| Caelo           | (s)-Lactic acid  | 133117308            | 1              |
| Caelo           | (s)-Lactic acid  | 14112017             | 1              |
| Caelo           | (s)-Lactic acid  | 14112112             | 7              |
| Caelo           | (s)-Lactic acid  | 14112115             | 13             |
| Caelo           | (s)-Lactic acid  | 12142162             | 1              |
| Caelo           | (s)-Lactic acid  | 17031502             | 1              |
| Caelo           | (s)-Lactic acid  | 14112119             | 20             |
| Caelo           | (s)-Lactic acid  | 14112116             | 4              |
| Caelo           | (s)-Lactic acid  | 15150402             | 20             |
| Caelo           | (s)-Lactic acid  | 15150413             | 8              |
| Caelo           | (s)-Lactic acid  | 15150421             | 21             |
| Caelo           | (s)-Lactic acid  | 15150418             | 4              |
| Caelo           | (s)-Lactic acid  | 133173               | 1              |
| Caelo           | (s)-Lactic acid  | 1530860102263531     | 1              |
| Caelo           | (s)-Lactic acid  | 15308609             | 1              |
| Caelo           | (s)-Lactic acid  | 15308615             | 1              |
| Caelo           | (s)-Lactic acid  | 16144201             | 28             |
| Caelo           | (s)-Lactic acid  | 2263531              | 2              |
| Caelo           | (s)-Lactic acid  | 62186516             | 1              |
| Caelo           | (s)-Lactic acid  | 16144214             | 7              |
| Caelo           | (s)-Lactic acid  | 16/44219             | 1              |
| Caelo           | (s)-Lactic acid  | 161442               | 1              |
| Caelo           | (s)-Lactic acid  | 16144216             | 28             |
| Caelo           | (s)-Lactic acid  | 128711-658           | 1              |
| Caelo           | (s)-Lactic acid  | 1644219              | 1              |
| Caelo           | (s)-Lactic acid  | 1644218              | 1              |
| Caelo           | (s)-Lactic acid  | 171217601            | 1              |
| Caelo           | (s)-Lactic acid  | 180344005            | 1              |
| Caelo           | (s)-Lactic acid  | 1904071              | 1              |
| Caelo           | (s)-Lactic acid  | 190447004            | 6              |
| Caelo           | (s)-Lactic acid  | 1900447002           | 1              |
| Caelo           | (s)-Lactic acid  | 20000605009          | 1              |
| Caelo           | (s)-Lactic acid  | 1618U-01034          | 1              |
| Caelo           | (s)-Lactic acid  | 5217M-01034          | 1              |
| Caelo           | (s)-Lactic acid  | 180340004            | 1              |
| Caelo           | (s)-Lactic acid  | 18064004             | 1              |
| Caelo           | (s)-Lactic acid  | 15308601             | 23             |
| Caelo           | (s)-Lactic acid  | 15150401             | 9              |
| Caelo           | (s)-Lactic acid  | 1510402              | 1              |
| Caelo           | (s)-Lactic acid  | 16144219             | 3              |
| Caelo           | (s)-Lactic acid  | 90646369             | 1              |
| Caelo           | (s)-Lactic acid  | 13317303             | 5              |
| Caelo           | (s)-Lactic acid  | 12142109             | 2              |
| Caelo           | (s)-Lactic acid  | 141121               | 1              |
| Caelo           | (s)-Lactic acid  | 19044701             | 60             |
| Caelo           | (s)-Lactic acid  | 16144212-20170704Ma1 | 1              |
| Caelo           | (s)-Lactic acid  | 1644201              | 1              |
| Caelo           | (s)-Lactic acid  | 15150405             | 2              |
| Caelo           | (s)-Lactic acid  | 15308602             | 3              |
| Caelo           | (s)-Lactic acid  | 1904470              | 1              |
| Caelo           | (s)-Lactic acid  | 13317313             | 6              |
| Caelo           | (s)-Lactic acid  | 18034013             | 60             |
| Caelo           | (s)-Lactic acid  | 13317393             | 1              |
| Caelo           | (s)-Lactic acid  | 161442216            | 1              |
| Caelo           | (s)-Lactic acid  | 180340055756         | 1              |
| Caelo           | (s)-Lactic acid  | 1510421              | 1              |

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| Supplier             | Substance       | Batch       | Spectra |
|----------------------|-----------------|-------------|---------|
| Caelo                | (s)-Lactic acid | 16144210    | 36      |
| Caelo                | (s)-Lactic acid | 15308608    | 36      |
| Caelo                | (s)-Lactic acid | 2014U-01034 | 1       |
| Caelo                | (s)-Lactic acid | 117I-01034  | 1       |
| Caelo                | (s)-Lactic acid | 5(17217601) | 1       |
| Caelo                | (s)-Lactic acid | 18034005    | 105     |
| Caelo                | (s)-Lactic acid | 2719I-01034 | 1       |
| Caelo                | (s)-Lactic acid | 130360      | 1       |
| Caelo                | (s)-Lactic acid | 15306613    | 1       |
| Caelo                | (s)-Lactic acid | 12142102    | 6       |
| Caelo                | (s)-Lactic acid | 913Q-01034  | 1       |
| Caelo                | (s)-Lactic acid | 13020208    | 7       |
| Caelo                | (s)-Lactic acid | 13317301    | 34      |
| Caelo                | (s)-Lactic acid | 16144218    | 48      |
| Caelo                | (s)-Lactic acid | 18034010    | 5       |
| Caelo                | (s)-Lactic acid | 12142101    | 10      |
| Caelo                | (s)-Lactic acid | 1644212     | 2       |
| Caelo                | (s)-Lactic acid | 18034006    | 7       |
| Caelo                | (s)-Lactic acid | 19044702    | 14      |
| Caelo                | (s)-Lactic acid | 17217601    | 61      |
| Caelo                | (s)-Lactic acid | 13020212    | 1       |
| Caelo                | (s)-Lactic acid | 190447002   | 66      |
| Caelo                | (s)-Lactic acid | 13317307    | 12      |
| Caelo                | (s)-Lactic acid | 16144206    | 3       |
| Caelo                | (s)-Lactic acid | 18034002    | 5       |
| Caelo                | (s)-Lactic acid | 180808187   | 1       |
| Caelo                | (s)-Lactic acid | 180345      | 1       |
| Caelo                | (s)-Lactic acid | 1900447005  | 1       |
| Caelo                | (s)-Lactic acid | 3435        | 1       |
| Caelo                | (s)-Lactic acid | 13020203    | 7       |
| Caelo                | (s)-Lactic acid | 13317315    | 4       |
| Caelo                | (s)-Lactic acid | 14112114    | 3       |
| Caelo                | (s)-Lactic acid | 17217811    | 1       |
| Caelo                | (s)-Lactic acid | 190447005   | 34      |
| Caelo                | (s)-Lactic acid | 20000605005 | 6       |
| Caelo                | (s)-Lactic acid | 408Q-01034  | 1       |
| Caelo                | (s)-Lactic acid | 13317304    | 2       |
| Caelo                | (s)-Lactic acid | 13317309    | 2       |
| Caelo                | (s)-Lactic acid | 15308613    | 22      |
| Caelo                | (s)-Lactic acid | 1813A-01034 | 1       |
| Caelo                | (s)-Lactic acid | 18034004    | 45      |
| Caelo                | (s)-Lactic acid | 1803404004  | 1       |
| Caelo                | (s)-Lactic acid | 180340005   | 1       |
| Caelo                | (s)-Lactic acid | 18034055    | 1       |
| Caelo                | (s)-Lactic acid | 109447002   | 1       |
| Caelo                | (s)-Lactic acid | 13020808    | 1       |
| Caelo                | (s)-Lactic acid | 15150410    | 21      |
| Caelo                | (s)-Lactic acid | 4116A-01034 | 1       |
| Caelo                | (s)-Lactic acid | 9064607     | 1       |
| Caelo                | (s)-Lactic acid | 11179217    | 6       |
| Caelo                | (s)-Lactic acid | 1612I-01034 | 1       |
| Caerlo/Noweda        | (s)-Lactic acid | 15150410    | 1       |
| Caesar & Lorenz GmbH | (s)-Lactic acid | 19044701    | 1       |
| Caesar & Loretz      | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH | (s)-Lactic acid | 13317308    | 1       |
| Caesar & Loretz GmbH | (s)-Lactic acid | 14112107    | 1       |
| Caesar & Loretz GmbH | (s)-Lactic acid | 18034005    | 10      |
| Caesar & Loretz GmbH | (s)-Lactic acid | 18034013    | 9       |
| Caesar & Loretz GmbH | (s)-Lactic acid | 18034010    | 1       |
| Caesar & Loretz GmbH | (s)-Lactic acid | 16144218    | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caesar & Loretz GmbH       | (s)-Lactic acid | 19044702    | 4       |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 19044701    | 12      |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 190447002   | 5       |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 190447005   | 15      |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 190447004   | 2       |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 20000605003 | 1       |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 20000605005 | 2       |
| Caesar & Loretz GmbH       | (s)-Lactic acid | 20000605009 | 2       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 15308608    | 2       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 18034005    | 1       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 190447005   | 1       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 19044701    | 1       |
| Caesar & Loretz GmbH / ... | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH Hi... | (s)-Lactic acid | 14112112    | 1       |
| Caesar & Loretz GmbH/ P... | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH/An... | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH/An... | (s)-Lactic acid | 190447004   | 1       |
| Caesar & Loretz GmbH/Je... | (s)-Lactic acid | 19044701    | 1       |
| Caesar & Loretz GmbH/Ph... | (s)-Lactic acid | 18034013    | 1       |
| Caesar & Loretz GmbH/Ph... | (s)-Lactic acid | 20000605005 | 1       |
| Caesar & Loretz GmbH/PP... | (s)-Lactic acid | 190447002   | 1       |
| Caesar & Loretz GmbH/Sa... | (s)-Lactic acid | AP210225-01 | 1       |
| Caesar & Loretz Hilden     | (s)-Lactic acid | 18034005    | 1       |
| Caesar & Loretz Hilden     | (s)-Lactic acid | 18034013    | 1       |
| Caesar und Loretz          | (s)-Lactic acid | 19044701    | 1       |
| Caesar&Lorenz / Gehe       | (s)-Lactic acid | 19044701    | 1       |
| Caesar&Loretz GmbH         | (s)-Lactic acid | 15308601    | 1       |
| Caesar&Loretz GmbH,22.0... | (s)-Lactic acid | 16144212    | 1       |
| Caesar&Loretz GmbH/ San... | (s)-Lactic acid | 16144218    | 1       |
| Caesar&Loretz GmbH/Anzag   | (s)-Lactic acid | 13020211    | 1       |
| Caesar&lorenz,AHC          | (s)-Lactic acid | 13317309    | 1       |
| Caesar&Loretz/Noweda       | (s)-Lactic acid | 15150402    | 1       |
| Caesar/Lorenz              | (s)-Lactic acid | 13020201    | 1       |
| Caolo- Noweda              | (s)-Lactic acid | 13020211    | 1       |
| Cealo/Kehr                 | (s)-Lactic acid | 13317312    | 1       |
| Cealo/Sanacorp             | (s)-Lactic acid | 18034005    | 1       |
| Celo/Kehr/06.04.2020       | (s)-Lactic acid | 190447002   | 1       |
| Euro OTC                   | (s)-Lactic acid | 18034013    | 1       |
| Euro OTC                   | (s)-Lactic acid | 1503086-03  | 1       |
| Euro OTC                   | (s)-Lactic acid | 14112112    | 1       |
| Euro OTC                   | (s)-Lactic acid | 18034005    | 1       |
| Euro OTC                   | (s)-Lactic acid | 15150410    | 1       |
| Fagron                     | (s)-Lactic acid | 14112112    | 2       |
| Fagron                     | (s)-Lactic acid | 16144216    | 1       |
| Fagron                     | (s)-Lactic acid | 18034005    | 1       |
| Fiebig                     | (s)-Lactic acid | 18034004    | 1       |
| Fiebig                     | (s)-Lactic acid | 18034005    | 1       |
| Fiebig                     | (s)-Lactic acid | 18034013    | 1       |
| Fischar/Phönix             | (s)-Lactic acid | 18034013    | 1       |
| Gatt-Koller                | (s)-Lactic acid | 1802081     | 1       |
| Gehe                       | (s)-Lactic acid | 11179217    | 1       |
| Gehe                       | (s)-Lactic acid | 13020208    | 1       |
| Gehe                       | (s)-Lactic acid | 14112119    | 3       |
| Gehe                       | (s)-Lactic acid | 15150402    | 2       |
| Gehe                       | (s)-Lactic acid | 16144201    | 2       |
| Gehe                       | (s)-Lactic acid | 17217601    | 1       |
| Gehe                       | (s)-Lactic acid | 18034005    | 2       |
| Gehe                       | (s)-Lactic acid | 19044702    | 2       |
| GEHE                       | (s)-Lactic acid | 21021180/2  | 1       |

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| Supplier              | Substance       | Batch        | Spectra |
|-----------------------|-----------------|--------------|---------|
| GEHE                  | (s)-Lactic acid | 16144201     | 1       |
| GEHE                  | (s)-Lactic acid | 17217601     | 1       |
| GEHE                  | (s)-Lactic acid | 18034004     | 1       |
| GEHE                  | (s)-Lactic acid | 18034005     | 1       |
| GEHE                  | (s)-Lactic acid | 19044701     | 1       |
| Gehe amax             | (s)-Lactic acid | 16144212     | 1       |
| Gehe amax             | (s)-Lactic acid | 190447005    | 1       |
| Caelo                 | (s)-Lactic acid | 16141212     | 1       |
| Caelo                 | (s)-Lactic acid | 16141218     | 1       |
| Gumo                  | (s)-Lactic acid | 18034005     | 1       |
| Gutenberg-Apotheke    | (s)-Lactic acid | 13317303     | 1       |
| Henry Lamotte / Gehe  | (s)-Lactic acid | 108034005    | 1       |
| Henry Lamotte/Phoenix | (s)-Lactic acid | 16144218     | 1       |
| Kehr                  | (s)-Lactic acid | 17217601     | 1       |
| Kehr                  | (s)-Lactic acid | 190447002    | 1       |
| Kögl                  | (s)-Lactic acid | 261708164816 | 1       |
| Kögl                  | (s)-Lactic acid | 261708161217 | 1       |
| Kögl                  | (s)-Lactic acid | 1700073      | 2       |
| L12                   | (s)-Lactic acid | 16144201     | 1       |
| Lamotte               | (s)-Lactic acid | 19044701     | 1       |
| Lamotte/Ebert         | (s)-Lactic acid | 16144212     | 1       |
| Noweda                | (s)-Lactic acid | 81302139     | 1       |
| Noweda                | (s)-Lactic acid | 13020208     | 1       |
| Noweda                | (s)-Lactic acid | 15150410     | 2       |
| Noweda                | (s)-Lactic acid | 16144212     | 1       |
| Noweda                | (s)-Lactic acid | 16144218     | 1       |
| Noweda                | (s)-Lactic acid | 18034004     | 1       |
| Noweda                | (s)-Lactic acid | 18034010     | 1       |
| Noweda                | (s)-Lactic acid | 190447002    | 1       |
| Caelo                 | (s)-Lactic acid | 12142112     | 11      |
| Noweda 18.05.2015     | (s)-Lactic acid | 141121119    | 1       |
| Caelo                 | (s)-Lactic acid | 12142104     | 2       |
| Caelo                 | (s)-Lactic acid | 1412112      | 1       |
| Caelo                 | (s)-Lactic acid | 14112106     | 3       |
| Phoenix               | (s)-Lactic acid | 15308613     | 1       |
| Phoenix               | (s)-Lactic acid | 15308608     | 1       |
| Phoenix               | (s)-Lactic acid | 3062         | 1       |
| Phoenix               | (s)-Lactic acid | 18034004     | 1       |
| Phoenix               | (s)-Lactic acid | 18034013     | 1       |
| Phoenix               | (s)-Lactic acid | 3413         | 1       |
| Phoenix               | (s)-Lactic acid | 191260611    | 1       |
| Phoenix 26.01.2019    | (s)-Lactic acid | 18034010     | 1       |
| Phoenix Goettin       | (s)-Lactic acid | 14112115     | 1       |
| Phönix                | (s)-Lactic acid | 13020211     | 1       |
| Phönix                | (s)-Lactic acid | 16144210     | 1       |
| Phönix                | (s)-Lactic acid | 16144216     | 1       |
| Phönix                | (s)-Lactic acid | 16144219     | 1       |
| Phönix                | (s)-Lactic acid | 19044702     | 1       |
| Phönix                | (s)-Lactic acid | 20000605005  | 1       |
| Phönix                | (s)-Lactic acid | 20000605009  | 2       |
| Phönix 26.07.2019     | (s)-Lactic acid | 19044702     | 2       |
| Phönix, 21.03.2013    | (s)-Lactic acid | 13020201     | 1       |
| Purren Apotheke       | (s)-Lactic acid | 12069        | 1       |
| Rondell Apotheke      | (s)-Lactic acid | 15150402     | 1       |
| Rondell Apotheke      | (s)-Lactic acid | 15308613     | 1       |
| Sanacorp              | (s)-Lactic acid | 13020201     | 1       |
| Sanacorp              | (s)-Lactic acid | 13317307     | 1       |
| Sanacorp              | (s)-Lactic acid | 13317311     | 1       |
| Sanacorp              | (s)-Lactic acid | 16144201     | 1       |
| Sanacorp              | (s)-Lactic acid | 16144212     | 1       |

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| Supplier                   | Substance       | Batch     | Spectra |
|----------------------------|-----------------|-----------|---------|
| Sanacorp                   | (s)-Lactic acid | 16144218  | 1       |
| Sanacorp                   | (s)-Lactic acid | 17217601  | 1       |
| Sanacorp                   | (s)-Lactic acid | 18034005  | 2       |
| Sanacorp                   | (s)-Lactic acid | 19044701  | 2       |
| Sanacorp                   | (s)-Lactic acid | 190447005 | 3       |
| Caelo                      | (s)-Lactic acid | 10/AKD1   | 1       |
| Caelo                      | (s)-Lactic acid | 15306608  | 1       |
| Caelo                      | (s)-Lactic acid | AP20      | 1       |
| Spangro 7.11.2018          | (s)-Lactic acid | 18034006  | 1       |
| Taoasis                    | (s)-Lactic acid | 17217601  | 1       |
| Unisan                     | (s)-Lactic acid | 13020208  | 2       |
| WEPA Apothekenbedarf Gm... | (s)-Lactic acid | L0TAP0074 | 1       |
| Caelo                      | (s)-Lactic acid | 13317311  | 19      |
| Caelo                      | (s)-Lactic acid | 16144212  | 70      |
| Caelo                      | (s)-Lactic acid | 12142108  | 5       |
| Caelo                      | (s)-Lactic acid |           | 2       |
| Caelo                      | (s)-Lactic acid | 71449138  | 2       |

- 239 933 spectra from 1121 *Apo-Ident* customers from a total of 46 840 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *(s)-Lactic acid* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *(s)-Lactic acid* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 219           | 0              | 63 720        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 1410          | 20             | 239 933       |

The substance/substance group *(s)-Lactic acid* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2603 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 98.6014 % (> 98.3916 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group (s)-*Lactic acid* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance | Distance in<br>main model | Distance in<br>second-stage model |
|-----------|---------------------------|-----------------------------------|
| Pine tar  | 110.95                    | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group (s)-*Lactic acid* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30734     | 30734                  | 0.00                            | 164.47                             |
| 31436     | 34456                  | 0.44                            | 159.90                             |
| 33271     | 30734                  | 4.91                            | 163.53                             |
| 34456     | 34456                  | 0.00                            | 160.22                             |
| 34739     | 34739                  | 0.00                            | 160.62                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **1,3-butanediol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30851-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

1,3-butanediol; 1,3-Butandiolium

### Special notes

When selecting the *1,3-butanediol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| 1,3-butanediol            | 2      | 2      | 11     |

## Second-stage model

For differentiation of the substance/substance group *1,3-butanediol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *1,3-butanediol*:

| Supplier | Substance      | Batch            | Sample ID | Spectra | Certificate |
|----------|----------------|------------------|-----------|---------|-------------|
| Fagron   | 1,3-butanediol | 12J02-N07        | 30851     | 40      | 1402682     |
| Fagron   | 1,3-butanediol | 14G16-B01-296698 | 31594     | 60      | 20140804    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 100 spectra of 2 reference samples from the substance/substance group *1,3-butanediol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 839 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *1,3-butanediol*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch            | Sample ID | Spectra |
|----------|----------------|------------------|-----------|---------|
| Fagron   | 1,3-butanediol | 15E15-B02-332109 | 33788     | 40      |
| Fagron   | 1,3-butanediol | 17E22-B02-343289 | 34480     | 40      |



- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 12 spectra from 8 *Apo-Ident* customers from 11 batches from the substance/substance group *1,3-butanediol*.
- Among them are spectra of independent samples from 11 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance      | Batch            | Spectra |
|----------|----------------|------------------|---------|
| Caelo    | 1,3-butanediol | 13L19-B03-291208 | 1       |
| Fagron   | 1,3-butanediol | 15E15-B02        | 1       |
| Fagron   | 1,3-butanediol | 14G16-B01-301882 | 1       |
| Fagron   | 1,3-butanediol | 17E22-B02-343289 | 1       |
| Fagron   | 1,3-butanediol | 17E22-B02-35823  | 1       |
| Fagron   | 1,3-butanediol | B02-3655803      | 1       |
| Fagron   | 1,3-butanediol | 15E15-B02-325757 | 1       |
| Fagron   | 1,3-butanediol | 13A17-N03        | 1       |
| Fagron   | 1,3-butanediol | 17E22-B02        | 1       |
| Fagron   | 1,3-butanediol | 15E15-B02-332109 | 1       |
| Fagron   | 1,3-butanediol | S6526964         | 1       |
| PHÖNIX   | 1,3-butanediol | 15E15-B02        | 1       |

- 241 351 spectra from 1121 *Apo-Ident* customers from a total of 46 995 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *1,3-butanediol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *1,3-butanediol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 100           | 0              | 63 839        |
| <b>Type B</b> | 0              | 74            | 6              | 91 411        |
| <b>Type C</b> | 0              | 12            | 0              | 241 351       |

The substance/substance group *1,3-butanediol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9800 %) | 100.0000 % (> 94.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 92.5000 % (> 88.7500 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6856 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *1,3-butanediol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in<br>main model | Distance in<br>second-stage model |
|------------------------------|---------------------------|-----------------------------------|
| Dexpanthenol                 | 31.27                     | —                                 |
| Dexpanthenol concentrate 50% | 84.46                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *1,3-butanediol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30851     | 30851                  | 0.00                            | 50.34                              |
| 31594     | 30851                  | 6.42                            | 51.65                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **2-ethylhexyl laurate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30849-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

2-ethylhexyl laurate; 2-Ethylhexylis lauras

### Special notes

When selecting the *2-ethylhexyl laurate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| 2-ethylhexyl laurate      | 5      | 2      | 108    |

## Second-stage model

For differentiation of the substance/substance group *2-ethylhexyl laurate* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *2-ethylhexyl laurate*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | 2-ethylhexyl lau... | 14129303 | 31373     | 40      | 20140429    |
| Caelo    | 2-ethylhexyl lau... | 14129304 | 31507     | 60      | 20140429    |
| Caelo    | 2-ethylhexyl lau... | 153825   | 31878     | 60      | 20151113*   |
| Caelo    | 2-ethylhexyl lau... | 163157   | 33086     | 40      | 20161124*   |
| Caelo    | 2-ethylhexyl lau... | 163482   | 33087     | 40      | 20170106*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 240 spectra of 5 reference samples from the substance/substance group *2-ethylhexyl laurate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 699 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *2-ethylhexyl laurate*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance            | Batch    | Sample ID | Spectra |
|----------|----------------------|----------|-----------|---------|
| Caelo    | 2-ethylhexyl laurate | 17065201 | 33786     | 40      |
| Caelo    | 2-ethylhexyl laurate | 180194   | 33885     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 681 spectra from 352 *Apo-Ident* customers from 110 batches from the substance/substance group *2-ethylhexyl laurate*.
- Among them are spectra of independent samples from 108 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance            | Batch                | Spectra |
|----------------------------|----------------------|----------------------|---------|
| Caelo                      | 2-ethylhexyl laurate | 191251001            | 1       |
| Caelo                      | 2-ethylhexyl laurate | 779002               | 1       |
| AHD                        | 2-ethylhexyl laurate | 13010719             | 1       |
| AHD / Pharmachem Pöfneck   | 2-ethylhexyl laurate | 50414                | 2       |
| AHD/ Pharmachem            | 2-ethylhexyl laurate | 10515                | 8       |
| Caelo                      | 2-ethylhexyl laurate | 1482802              | 1       |
| AHD/Pharmachem             | 2-ethylhexyl laurate | 10616                | 5       |
| Allianc. Health. / Apomix  | 2-ethylhexyl laurate | 148-8015010319       | 1       |
| Allianc. Health. / Phar... | 2-ethylhexyl laurate | 10515                | 1       |
| Allianz                    | 2-ethylhexyl laurate | 18121804             | 1       |
| Allinace                   | 2-ethylhexyl laurate | 17065201             | 1       |
| apomix                     | 2-ethylhexyl laurate | 8325111111           | 1       |
| apomix                     | 2-ethylhexyl laurate | 8014260413           | 2       |
| apomix                     | 2-ethylhexyl laurate | 8015050414           | 2       |
| apomix                     | 2-ethylhexyl laurate | 148-8014010815       | 1       |
| apomix                     | 2-ethylhexyl laurate | 148-8013010616       | 4       |
| apomix                     | 2-ethylhexyl laurate | 1488013010616        | 1       |
| apomix                     | 2-ethylhexyl laurate | 2140817              | 1       |
| apomix                     | 2-ethylhexyl laurate | 148-8014010517       | 3       |
| apomix                     | 2-ethylhexyl laurate | 16348202             | 1       |
| apomix                     | 2-ethylhexyl laurate | 148-8013010218       | 6       |
| apomix                     | 2-ethylhexyl laurate | 1488014010618        | 1       |
| apomix                     | 2-ethylhexyl laurate | 148-8014010618       | 1       |
| apomix                     | 2-ethylhexyl laurate | 148-8015010319       | 4       |
| apomix                     | 2-ethylhexyl laurate | 148-8013010719       | 2       |
| Apomix                     | 2-ethylhexyl laurate | 8014210112           | 1       |
| Apomix                     | 2-ethylhexyl laurate | 8015050414           | 1       |
| Apomix                     | 2-ethylhexyl laurate | 8015010115           | 5       |
| Apomix                     | 2-ethylhexyl laurate | 8015010515           | 1       |
| Apomix                     | 2-ethylhexyl laurate | 148-80130106ZA182/16 | 1       |
| Apomix                     | 2-ethylhexyl laurate | ZA182/16             | 1       |
| Apomix                     | 2-ethylhexyl laurate | 148-8013010616       | 10      |
| Apomix                     | 2-ethylhexyl laurate | 148-8013011116       | 7       |
| Apomix                     | 2-ethylhexyl laurate | 148-8014010517       | 3       |
| Apomix                     | 2-ethylhexyl laurate | 148-8013010218       | 7       |
| Apomix                     | 2-ethylhexyl laurate | 148-8014010618       | 3       |

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| Supplier             | Substance            | Batch                  | Spectra |
|----------------------|----------------------|------------------------|---------|
| Apomix               | 2-ethylhexyl laurate | 148-80140618           | 1       |
| Apomix               | 2-ethylhexyl laurate | ZA131/19               | 1       |
| Apomix               | 2-ethylhexyl laurate | 148-8015010319         | 2       |
| Apomix               | 2-ethylhexyl laurate | 148-8013010719         | 2       |
| Apomix               | 2-ethylhexyl laurate | 148-8014010720         | 1       |
| Apomix (AMH)         | 2-ethylhexyl laurate | 148-8015010319         | 1       |
| Apomix / Anzag       | 2-ethylhexyl laurate | 148-801301116          | 1       |
| Apomix / Anzag       | 2-ethylhexyl laurate | 2817E-03641            | 1       |
| Apomix / Anzag       | 2-ethylhexyl laurate | 2918E-03641            | 2       |
| Apomix / Gehe        | 2-ethylhexyl laurate | 148-8014010517         | 1       |
| apomix / Noweda      | 2-ethylhexyl laurate | 148-8013010616         | 1       |
| apomix / Noweda      | 2-ethylhexyl laurate | 148-8014010618         | 1       |
| Apomix / Phönix      | 2-ethylhexyl laurate | 40514                  | 1       |
| Apomix / Phönix      | 2-ethylhexyl laurate | 148-8014010517         | 1       |
| apomix / Retest      | 2-ethylhexyl laurate | 148-8013010218ZA52/18  | 1       |
| Apomix / Sanacorp    | 2-ethylhexyl laurate | 148-8013011116         | 1       |
| Apomix GEHE          | 2-ethylhexyl laurate | 148-8014010517         | 1       |
| Apomix GEHE          | 2-ethylhexyl laurate | 148-8014010618         | 1       |
| apomix/ Alliance     | 2-ethylhexyl laurate | 148-8014010618         | 1       |
| Apomix/ Alliance H.  | 2-ethylhexyl laurate | 148-8014010618ZA252/18 | 1       |
| Apomix/ NOWEDA       | 2-ethylhexyl laurate | 148-8013010719         | 1       |
| apomix/ Phoenix      | 2-ethylhexyl laurate | 8015050414             | 1       |
| Apomix/Alliance      | 2-ethylhexyl laurate | 1488013010218          | 1       |
| apomix/Anzag         | 2-ethylhexyl laurate | 148-8015010319         | 3       |
| Apomix/Anzag         | 2-ethylhexyl laurate | 813M-03324             | 1       |
| Apomix/Anzag         | 2-ethylhexyl laurate | 3114U-03641            | 1       |
| Apomix/Anzag         | 2-ethylhexyl laurate | 148-8013010616         | 1       |
| Apomix/Anzag         | 2-ethylhexyl laurate | 2516Q-03641            | 1       |
| Apomix/Anzag         | 2-ethylhexyl laurate | 2119I-03641            | 1       |
| Caelo                | 2-ethylhexyl laurate | 148-801410618          | 1       |
| Apomix/Gehe          | 2-ethylhexyl laurate | 148-8014010517         | 1       |
| Apomix/Gehe          | 2-ethylhexyl laurate | 148-8014010618         | 1       |
| Apomix/GEHE          | 2-ethylhexyl laurate | 148-8015010319         | 1       |
| apomix/gehe 26.06.19 | 2-ethylhexyl laurate | 148_8014010618         | 1       |
| apomix/Ge-hh         | 2-ethylhexyl laurate | 148-8015010319         | 1       |
| Apomix/Noveda        | 2-ethylhexyl laurate | 148-8013010218         | 1       |
| apomix/Noweda        | 2-ethylhexyl laurate | 148-8013011116         | 1       |
| apomix/Noweda        | 2-ethylhexyl laurate | 8014010618             | 1       |
| Apomix/Noweda        | 2-ethylhexyl laurate | 8014260413             | 2       |
| Apomix/Noweda        | 2-ethylhexyl laurate | 8015050414ZA96/14      | 1       |
| Apomix/Noweda        | 2-ethylhexyl laurate | 148-8013010616         | 2       |
| Apomix/Noweda        | 2-ethylhexyl laurate | 148-8013011116         | 1       |
| Apomix/Noweda        | 2-ethylhexyl laurate | 148-8013010218         | 3       |
| apomix/P             | 2-ethylhexyl laurate | 148-8013011116         | 1       |
| Apomix/Phoenix       | 2-ethylhexyl laurate | 148-8014010618         | 1       |
| Apomix/Phoenix       | 2-ethylhexyl laurate | 13011120               | 1       |
| Apomix/phönix        | 2-ethylhexyl laurate | 148-8013010616         | 1       |
| Apomix/Phönix        | 2-ethylhexyl laurate | 148-8013010616         | 1       |
| Apomix/Phönix        | 2-ethylhexyl laurate | 148-8013011116         | 1       |
| Apomix/Phönix        | 2-ethylhexyl laurate | 148-8013010719         | 1       |
| Apomix/Phönix        | 2-ethylhexyl laurate | 148-8013011120         | 1       |
| apomix/Sanacorp      | 2-ethylhexyl laurate | 8015050414             | 1       |
| apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8014010517         | 1       |
| apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8013010719         | 1       |
| apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8014010720ZA176/20 | 1       |
| Apomix/Sanacorp      | 2-ethylhexyl laurate | 8015010115ZA48/15      | 1       |
| Apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8013010218         | 1       |
| Apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8015010319         | 1       |
| Apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8013010719         | 1       |
| Apomix/Sanacorp      | 2-ethylhexyl laurate | 148-8013011120         | 2       |

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| <b>Supplier</b>      | <b>Substance</b>     | <b>Batch</b>        | <b>Spectra</b> |
|----------------------|----------------------|---------------------|----------------|
| Apomix/Spangro       | 2-ethylhexyl laurate | 148-8013011116      | 1              |
| Apomix/Spangro       | 2-ethylhexyl laurate | 148-8014010517      | 1              |
| Bombastus            | 2-ethylhexyl laurate | 221010              | 1              |
| Bombastus            | 2-ethylhexyl laurate | 18001251            | 2              |
| Bombastus            | 2-ethylhexyl laurate | 18004026P-181227-6  | 1              |
| Bombastus            | 2-ethylhexyl laurate | 148-8013010616      | 1              |
| Bombastus            | 2-ethylhexyl laurate | 304559              | 1              |
| Caelo                | 2-ethylhexyl laurate | 17065201            | 5              |
| Caelo                | 2-ethylhexyl laurate | 21091303            | 1              |
| Caelo                | 2-ethylhexyl laurate | 14182802            | 1              |
| Caelo                | 2-ethylhexyl laurate | 16348202            | 10             |
| Caelo                | 2-ethylhexyl laurate | 10515               | 1              |
| Caelo                | 2-ethylhexyl laurate | 148-8013010616      | 3              |
| Caelo                | 2-ethylhexyl laurate | 16143804            | 2              |
| Caelo                | 2-ethylhexyl laurate | 16245001            | 8              |
| Caelo                | 2-ethylhexyl laurate | 16143801            | 1              |
| Caelo                | 2-ethylhexyl laurate | 1488013010616       | 1              |
| Caelo                | 2-ethylhexyl laurate | 16315703            | 4              |
| Caelo                | 2-ethylhexyl laurate | 16348201            | 12             |
| Caelo                | 2-ethylhexyl laurate | 163348201           | 1              |
| Caelo                | 2-ethylhexyl laurate | 148-8014010517ZA241 | 1              |
| Caelo                | 2-ethylhexyl laurate | 1488014010517       | 1              |
| Caelo                | 2-ethylhexyl laurate | 170665201           | 1              |
| Caelo                | 2-ethylhexyl laurate | 1812802             | 2              |
| Caelo                | 2-ethylhexyl laurate | 18225901            | 39             |
| Caelo                | 2-ethylhexyl laurate | 20002646001         | 6              |
| Caelo                | 2-ethylhexyl laurate | 16315701            | 7              |
| Caelo                | 2-ethylhexyl laurate | 18019403            | 7              |
| Caelo                | 2-ethylhexyl laurate | 181211802           | 1              |
| Caelo                | 2-ethylhexyl laurate | 18234905            | 2              |
| Caelo                | 2-ethylhexyl laurate | 148-8013010218      | 1              |
| Caelo                | 2-ethylhexyl laurate | 130312              | 3              |
| Caelo                | 2-ethylhexyl laurate | 18234902            | 8              |
| Caelo                | 2-ethylhexyl laurate | 20004416002         | 3              |
| Caelo                | 2-ethylhexyl laurate | 18121804            | 12             |
| Caelo                | 2-ethylhexyl laurate | 148-8014010815      | 2              |
| Caelo                | 2-ethylhexyl laurate | 18121802            | 26             |
| Caelo                | 2-ethylhexyl laurate | 148-8014010517      | 1              |
| Caelo                | 2-ethylhexyl laurate | 191241001           | 15             |
| Caelo                | 2-ethylhexyl laurate | 13252003            | 1              |
| Caelo                | 2-ethylhexyl laurate | 50414               | 6              |
| Caelo                | 2-ethylhexyl laurate | 17065202            | 6              |
| Caelo                | 2-ethylhexyl laurate | 148-8014010618      | 1              |
| Caelo                | 2-ethylhexyl laurate | 1488013010218       | 1              |
| Caelo                | 2-ethylhexyl laurate | 19124101            | 10             |
| Caelo                | 2-ethylhexyl laurate | 16245004            | 2              |
| Caelo                | 2-ethylhexyl laurate | 15382601            | 3              |
| Caelo                | 2-ethylhexyl laurate | 19124104            | 23             |
| Caelo                | 2-ethylhexyl laurate | 1912404             | 1              |
| Caelo                | 2-ethylhexyl laurate | 16245003            | 3              |
| Caelo                | 2-ethylhexyl laurate | 1924104             | 1              |
| Caelo                | 2-ethylhexyl laurate | 13018601            | 1              |
| Caeol/Noweda         | 2-ethylhexyl laurate | 19124104            | 1              |
| Caeolo / ahd         | 2-ethylhexyl laurate | 17065201            | 1              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 17065201            | 1              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 18225901            | 2              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 1822901             | 1              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 18234902            | 2              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 19124104            | 8              |
| Caesar & Loretz GmbH | 2-ethylhexyl laurate | 19124101            | 1              |

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| Supplier                   | Substance            | Batch          | Spectra |
|----------------------------|----------------------|----------------|---------|
| Caesar & Loretz GmbH       | 2-ethylhexyl laurate | 191241001      | 7       |
| Caesar & Loretz GmbH       | 2-ethylhexyl laurate | 20004416002    | 4       |
| Caesar & Loretz GmbH / ... | 2-ethylhexyl laurate | 17065202       | 1       |
| Caesar & Loretz GmbH/ J... | 2-ethylhexyl laurate | 191241001      | 1       |
| Caesar & Loretz GmbH/Fi... | 2-ethylhexyl laurate | 191241001      | 1       |
| Caesar & Loretz GmbH/Sa... | 2-ethylhexyl laurate | AP210204-03    | 1       |
| Caesar&Loretz GmbH/ San... | 2-ethylhexyl laurate | 17065202       | 1       |
| DHW/AHD                    | 2-ethylhexyl laurate | 148-8013010218 | 1       |
| E Plus                     | 2-ethylhexyl laurate | 16348202       | 1       |
| EuRho/Noweda               | 2-ethylhexyl laurate | 18019403       | 1       |
| Euro OTC                   | 2-ethylhexyl laurate | 16348202       | 2       |
| Euro OTC                   | 2-ethylhexyl laurate | 148-8014010618 | 1       |
| Fagron                     | 2-ethylhexyl laurate | 148-8013010616 | 1       |
| Fagron                     | 2-ethylhexyl laurate | 50414          | 2       |
| Gehe                       | 2-ethylhexyl laurate | 130312         | 2       |
| Gehe                       | 2-ethylhexyl laurate | 148-8013010218 | 1       |
| Gehe                       | 2-ethylhexyl laurate | 148-8015010319 | 1       |
| GEHE                       | 2-ethylhexyl laurate | 148-8013010218 | 2       |
| Gehe / Apomix              | 2-ethylhexyl laurate | 148-8014010720 | 1       |
| Gehe / Pharmachem. Pößn... | 2-ethylhexyl laurate | 10616          | 2       |
| Gehe/Apomix                | 2-ethylhexyl laurate | 148-8015010319 | 1       |
| Caelo                      | 2-ethylhexyl laurate | 148-8013011116 | 1       |
| Euro OTC                   | 2-ethylhexyl laurate | 50414          | 2       |
| Hepart                     | 2-ethylhexyl laurate | 10616          | 1       |
| Ichthyol                   | 2-ethylhexyl laurate | 8015180213     | 1       |
| Kehr                       | 2-ethylhexyl laurate | 18121802       | 1       |
| Kehr/Pharmachem            | 2-ethylhexyl laurate | 1501202        | 1       |
| L10                        | 2-ethylhexyl laurate | 18019405       | 1       |
| L10                        | 2-ethylhexyl laurate | 18225901       | 1       |
| L12                        | 2-ethylhexyl laurate | 148-8013011116 | 1       |
| Nachtestung-Verlängerung   | 2-ethylhexyl laurate | 275/18         | 1       |
| Noweda                     | 2-ethylhexyl laurate | 16348202       | 2       |
| Noweda                     | 2-ethylhexyl laurate | 18019405       | 3       |
| Noweda                     | 2-ethylhexyl laurate | 19124101       | 1       |
| Noweda                     | 2-ethylhexyl laurate | 19124104       | 1       |
| Noweda                     | 2-ethylhexyl laurate | 19001244       | 1       |
| Noweda                     | 2-ethylhexyl laurate | 191241001      | 2       |
| Caelo                      | 2-ethylhexyl laurate | 16143802       | 2       |
| Caelo                      | 2-ethylhexyl laurate | 148-8013010719 | 1       |
| Noweda/Apomix              | 2-ethylhexyl laurate | 148-8013010218 | 1       |
| Caelo                      | 2-ethylhexyl laurate | 18019405       | 6       |
| Nowedea 15.7.17            | 2-ethylhexyl laurate | 16348202       | 1       |
| Pharm.Pößneck/AHD          | 2-ethylhexyl laurate | 10616          | 3       |
| Pharma Pößneck             | 2-ethylhexyl laurate | 240314         | 1       |
| Pharma Pößneck             | 2-ethylhexyl laurate | 10515          | 1       |
| Pharmach.Pößneck/AHD       | 2-ethylhexyl laurate | 290317         | 5       |
| Pharmach.Pößneck/AHD       | 2-ethylhexyl laurate | 260418         | 2       |
| Pharmachem                 | 2-ethylhexyl laurate | 131111         | 2       |
| Pharmachem                 | 2-ethylhexyl laurate | 50414          | 6       |
| Pharmachem                 | 2-ethylhexyl laurate | 10515          | 6       |
| Pharmachem                 | 2-ethylhexyl laurate | 10616          | 5       |
| Pharmachem                 | 2-ethylhexyl laurate | 290317         | 4       |
| Pharmachem                 | 2-ethylhexyl laurate | 260418         | 3       |
| Pharmachem / Alliance H... | 2-ethylhexyl laurate | 10616          | 1       |
| Pharmachem / Phoenix       | 2-ethylhexyl laurate | 260418         | 1       |
| Pharmachem / Phönix        | 2-ethylhexyl laurate | 10213          | 1       |
| Pharmachem Anzag           | 2-ethylhexyl laurate | 130312         | 2       |
| pharmachem gmbh            | 2-ethylhexyl laurate | 50414          | 1       |
| pharmachem gmbh            | 2-ethylhexyl laurate | 10616          | 1       |
| Pharmachem GmbH            | 2-ethylhexyl laurate | 131111         | 2       |

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| <b>Supplier</b>            | <b>Substance</b>     | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|----------------------|--------------|----------------|
| Pharmachem GmbH            | 2-ethylhexyl laurate | 130312       | 1              |
| Pharmachem GmbH            | 2-ethylhexyl laurate | 10213        | 2              |
| Pharmachem GmbH            | 2-ethylhexyl laurate | 50414        | 1              |
| Pharmachem GmbH            | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem GmbH & Co KG    | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem GmbH & Co KG    | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem GmbH & Co KG    | 2-ethylhexyl laurate | 260418       | 2              |
| Pharmachem GmbH & Co. K... | 2-ethylhexyl laurate | 260418       | 1              |
| pharmachem GmbH Pößneck    | 2-ethylhexyl laurate | 10213        | 1              |
| Pharmachem GmbH&Co.KG      | 2-ethylhexyl laurate | 130312       | 1              |
| Pharmachem GmbH&Co.KG      | 2-ethylhexyl laurate | 10515        | 1              |
| Pharmachem GmbH&Co.KG      | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem GmbH&Co.KG      | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem GmbH&Co.KG/N... | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem pöneck/Phönix   | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem Pösneck         | 2-ethylhexyl laurate | 50414        | 2              |
| Pharmachem Pösneck/Noweda  | 2-ethylhexyl laurate | 10515        | 4              |
| Pharmachem Pößneck         | 2-ethylhexyl laurate | 10213        | 2              |
| Pharmachem Pößneck         | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem Pößneck         | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem Pößneck         | 2-ethylhexyl laurate | 260418       | 2              |
| Pharmachem Pößneck /Now... | 2-ethylhexyl laurate | 50414        | 2              |
| Pharmachem Pößneck /Now... | 2-ethylhexyl laurate | 10515        | 3              |
| Pharmachem Pößneck GmbH... | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem Pößneck GmbH... | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem Pößneck GmbH... | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem Pößneck, GEHE   | 2-ethylhexyl laurate | 10515        | 1              |
| Pharmachem Pößneck/Sana... | 2-ethylhexyl laurate | 50414        | 1              |
| Pharmachem Pößneck/Sana... | 2-ethylhexyl laurate | 10515        | 1              |
| Pharmachem./Allianc.H.     | 2-ethylhexyl laurate | 50414        | 1              |
| Pharmachem.Pößneck         | 2-ethylhexyl laurate | 10515        | 3              |
| Pharmachem.Pößneck/Phönix  | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem/ Gehe 28.03.19  | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem/ Noweda         | 2-ethylhexyl laurate | 130312       | 1              |
| Pharmachem/ Noweda         | 2-ethylhexyl laurate | 50414        | 1              |
| Pharmachem/ Noweda         | 2-ethylhexyl laurate | 10616        | 2              |
| Pharmachem/ Sanacorp       | 2-ethylhexyl laurate | 130312       | 1              |
| Pharmachem/ Sanacorp       | 2-ethylhexyl laurate | 50414        | 1              |
| Pharmachem/ Sanacorp       | 2-ethylhexyl laurate | 10515        | 1              |
| Pharmachem/AHD             | 2-ethylhexyl laurate | 10213        | 4              |
| Pharmachem/AHD             | 2-ethylhexyl laurate | 2304193      | 1              |
| Pharmachem/Alliance        | 2-ethylhexyl laurate | 260418       | 2              |
| Pharmachem/Gehe            | 2-ethylhexyl laurate | 131111       | 1              |
| Pharmachem/Gehe/14.04.21   | 2-ethylhexyl laurate | 1501202      | 1              |
| Pharmachem/Noweda          | 2-ethylhexyl laurate | 131111       | 2              |
| Pharmachem/Noweda          | 2-ethylhexyl laurate | 10616        | 1              |
| Pharmachem/Noweda          | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem/Noweda          | 2-ethylhexyl laurate | 2304191      | 1              |
| Pharmachem/Phoenix         | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem/Phönix          | 2-ethylhexyl laurate | 10213        | 1              |
| Pharmachem/Phönix          | 2-ethylhexyl laurate | 10616        | 2              |
| Pharmachem/Phönix          | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem/Phönix          | 2-ethylhexyl laurate | 260418       | 1              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 50414        | 6              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 10515        | 5              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 10616        | 2              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 290317       | 1              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 260418       | 2              |
| Pharmachem/Sanacorp        | 2-ethylhexyl laurate | 2304195      | 1              |
| pharmachemie /phönix       | 2-ethylhexyl laurate | 260418       | 1              |

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| Supplier                  | Substance            | Batch          | Spectra |
|---------------------------|----------------------|----------------|---------|
| Pharmachemie GmbH&co.KG   | 2-ethylhexyl laurate | 290317         | 1       |
| Pharmachen GmbH           | 2-ethylhexyl laurate | 1501201        | 1       |
| Pharmamacher/Noweda       | 2-ethylhexyl laurate | 260418         | 2       |
| Pharmamchem/Sanacorp      | 2-ethylhexyl laurate | 260418         | 2       |
| Phoenix                   | 2-ethylhexyl laurate | 148-8013010616 | 1       |
| Phoenix                   | 2-ethylhexyl laurate | 18225901       | 1       |
| Phoenix/Apomix            | 2-ethylhexyl laurate | 8015010115     | 1       |
| Phönix                    | 2-ethylhexyl laurate | 10616          | 1       |
| Phönix                    | 2-ethylhexyl laurate | 290317         | 1       |
| Phönix / Pharmachem       | 2-ethylhexyl laurate | 10616          | 1       |
| Phönix Gotha              | 2-ethylhexyl laurate | 131111         | 1       |
| Phönix Gotha              | 2-ethylhexyl laurate | 10213          | 1       |
| phönix Pharmochem         | 2-ethylhexyl laurate | 290317         | 1       |
| Caelo                     | 2-ethylhexyl laurate | 16143803       | 4       |
| Phönix/Pharmachem Pößneck | 2-ethylhexyl laurate | 290317         | 1       |
| PKH GmbH                  | 2-ethylhexyl laurate | 148-8015010319 | 1       |
| PKH GmbH                  | 2-ethylhexyl laurate | 148-8013010719 | 1       |
| PKH GmbH / Phönix         | 2-ethylhexyl laurate | 148-8013011120 | 1       |
| PKH GmbH Halle/ AHD       | 2-ethylhexyl laurate | 148-8015010319 | 1       |
| pkh gmbh/Noweda           | 2-ethylhexyl laurate | 1488013010218  | 1       |
| PKH Halle,Anzag           | 2-ethylhexyl laurate | 148-8013010616 | 1       |
| PKH Halle/Sanacorp        | 2-ethylhexyl laurate | 8013120913     | 1       |
| Sanacorp                  | 2-ethylhexyl laurate | 19124104       | 1       |
| Caelo                     | 2-ethylhexyl laurate | 8015180213     | 1       |
| Sanacorp / apomix         | 2-ethylhexyl laurate | 148-8013010218 | 1       |
| Sanacorp /Pharmachem      | 2-ethylhexyl laurate | 2304191        | 2       |
| Sanacorp/apomix           | 2-ethylhexyl laurate | 148-801310616  | 1       |
| Caelo                     | 2-ethylhexyl laurate | 8014210112     | 1       |
| Sanacorp/Pharmachem       | 2-ethylhexyl laurate | 290317         | 2       |
| Sanacorp/Pharmachem       | 2-ethylhexyl laurate | 260418         | 1       |
| Sanacorp/Pharmachem       | 2-ethylhexyl laurate | 1501201        | 1       |
| THC Noweda                | 2-ethylhexyl laurate | 18225901       | 1       |
| Caelo                     | 2-ethylhexyl laurate | 14129304       | 1       |
| Caelo                     | 2-ethylhexyl laurate |                | 1       |

- 240 682 spectra from 1121 *Apo-Ident* customers from a total of 46 899 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *2-ethylhexyl laurate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *2-ethylhexyl laurate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 240           | 0              | 63 699        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 667           | 14             | 240 682       |

The substance/substance group *2-ethylhexyl laurate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 97.9442 % (> 97.5037 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *2-ethylhexyl laurate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Squalane                                  | 9.12                   | 72.43                          |
| Triglycerides, medium-chain               | 15.50                  | —                              |
| Wool fat                                  | 17.73                  | —                              |
| Emulsifying hydrophobic base gel DAC      | 29.10                  | —                              |
| Camphor ointment                          | 31.00                  | —                              |
| Soy lecithin, liquid                      | 32.57                  | —                              |
| Laurel oil                                | 33.00                  | —                              |
| Wheatgerm oil, refined                    | 33.97                  | —                              |
| Softisan <sup>®</sup> 649                 | 34.44                  | —                              |
| Peanut oil, refined                       | 34.86                  | —                              |
| Shea butter, refined                      | 35.70                  | —                              |
| Apricot kernel oil, refined               | 35.86                  | —                              |
| Olive oil, native                         | 37.31                  | —                              |
| Pasta Cordes <sup>®</sup>                 | 37.54                  | —                              |
| Hydrophobic base gel DAC                  | 37.92                  | —                              |
| Sorbitan trioleate                        | 38.34                  | —                              |
| Grape seed oil, refined                   | 39.15                  | —                              |
| Isopropyl myristate                       | 39.69                  | —                              |
| Paraffin, light liquid                    | 40.71                  | —                              |
| Isopropyl palmitate                       | 41.52                  | —                              |
| Decyl oleate                              | 42.32                  | —                              |
| Soy oil, refined                          | 42.41                  | —                              |
| Sunflower oil, refined                    | 42.73                  | —                              |
| Avocado oil, refined                      | 42.78                  | —                              |
| Sesame oil, refined                       | 45.68                  | —                              |
| Guaiazulene 25%, water-soluble            | 45.71                  | —                              |
| Corn oil, refined                         | 48.12                  | —                              |
| Metronidazole 25% in white petrolatum     | 50.89                  | —                              |
| ⋮                                         | ⋮                      | ⋮                              |
| Wool alcohol cream SR                     | >50                    | 34.95                          |
| Base cream DAC                            | >50                    | 41.33                          |
| Eucerin <sup>®</sup> cum Aqua             | >50                    | 51.90                          |
| Wool alcohol cream DAB                    | >50                    | 67.68                          |
| Non-ionic hydrophil ointment              | >50                    | 69.35                          |
| Lanette <sup>®</sup> ointment (conserved) | >50                    | 90.31                          |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *2-ethylhexyl laurate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31373     | 31878               | 2.13                         | 11.34                           |
| 31507     | 31878               | 2.50                         | 10.80                           |
| 31878     | 31878               | 0.00                         | 11.01                           |
| 33086     | 33086               | 0.00                         | 10.60                           |
| 33087     | 33087               | 0.00                         | 11.27                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Acetic acid 30%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30487-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Acetic acid 30%; Acidum aceticum dilut. 30%

### Special notes

When selecting the *Acetic acid 30%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Acetic acid 30%           | 3      | 2      | 17     |

## Second-stage model

For differentiation of the substance/substance group *Acetic acid 30%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Acetic acid 30%*:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------|----------|-----------|---------|-------------|
| Caelo    | Acetic acid 30% | 12376101 | 31131     | 40      | 20130107    |
| Caelo    | Acetic acid 30% | 12376101 | 31318     | 60      | 20130107    |
| Caelo    | Acetic acid 30% | 16079301 | 33426     | 40      | 1801528     |
| Caelo    | Acetic acid 30% | 172744   | 33889     | 40      | 20171027*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Acetic acid 30%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 759 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Acetic acid 30%*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Acetic acid 30% | 18123201 | 34236     | 40      |
| Caelo    | Acetic acid 30% | 191085   | 34632     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 227 spectra from 157 *Apo-Ident* customers from 20 batches from the substance/substance group *Acetic acid 30%*.
- Among them are spectra of independent samples from 17 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Bombastus                  | Acetic acid 30% | 16079301    | 1       |
| Caelo                      | Acetic acid 30% | 11271701    | 4       |
| Caelo                      | Acetic acid 30% | 12376102    | 2       |
| Caelo                      | Acetic acid 30% | 14208501    | 30      |
| Caelo                      | Acetic acid 30% | 1408501     | 1       |
| Caelo                      | Acetic acid 30% | 14058001    | 3       |
| Caelo                      | Acetic acid 30% | 16079101    | 3       |
| Caelo                      | Acetic acid 30% | 16076101    | 1       |
| Caelo                      | Acetic acid 30% | 17274401    | 6       |
| Caelo                      | Acetic acid 30% | 19281202    | 1       |
| Caelo                      | Acetic acid 30% | 20003461001 | 6       |
| Caelo                      | Acetic acid 30% | 19108501    | 6       |
| Caelo                      | Acetic acid 30% | 16049301    | 1       |
| Caelo                      | Acetic acid 30% | 1812301     | 2       |
| Caelo                      | Acetic acid 30% | 1428501     | 1       |
| Caelo                      | Acetic acid 30% | 18123201    | 60      |
| Caelo                      | Acetic acid 30% | 1727441     | 1       |
| Caesar & Loretz GmbH       | Acetic acid 30% | 14208501    | 1       |
| Caesar & Loretz GmbH       | Acetic acid 30% | 18123201    | 2       |
| Caesar & Loretz GmbH       | Acetic acid 30% | 20003461001 | 3       |
| Caesar & Loretz GmbH'      | Acetic acid 30% | 18123201    | 7       |
| Caesar & Loretz GmbH'/GÖ   | Acetic acid 30% | 18123201    | 1       |
| Caesar & Loretz GmbH/Kehr  | Acetic acid 30% | 18123201    | 1       |
| Caesar & Loretz GmbH/Ph... | Acetic acid 30% | 20003461001 | 1       |
| Caesar & Loretz Hilden     | Acetic acid 30% | 18123201    | 1       |
| Caesar&Loretz              | Acetic acid 30% | 16079301    | 1       |
| Cealo/Noweda               | Acetic acid 30% | 16079301    | 4       |
| E Plus                     | Acetic acid 30% | 18123201    | 1       |
| Fagron                     | Acetic acid 30% | 16079301    | 1       |
| GEHE                       | Acetic acid 30% | 18123201    | 1       |
| GEHE am 21.05.2014         | Acetic acid 30% | 12376101    | 1       |
| L12                        | Acetic acid 30% | 16079301    | 1       |
| Noweda                     | Acetic acid 30% | 18123201    | 1       |
| Phoenix                    | Acetic acid 30% | 11271702    | 1       |
| Phönix                     | Acetic acid 30% | 16079301    | 3       |
| Sanacorp                   | Acetic acid 30% | 18123201    | 1       |

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| Supplier | Substance       | Batch    | Spectra |
|----------|-----------------|----------|---------|
| Caelo    | Acetic acid 30% | 12376101 | 14      |
| Caelo    | Acetic acid 30% | 16079301 | 50      |
| Phönix   | Acetic acid 30% |          | 1       |

- 241 136 spectra from 1121 *Apo-Ident* customers from a total of 46 987 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Acetic acid 30%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Acetic acid 30%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 214           | 13             | 241 136       |

The substance/substance group *Acetic acid 30%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 94.2731 % (> 92.9515 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Acetic acid 30%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                            | Distance in main model | Distance in second-stage model |
|--------------------------------------|------------------------|--------------------------------|
| Hydrophilic base emulsion (NRF p.25) | 31.41                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)  | 31.65                  | —                              |
| Dextrorotary lactic acid 20%         | 33.53                  | —                              |

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| Substanz                                  | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Non-ionic hydrous liniment SR/DAC (NRF... | 37.87                     | —                                 |
| Hydrophilic cream, non-ionic SR (NRF p... | 45.54                     | —                                 |
| Glycolic acid 70%                         | 45.88                     | —                                 |
| Benzalkonium chloride solution 50%        | 48.49                     | —                                 |
| Aluminium acetotartrate solution          | 48.85                     | —                                 |
| Hydrophilic cream, non-ionic without p... | 50.75                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Acetic acid 30%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31131     | 33889                  | 7.29                            | 35.20                              |
| 31318     | 33889                  | 3.34                            | 32.33                              |
| 33426     | 33426                  | 0.00                            | 31.41                              |
| 33889     | 33889                  | 0.00                            | 32.19                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Acetic acid 99%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30486-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Acetic acid 99%; Acidum aceticum glaciale

### Special notes

When selecting the *Acetic acid 99%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Acetic acid 99%           | 5      | 3      | 51     |

## Second-stage model

For differentiation of the substance/substance group *Acetic acid 99%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Acetic acid 99%*:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------|----------|-----------|---------|-------------|
| Caelo    | Acetic acid 99% | 13013101 | 31132     | 39      | 20130114    |
| Caelo    | Acetic acid 99% | 13013101 | 31319     | 60      | 20130114    |
| Caelo    | Acetic acid 99% | 16238401 | 33423     | 40      | 1801527     |
| Caelo    | Acetic acid 99% | 182767   | 34473     | 40      | 20181105*   |
| Caelo    | Acetic acid 99% | 20003519 | 35256     | 40      | 20201120*   |
| Hedinger | Acetic acid 99% | 223083B  | 33428     | 40      | 20160727    |
| Hedinger | Acetic acid 99% | 223083B  | 33429     | 40      | 20160727    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 299 spectra of 7 reference samples from the substance/substance group *Acetic acid 99%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 640 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Acetic acid 99%*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Acetic acid 99% | 11186701 | 30486     | 40      |
| Caelo    | Acetic acid 99% | 191119   | 34474     | 40      |
| Caelo    | Acetic acid 99% | 191120   | 34475     | 40      |

- 91371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 290 spectra from 212 *Apo-Ident* customers from 54 batches from the substance/substance group *Acetic acid 99%*.
- Among them are spectra of independent samples from 51 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| ACM                        | Acetic acid 99% | KNC1163J14  | 1       |
| Anzag                      | Acetic acid 99% | 7002101     | 1       |
| Anzag                      | Acetic acid 99% | 7004111     | 1       |
| Anzag                      | Acetic acid 99% | 223088B     | 1       |
| Bombastus                  | Acetic acid 99% | 7006091     | 1       |
| Caelo                      | Acetic acid 99% | 11186701    | 1       |
| Caelo                      | Acetic acid 99% | 1186701     | 1       |
| Caelo                      | Acetic acid 99% | 13218301    | 24      |
| Caelo                      | Acetic acid 99% | 18031701    | 1       |
| Caelo                      | Acetic acid 99% | 15280702    | 6       |
| Caelo                      | Acetic acid 99% | 18276701    | 30      |
| Caelo                      | Acetic acid 99% | 19112001    | 3       |
| Caelo                      | Acetic acid 99% | 1911901     | 4       |
| Caelo                      | Acetic acid 99% | 19111901    | 11      |
| Caelo                      | Acetic acid 99% | 13218501    | 2       |
| Caelo                      | Acetic acid 99% | 10135706    | 1       |
| Caelo                      | Acetic acid 99% | 11349901    | 7       |
| Caelo                      | Acetic acid 99% | 17200401    | 26      |
| Caelo                      | Acetic acid 99% | 7002101     | 1       |
| Caelo                      | Acetic acid 99% | 15280701    | 12      |
| Caelo                      | Acetic acid 99% | 5117A-01010 | 1       |
| Caesar & Loretz GmbH       | Acetic acid 99% | 19111901    | 1       |
| Caesar & Loretz GmbH'      | Acetic acid 99% | 18276701    | 2       |
| Caesar & Loretz GmbH / ... | Acetic acid 99% | 15280701    | 1       |
| Caesar & Loretz GmbH/No... | Acetic acid 99% | 117M-01010  | 1       |
| Cealo/ AHD                 | Acetic acid 99% | 18276701    | 1       |
| Devisa/Noweda              | Acetic acid 99% | 13218301    | 1       |
| EuRho/Noweda               | Acetic acid 99% | 16238401    | 1       |
| Euro OTC                   | Acetic acid 99% | 7006091     | 1       |
| Fagron                     | Acetic acid 99% | 13218301    | 1       |

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| <b>Supplier</b>         | <b>Substance</b> | <b>Batch</b>    | <b>Spectra</b> |
|-------------------------|------------------|-----------------|----------------|
| Fiebig                  | Acetic acid 99%  | 18276701        | 1              |
| fishar                  | Acetic acid 99%  | 180406E/7006091 | 1              |
| fishar                  | Acetic acid 99%  | 7008091         | 1              |
| Fischar                 | Acetic acid 99%  | 7004051         | 1              |
| Fischar                 | Acetic acid 99%  | 7003053         | 1              |
| Fischar                 | Acetic acid 99%  | 7004111         | 1              |
| Fischar                 | Acetic acid 99%  | 7005091         | 2              |
| Fischar                 | Acetic acid 99%  | 90212/1         | 1              |
| Fischar                 | Acetic acid 99%  | 7006091         | 5              |
| Fischar                 | Acetic acid 99%  | 7008091         | 2              |
| Fischar                 | Acetic acid 99%  | 7009082         | 1              |
| Fischar / Anzag         | Acetic acid 99%  | 7002031         | 1              |
| Fischar / Gehe          | Acetic acid 99%  | 7006091         | 3              |
| Fischar / Noweda        | Acetic acid 99%  | 7006091         | 1              |
| Fischar / Phönix        | Acetic acid 99%  | 7006091         | 1              |
| Fischar GmbH & Co.KG    | Acetic acid 99%  | 7008091         | 1              |
| Fischar Otto / Sanacorp | Acetic acid 99%  | 7005091         | 1              |
| Fischar, Saarbrücken    | Acetic acid 99%  | 7008091         | 1              |
| Fischar/ AHD            | Acetic acid 99%  | 7008091         | 1              |
| Fischar/Alkun           | Acetic acid 99%  | 7005091         | 1              |
| Fischar/Ebert           | Acetic acid 99%  | 7006091         | 1              |
| Fischar/Gehe            | Acetic acid 99%  | 7002031         | 1              |
| Fischar/Gehe            | Acetic acid 99%  | 7003053         | 1              |
| Fischar/Gehe            | Acetic acid 99%  | 7006091         | 1              |
| Fischar/Gehe            | Acetic acid 99%  | 7009082         | 1              |
| Fischar/Jenne           | Acetic acid 99%  | 23(7006091)     | 1              |
| Fischar/Kehr            | Acetic acid 99%  | 7005091         | 1              |
| Fischar/Noweda          | Acetic acid 99%  | 7004051         | 2              |
| Fischar/Noweda          | Acetic acid 99%  | 7006091         | 3              |
| Fischar/Phoenix         | Acetic acid 99%  | 7002101         | 1              |
| Fischar/Phoenix         | Acetic acid 99%  | 7006091         | 1              |
| Fischar/Phoenix         | Acetic acid 99%  | 7008091         | 2              |
| Fischar/Phönix          | Acetic acid 99%  | 7006091         | 5              |
| Fischar/Phönix          | Acetic acid 99%  | 70006091        | 1              |
| Fischar/Sanacorp        | Acetic acid 99%  | 7006091         | 3              |
| Fischer                 | Acetic acid 99%  | 7005091         | 1              |
| Fischer/Phönix          | Acetic acid 99%  | 7004111         | 1              |
| Fischer/Phönix          | Acetic acid 99%  | 7006091         | 1              |
| Fischer/Sanacorp        | Acetic acid 99%  | 7006091         | 1              |
| Fischar/AHD             | Acetic acid 99%  | 7004111         | 1              |
| Fischar/Phoenix         | Acetic acid 99%  | 7002101         | 1              |
| Gehe                    | Acetic acid 99%  | 18276701        | 1              |
| GEHE                    | Acetic acid 99%  | 7006091         | 2              |
| GEHE                    | Acetic acid 99%  | 17200401        | 1              |
| Gehe amax               | Acetic acid 99%  | 19111901        | 1              |
| Gehe/Hedinger           | Acetic acid 99%  | 223088B         | 1              |
| Hedinger                | Acetic acid 99%  | 223018B         | 1              |
| Hedinger                | Acetic acid 99%  | 5113M-01010     | 1              |
| Hedinger                | Acetic acid 99%  | 223052B         | 2              |
| Hedinger                | Acetic acid 99%  | 223055B         | 1              |
| Hedinger                | Acetic acid 99%  | 223066b         | 1              |
| Hedinger                | Acetic acid 99%  | 223079B         | 1              |
| Hedinger                | Acetic acid 99%  | 223104B         | 1              |
| Hedinger                | Acetic acid 99%  | 223109B         | 1              |
| Hedinger                | Acetic acid 99%  | 223134B         | 1              |
| Hedinger / Kehr         | Acetic acid 99%  | 223079B         | 1              |
| Hedinger/AHD            | Acetic acid 99%  | 2230128         | 1              |
| Hedinger/Gehe           | Acetic acid 99%  | 223007B         | 1              |
| Hedinger/Jenne          | Acetic acid 99%  | 223044B         | 1              |
| Hedinger/Noweda         | Acetic acid 99%  | 223134B         | 1              |

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| Supplier              | Substance       | Batch        | Spectra |
|-----------------------|-----------------|--------------|---------|
| Hedinger/NOWEDA       | Acetic acid 99% | 223012B      | 1       |
| Hedinger/Sanacorp     | Acetic acid 99% | 223134B      | 2       |
| Merck                 | Acetic acid 99% | K49316056729 | 1       |
| Merck                 | Acetic acid 99% | K51835456938 | 1       |
| Noweda                | Acetic acid 99% | 7006091      | 1       |
| Noweda/Fischar        | Acetic acid 99% | 7005091      | 1       |
| otto fischar          | Acetic acid 99% | 7004111      | 1       |
| Otto Fischar GmbH     | Acetic acid 99% | 7003053      | 1       |
| Otto Fischar/ Phoenix | Acetic acid 99% | 7002101      | 1       |
| Otto Fischar/Phönix   | Acetic acid 99% | 7007081      | 1       |
| Otto Fischbar GmbH    | Acetic acid 99% | 7006091      | 1       |
| Otto Fischer          | Acetic acid 99% | 7006091      | 1       |
| Otto Fischer/Noweda   | Acetic acid 99% | 70006091     | 1       |
| ph.eur /phönix        | Acetic acid 99% | 7002101      | 1       |
| Phoenix               | Acetic acid 99% | 7003053      | 1       |
| Caelo                 | Acetic acid 99% | 13218401     | 1       |
| Phönix                | Acetic acid 99% | 2230888      | 1       |
| PHÖNIX                | Acetic acid 99% | 18276701     | 1       |
| Sanacorp              | Acetic acid 99% | 11349901     | 1       |
| Sanacorp              | Acetic acid 99% | 13218301     | 1       |
| Sanacorp              | Acetic acid 99% | 7006091      | 1       |
| Sanacorp/ Lamotte     | Acetic acid 99% | 17200401     | 1       |
| Sanacorp/ Noweda      | Acetic acid 99% | 14072501     | 1       |
| Spangropharm          | Acetic acid 99% | 2231098      | 1       |
| Wacker Chemie AG      | Acetic acid 99% | 223079B      | 1       |
| Caelo                 | Acetic acid 99% | 16238401     | 29      |
| Caelo                 | Acetic acid 99% | 13013101     | 7       |
| Hedinger              | Acetic acid 99% | 223083B      | 2       |

- 241 073 spectra from 1121 *Apo-Ident* customers from a total of 46 953 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Acetic acid 99%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Acetic acid 99%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 299           | 0              | 63 640        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 289           | 1              | 241 073       |

The substance/substance group *Acetic acid 99%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 97.9933 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.6552 % (> 98.6207 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Acetic acid 99%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------|---------------------------|-----------------------------------|
| Salicylic acid 50% (paraffin) | 39.36                     | —                                 |
| Permethrin 25% solution       | 182.40                    | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Acetic acid 99%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31132     | 34473                  | 4.72                            | 100.02                             |
| 31319     | 35256                  | 3.99                            | 93.01                              |
| 33423     | 33423                  | 0.00                            | 94.41                              |
| 33428     | 33423                  | 1.84                            | 96.44                              |
| 33429     | 33423                  | 1.82                            | 96.32                              |
| 34473     | 34473                  | 0.00                            | 99.26                              |
| 35256     | 35256                  | 0.00                            | 94.95                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Acetone**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30539-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Acetone; Acetinum

### Special notes

When selecting the *Acetone* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Acetone                   | 3      | 2      | 284    |

## Second-stage model

For differentiation of the substance/substance group *Acetone* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Acetone*:

| Supplier     | Substance | Batch   | Sample ID | Spectra | Certificate |
|--------------|-----------|---------|-----------|---------|-------------|
| Hedinger     | Acetone   | 011215B | 31575     | 59      | 1505477     |
| Hedinger     | Acetone   | 011242B | 31793     | 60      | 20150703    |
| Otto Fischar | Acetone   | 4205031 | 31796     | 60      | 20150305    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 179 spectra of 3 reference samples from the substance/substance group *Acetone*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 760 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Acetone*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch   | Sample ID | Spectra |
|----------|-----------|---------|-----------|---------|
| Hedinger | Acetone   | 011236B | 32920     | 40      |
| Hedinger | Acetone   | 011297B | 33946     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 901 spectra from 361 *Apo-Ident* customers from 291 batches from the substance/substance group *Acetone*.
- Among them are spectra of independent samples from 283 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance | Batch      | Spectra |
|----------------------------|-----------|------------|---------|
| 01.09.20/AHD/Hedinger      | Acetone   | 11349B     | 1       |
| A.Hedinger/ Sanacorp       | Acetone   | 11345B     | 1       |
| A.Hedinger/Sana            | Acetone   | 11331B     | 1       |
| Aallianc. Healthc. / Fi... | Acetone   | 4208041    | 1       |
| ACM                        | Acetone   | KNC0783J13 | 2       |
| ACM                        | Acetone   | KNC1133J14 | 1       |
| AHD                        | Acetone   | 11319B     | 1       |
| AHD / Hedinger             | Acetone   | 11203B     | 1       |
| AHD 29.10.14 EK 6,70       | Acetone   | 11210B     | 1       |
| AHD Hedinger               | Acetone   | 11260B     | 1       |
| AHD/18.11.14/Hedinger      | Acetone   | 11215B     | 1       |
| AHD/Hedinger               | Acetone   | 11302B     | 1       |
| AHD/Hedinger               | Acetone   | 11323B     | 1       |
| Alliance Health 04.06.2... | Acetone   | 11199B     | 1       |
| Alliance health 12.01.15   | Acetone   | 11218B     | 1       |
| Alliance Healthcare/Hed... | Acetone   | 11224B     | 1       |
| Caelo                      | Acetone   | 11319B     | 2       |
| Anzag                      | Acetone   | 11173B     | 1       |
| Anzag/ Hedinger            | Acetone   | 11158B     | 1       |
| Anzag/ Otto Fischar Gmb... | Acetone   | 4204032    | 1       |
| Anzag/Dr. Seeger           | Acetone   | 11148B     | 1       |
| Anzag/Seeger               | Acetone   | 11185B     | 1       |
| Apoth.E.Bartel             | Acetone   | 11283B     | 1       |
| Apoth.E.Bartel / Noweda    | Acetone   | 11173B     | 1       |
| Barthel                    | Acetone   | 11177B     | 1       |
| Caelo                      | Acetone   | 11283B     | 1       |
| Caelo                      | Acetone   | 1018121    | 1       |
| Caelo                      | Acetone   | 11148B     | 2       |
| Caelo                      | Acetone   | 11171B     | 2       |
| Caelo                      | Acetone   | 11252B     | 1       |
| Caelo                      | Acetone   | 11263B     | 3       |
| Caelo                      | Acetone   | 123456     | 1       |
| Caelo                      | Acetone   | 11288b     | 1       |
| Caelo                      | Acetone   | 11289B     | 3       |
| Caelo                      | Acetone   | 1017082    | 1       |
| Caelo                      | Acetone   | 11308B     | 2       |
| Caelo                      | Acetone   | 4208062    | 4       |
| Caelo                      | Acetone   | 11328B     | 1       |
| Caelo                      | Acetone   | 1019082    | 1       |
| Caelo                      | Acetone   | 11185B     | 2       |
| Caelo                      | Acetone   | 11282B     | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|------------------|---------------|----------------|
| Caelo                      | Acetone          | 11210B        | 1              |
| Caelo                      | Acetone          | 111738        | 1              |
| Caelo                      | Acetone          | 112868        | 2              |
| Caelo                      | Acetone          | 11224B        | 1              |
| Caelo                      | Acetone          | 11234B        | 2              |
| Caelo                      | Acetone          | 4204031       | 1              |
| Caelo                      | Acetone          | 4206012       | 1              |
| Caelo                      | Acetone          | 4208061       | 2              |
| Caelo                      | Acetone          | 420891        | 1              |
| Caelo                      | Acetone          | 1017051       | 1              |
| Caelo                      | Acetone          | 1018091       | 1              |
| Caelo                      | Acetone          | 11236B        | 1              |
| Caelo                      | Acetone          | 112828        | 1              |
| Caelo                      | Acetone          | 606001008     | 1              |
| Caelo                      | Acetone          | 11250B        | 1              |
| Caelo                      | Acetone          | 11227B        | 1              |
| Caelo                      | Acetone          | 4207102       | 1              |
| Caelo                      | Acetone          | 112898        | 1              |
| Caelo                      | Acetone          | 420571        | 1              |
| Caelo                      | Acetone          | 111938        | 1              |
| Caelo                      | Acetone          | 11218B        | 1              |
| Caelo                      | Acetone          | 11247B        | 2              |
| Caelo                      | Acetone          | 11302B        | 3              |
| Caelo                      | Acetone          | 4205062       | 2              |
| Caelo                      | Acetone          | 11297B        | 3              |
| Caesar & Loretz GmbH Hi... | Acetone          | 4205111       | 1              |
| Caesar & Loretz GmbH Hi... | Acetone          | 420511        | 2              |
| Delta                      | Acetone          | 4207013       | 1              |
| Dr.Seeger GmbH             | Acetone          | 11199B        | 1              |
| Dr.Seeger/Jenne            | Acetone          | 11188B        | 1              |
| Ebert KKH 29.09.2016       | Acetone          | 4206042       | 1              |
| Ebert/Fischar              | Acetone          | 4207101       | 1              |
| Euro OTC                   | Acetone          | 11297B        | 1              |
| Euro OTC                   | Acetone          | 4208021       | 2              |
| Euro OTC                   | Acetone          | 12001         | 1              |
| Euro OTC                   | Acetone          | 4204032       | 1              |
| Euro OTC                   | Acetone          | 112618        | 1              |
| Euro OTC                   | Acetone          | 11193B        | 1              |
| Fagron                     | Acetone          | 1019031       | 1              |
| Fagron                     | Acetone          | 4207012       | 1              |
| Fiebig/Hedinger            | Acetone          | 11333B        | 1              |
| fischar                    | Acetone          | 4205031       | 1              |
| fischar                    | Acetone          | 4208021       | 1              |
| fischar                    | Acetone          | 4208061       | 1              |
| fischar                    | Acetone          | 4208062       | 1              |
| fischar                    | Acetone          | 4208092       | 1              |
| Fischar                    | Acetone          | 90110/1       | 2              |
| Fischar                    | Acetone          | 16101206      | 1              |
| Fischar                    | Acetone          | 4202101       | 1              |
| Fischar                    | Acetone          | 6021303       | 1              |
| Fischar                    | Acetone          | 28031301      | 1              |
| Fischar                    | Acetone          | 4202061       | 1              |
| Fischar                    | Acetone          | 9C205/1       | 1              |
| Fischar                    | Acetone          | 4202121       | 2              |
| Fischar                    | Acetone          | 4008978161101 | 1              |
| Fischar                    | Acetone          | 30081301      | 1              |
| Fischar                    | Acetone          | 25101302      | 1              |
| Fischar                    | Acetone          | 4203032       | 1              |
| Fischar                    | Acetone          | 22111302      | 1              |
| Fischar                    | Acetone          | 123456        | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Fischar                    | Acetone          | 5041403      | 1              |
| Fischar                    | Acetone          | 4203091      | 1              |
| Fischar                    | Acetone          | 2051408      | 1              |
| Fischar                    | Acetone          | 4204031      | 4              |
| Fischar                    | Acetone          | 4204051      | 1              |
| Fischar                    | Acetone          | 4204032      | 1              |
| Fischar                    | Acetone          | 45204052     | 1              |
| Fischar                    | Acetone          | 4204052      | 2              |
| Fischar                    | Acetone          | 4205011      | 1              |
| Fischar                    | Acetone          | 14101702     | 1              |
| Fischar                    | Acetone          | 4091513      | 1              |
| Fischar                    | Acetone          | 4205031      | 1              |
| Fischar                    | Acetone          | 4205061      | 1              |
| Fischar                    | Acetone          | 4205062      | 2              |
| Fischar                    | Acetone          | 4206011      | 2              |
| Fischar                    | Acetone          | 4206012      | 3              |
| Fischar                    | Acetone          | 4206041      | 2              |
| Fischar                    | Acetone          | 1016051      | 1              |
| Fischar                    | Acetone          | 1016041      | 1              |
| Fischar                    | Acetone          | 4206071      | 1              |
| Fischar                    | Acetone          | 4207013      | 1              |
| Fischar                    | Acetone          | 1017032      | 1              |
| Fischar                    | Acetone          | 1017021      | 1              |
| Fischar                    | Acetone          | 4207042      | 1              |
| Fischar                    | Acetone          | 10170323     | 1              |
| Fischar                    | Acetone          | 27101711     | 1              |
| Fischar                    | Acetone          | 1017092      | 1              |
| Fischar                    | Acetone          | 7051801      | 1              |
| Fischar                    | Acetone          | 29061801     | 1              |
| Fischar                    | Acetone          | 4208021      | 1              |
| Fischar                    | Acetone          | 4207102      | 1              |
| Fischar                    | Acetone          | 11195B       | 1              |
| Fischar                    | Acetone          | 1018052      | 1              |
| Fischar                    | Acetone          | 1018062      | 2              |
| Fischar                    | Acetone          | 20101803     | 1              |
| Fischar                    | Acetone          | 24101803     | 1              |
| Fischar                    | Acetone          | 4208121      | 1              |
| Fischar                    | Acetone          | 4208092      | 5              |
| Fischar                    | Acetone          | 4208041      | 1              |
| Fischar                    | Acetone          | 4208122      | 2              |
| Fischar                    | Acetone          | 1019071      | 1              |
| Fischar                    | Acetone          | 4209031      | 1              |
| Fischar                    | Acetone          | 4208084      | 1              |
| Fischar                    | Acetone          | 4209052      | 1              |
| Fischar                    | Acetone          | 1019051      | 1              |
| Fischar                    | Acetone          | 1019082      | 2              |
| Fischar                    | Acetone          | 4209092      | 1              |
| Fischar                    | Acetone          | 4200011      | 1              |
| Fischar                    | Acetone          | 4200032      | 1              |
| Fischar                    | Acetone          | 4204072      | 1              |
| Fischar                    | Acetone          | 4205071      | 1              |
| Fischar                    | Acetone          | 5051704      | 1              |
| Fischar                    | Acetone          | 7091706      | 1              |
| Fischar / Alliance Hea...  | Acetone          | 1019101      | 1              |
| fischar / ahd              | Acetone          | 1017092      | 2              |
| Fischar / Alliance Heal... | Acetone          | 4206012      | 1              |
| Fischar / Alliance Heal... | Acetone          | 4206071      | 1              |
| Fischar / Gehe             | Acetone          | 1015062      | 1              |
| Fischar / Gehe             | Acetone          | 4207013      | 1              |
| Fischar / Geilenkirchen    | Acetone          | 1010012      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Fischar / Sanacorp         | Acetone          | 4207041      | 1              |
| Fischar Anzag              | Acetone          | 90205/2      | 1              |
| Fischar Anzag              | Acetone          | 1(4207102)   | 1              |
| Fischar GmbH               | Acetone          | 1016101      | 1              |
| Fischar GmbH               | Acetone          | 1018052      | 1              |
| Fischar GmbH/Krieger       | Acetone          | 4206071      | 1              |
| Fischar/ Anzag             | Acetone          | 2(4208084)   | 1              |
| Fischar/ Krieger           | Acetone          | 4208021      | 1              |
| Fischar/ Krieger           | Acetone          | 4208092      | 1              |
| Fischar/ Now               | Acetone          | 4203111      | 1              |
| Fischar/ Noweda            | Acetone          | 1018021      | 1              |
| Fischar/ Noweda            | Acetone          | 1018011      | 1              |
| Fischar/ Noweda            | Acetone          | 1018101      | 1              |
| Fischar/ Noweda            | Acetone          | 4208041      | 1              |
| Fischar/ Phönix            | Acetone          | 4207012      | 1              |
| fishar/AHD                 | Acetone          | 10180315628  | 1              |
| Fischar/Alliance Heathc... | Acetone          | 4206011      | 1              |
| Fischar/E&J                | Acetone          | 4206071      | 1              |
| Fischar/E&J                | Acetone          | 4207071      | 1              |
| Fischar/Fiebig             | Acetone          | 4207012      | 1              |
| Fischar/Fiebig             | Acetone          | 4207073      | 1              |
| Fischar/Fiebig             | Acetone          | 4208062      | 1              |
| fishar/Gehe                | Acetone          | 4206011      | 1              |
| Fischar/Gehe               | Acetone          | 4202101      | 1              |
| Fischar/Gehe               | Acetone          | 4203031      | 3              |
| Fischar/Gehe               | Acetone          | 4203101      | 1              |
| Fischar/Gehe               | Acetone          | 4204031      | 1              |
| Fischar/Gehe               | Acetone          | 4204071      | 1              |
| Fischar/Gehe               | Acetone          | 4204032      | 1              |
| Fischar/Gehe               | Acetone          | 4205092      | 1              |
| Fischar/Gehe               | Acetone          | 4205032      | 1              |
| Fischar/Gehe               | Acetone          | 1016051      | 1              |
| Fischar/Gehe               | Acetone          | 4207043      | 1              |
| Fischar/Gehe               | Acetone          | 1018052      | 1              |
| Fischar/Gehe               | Acetone          | 4208091      | 1              |
| Fischar/Gehe               | Acetone          | 4209032      | 1              |
| Fischar/Gehe               | Acetone          | 4209052      | 1              |
| Fischar/Gehe               | Acetone          | 4205071      | 1              |
| Fischar/Jenne              | Acetone          | 1018062      | 1              |
| Fischar/Kehr               | Acetone          | 4207042      | 1              |
| Fischar/Kehr               | Acetone          | 4209031      | 1              |
| Fischar/Kehr               | Acetone          | 4200011      | 1              |
| fishar/Noweda              | Acetone          | 4208091      | 3              |
| Fischar/Noweda             | Acetone          | 4203101      | 1              |
| Fischar/Noweda             | Acetone          | 4205062      | 1              |
| Fischar/Noweda             | Acetone          | 4206092      | 1              |
| Fischar/Noweda             | Acetone          | 4207011      | 1              |
| Fischar/Noweda             | Acetone          | 1018111      | 1              |
| Fischar/Noweda             | Acetone          | 1018091      | 1              |
| Fischar/Noweda             | Acetone          | 4208121      | 2              |
| Fischar/Noweda             | Acetone          | 4209101      | 1              |
| Fischar/Noweda             | Acetone          | 4200011      | 2              |
| Fischar/Noweda             | Acetone          | 1010061      | 1              |
| Fischar/Noweda             | Acetone          | 4200072      | 2              |
| Fischar/Phoenix            | Acetone          | 4205031      | 1              |
| Fischar/Phoenix            | Acetone          | 4207013      | 1              |
| Fischar/Phoenix            | Acetone          | 4208041      | 3              |
| Fischar/Phoenix            | Acetone          | 4208061      | 1              |
| Fischar/Phoenix            | Acetone          | 4208092      | 1              |
| Fischar/Phoenix            | Acetone          | 4209032      | 1              |

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| Supplier             | Substance | Batch      | Spectra |
|----------------------|-----------|------------|---------|
| Fischar/Phoenix      | Acetone   | 4209031    | 1       |
| Fischar/Phönix       | Acetone   | 4204012    | 2       |
| Fischar/Phönix       | Acetone   | 4206011    | 1       |
| Fischar/Phönix       | Acetone   | 4206041    | 1       |
| Fischar/Phönix       | Acetone   | 4205072    | 1       |
| Fischar/Phönix       | Acetone   | 1017092    | 1       |
| Fischar/Phönix       | Acetone   | 1018021    | 1       |
| Fischar/Phönix       | Acetone   | 4206071    | 1       |
| Fischar/Phönix       | Acetone   | 4208021    | 1       |
| Fischar/Phönix       | Acetone   | 1918052    | 1       |
| Fischar/Phönix       | Acetone   | 1018081    | 1       |
| Fischar/Phönix       | Acetone   | 1019041    | 2       |
| Fischar/Phönix       | Acetone   | 4200031    | 1       |
| Fischar/PX           | Acetone   | 4209102    | 1       |
| Fischar/Sanacorp     | Acetone   | 1019071    | 1       |
| Fischbar             | Acetone   | 17091206   | 1       |
| Fischbar             | Acetone   | 22091201   | 1       |
| Fischbar             | Acetone   | 2101205    | 1       |
| Fischbar             | Acetone   | 4101302    | 1       |
| Fischbar             | Acetone   | 1016041    | 1       |
| Fischbar             | Acetone   | 4208121    | 1       |
| fischer              | Acetone   | 4206061    | 1       |
| Fischer              | Acetone   | A-040613-3 | 1       |
| Fischer              | Acetone   | 4205032    | 1       |
| Fischer              | Acetone   | 1015081    | 1       |
| Fischer              | Acetone   | 1016051    | 1       |
| Fischer              | Acetone   | 1016101    | 1       |
| Fischer              | Acetone   | 4207102    | 1       |
| Fischer              | Acetone   | 1018031    | 1       |
| Fischer              | Acetone   | 4209031    | 1       |
| Fischer GmbH/Phönix  | Acetone   | 4207041    | 1       |
| Fischer/Alliance     | Acetone   | 1018021    | 1       |
| fischer/Anzag        | Acetone   | 4202061    | 1       |
| fischer/Anzag        | Acetone   | 4203032    | 2       |
| Fischer/Fiebig       | Acetone   | 4207102    | 1       |
| Fischer/Gehe         | Acetone   | 4201051    | 1       |
| Fischer/Gehe         | Acetone   | 4204091    | 1       |
| Fischer/Gehe         | Acetone   | 1015041    | 1       |
| Fischer/Gehe         | Acetone   | 4209031    | 1       |
| Fischer/Gehe 3.11.15 | Acetone   | 4205062    | 1       |
| Fischer/Phönix       | Acetone   | 4209052    | 1       |
| Fischer/Sanacorp     | Acetone   | 420301     | 1       |
| fishar/noweda        | Acetone   | 1019012    | 2       |
| fishar/Phoenix       | Acetone   | 4208022    | 2       |
| Gehe                 | Acetone   | 11226B     | 1       |
| Gehe                 | Acetone   | 11256B     | 1       |
| Gehe                 | Acetone   | 11263B     | 1       |
| Gehe                 | Acetone   | 4207013    | 1       |
| Gehe                 | Acetone   | 11323B     | 1       |
| Gehe                 | Acetone   | 11247B     | 1       |
| GEHE                 | Acetone   | 4202052    | 1       |
| GEHE                 | Acetone   | 11308B     | 1       |
| Gehe / Fischar       | Acetone   | 1017081    | 1       |
| Caelo                | Acetone   | 11260B     | 1       |
| Gehe/Fischar         | Acetone   | 90110/2    | 1       |
| Gehe/Fischar         | Acetone   | 4207012    | 1       |
| Gehe/Fischar         | Acetone   | 1019041    | 1       |
| Gehe/Hedinger        | Acetone   | 11272B     | 1       |
| Gehe/Hedinger        | Acetone   | 11277B     | 1       |
| Geibo                | Acetone   | 4207041    | 1       |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------|------------------|--------------|----------------|
| H.Lamotte/Noweda | Acetone          | 11210B       | 2              |
| Hed              | Acetone          | 11203B       | 2              |
| Heding./Phoenix  | Acetone          | 11330B       | 1              |
| hedinger         | Acetone          | 11210B       | 4              |
| hedinger         | Acetone          | 11218B       | 2              |
| hedinger         | Acetone          | 11252B       | 2              |
| hedinger         | Acetone          | 11250B       | 1              |
| hedinger         | Acetone          | 11271B       | 1              |
| hedinger         | Acetone          | 11283B       | 1              |
| hedinger         | Acetone          | 11277B       | 1              |
| hedinger         | Acetone          | 11341B       | 1              |
| Hedinger         | Acetone          | 11134B       | 1              |
| Hedinger         | Acetone          | 2704211002   | 1              |
| Hedinger         | Acetone          | 11143B       | 3              |
| Hedinger         | Acetone          | 11158B       | 3              |
| Hedinger         | Acetone          | 11152B       | 1              |
| Hedinger         | Acetone          | 11148B       | 1              |
| Hedinger         | Acetone          | 11168B       | 1              |
| Hedinger         | Acetone          | 18011306     | 1              |
| Hedinger         | Acetone          | 11163B       | 1              |
| Hedinger         | Acetone          | 111688       | 1              |
| Hedinger         | Acetone          | 11173B       | 13             |
| Hedinger         | Acetone          | 111738       | 2              |
| Hedinger         | Acetone          | 19041301     | 1              |
| Hedinger         | Acetone          | 4061306      | 1              |
| Hedinger         | Acetone          | 11177B       | 2              |
| Hedinger         | Acetone          | 11182B       | 2              |
| Hedinger         | Acetone          | 2713M1002    | 1              |
| Hedinger         | Acetone          | 111828       | 1              |
| Hedinger         | Acetone          | 11185B       | 2              |
| Hedinger         | Acetone          | 16081301     | 1              |
| Hedinger         | Acetone          | 11065B       | 1              |
| Hedinger         | Acetone          | 111888       | 1              |
| Hedinger         | Acetone          | 10091304     | 1              |
| Hedinger         | Acetone          | 11188B       | 4              |
| Hedinger         | Acetone          | 11187B       | 2              |
| Hedinger         | Acetone          | 11195B       | 2              |
| Hedinger         | Acetone          | 111938       | 1              |
| Hedinger         | Acetone          | 11193B       | 1              |
| Hedinger         | Acetone          | 11199B       | 4              |
| Hedinger         | Acetone          | 11200B       | 2              |
| Hedinger         | Acetone          | 16061404     | 1              |
| Hedinger         | Acetone          | 220114       | 1              |
| Hedinger         | Acetone          | 25071411     | 1              |
| Hedinger         | Acetone          | 11210B       | 6              |
| Hedinger         | Acetone          | 112108       | 1              |
| Hedinger         | Acetone          | 16101402     | 1              |
| Hedinger         | Acetone          | 11215B       | 3              |
| Hedinger         | Acetone          | 8121401      | 1              |
| Hedinger         | Acetone          | 11232B       | 6              |
| Hedinger         | Acetone          | 11241b       | 1              |
| Hedinger         | Acetone          | 11250B       | 5              |
| Hedinger         | Acetone          | 123456       | 1              |
| Hedinger         | Acetone          | 11139B       | 1              |
| Hedinger         | Acetone          | 11226B       | 1              |
| Hedinger         | Acetone          | 11234B       | 2              |
| Hedinger         | Acetone          | 11247B       | 4              |
| Hedinger         | Acetone          | 11252B       | 1              |
| Hedinger         | Acetone          | 11256B       | 3              |
| Hedinger         | Acetone          | 11260B       | 2              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Hedinger                  | Acetone          | 1261B        | 1              |
| Hedinger                  | Acetone          | 11258B       | 1              |
| Hedinger                  | Acetone          | 11261B       | 1              |
| Hedinger                  | Acetone          | 15230        | 1              |
| Hedinger                  | Acetone          | 11272B       | 2              |
| Hedinger                  | Acetone          | 112618       | 2              |
| Hedinger                  | Acetone          | 11271B       | 1              |
| Hedinger                  | Acetone          | 11277B       | 3              |
| Hedinger                  | Acetone          | 11278B       | 6              |
| Hedinger                  | Acetone          | 112718       | 2              |
| Hedinger                  | Acetone          | 112788       | 1              |
| Hedinger                  | Acetone          | 11282B       | 2              |
| Hedinger                  | Acetone          | 11283B       | 3              |
| Hedinger                  | Acetone          | 11288B       | 2              |
| Hedinger                  | Acetone          | 112898       | 2              |
| Hedinger                  | Acetone          | 11295B       | 1              |
| Hedinger                  | Acetone          | 11289B       | 6              |
| Hedinger                  | Acetone          | 11301B       | 1              |
| Hedinger                  | Acetone          | 11302B       | 6              |
| Hedinger                  | Acetone          | 11297B       | 2              |
| Hedinger                  | Acetone          | 11308B       | 1              |
| Hedinger                  | Acetone          | 11319B       | 4              |
| Hedinger                  | Acetone          | 113198       | 1              |
| Hedinger                  | Acetone          | 11323B       | 7              |
| Hedinger                  | Acetone          | 11322B       | 1              |
| Hedinger                  | Acetone          | 11331B       | 6              |
| Hedinger                  | Acetone          | 11328B       | 2              |
| Hedinger                  | Acetone          | 11333B       | 5              |
| Hedinger                  | Acetone          | 11330B       | 1              |
| Hedinger                  | Acetone          | 113318       | 1              |
| Hedinger                  | Acetone          | 11336B       | 4              |
| Hedinger                  | Acetone          | 11341B       | 1              |
| Hedinger                  | Acetone          | 11349B       | 3              |
| Hedinger                  | Acetone          | 11361B       | 2              |
| Hedinger                  | Acetone          | 13364B       | 1              |
| Hedinger                  | Acetone          | 11236B       | 1              |
| Hedinger                  | Acetone          | 11242B       | 1              |
| Hedinger , Noweda         | Acetone          | 11168B       | 1              |
| Hedinger , Stuttgart      | Acetone          | 11182B       | 1              |
| Hedinger / Anzag          | Acetone          | 11283B       | 1              |
| Hedinger / Anzag          | Acetone          | 11288B       | 1              |
| Hedinger / Anzag          | Acetone          | 111323B      | 1              |
| Hedinger / Anzag          | Acetone          | 11336B       | 1              |
| Hedinger / Noveda         | Acetone          | 11289B       | 1              |
| Hedinger / Gehe           | Acetone          | 11173B       | 1              |
| Hedinger / Gehe           | Acetone          | 11282B       | 1              |
| Hedinger / Noweda         | Acetone          | 11203B       | 1              |
| Hedinger / Noweda         | Acetone          | 11210B       | 2              |
| Hedinger / Noweda         | Acetone          | 11199B       | 1              |
| Hedinger / Noweda         | Acetone          | 112158       | 1              |
| Hedinger / Noweda         | Acetone          | 11226B       | 1              |
| Hedinger / Noweda         | Acetone          | 11319B       | 1              |
| Hedinger / Noweda         | Acetone          | 11328B       | 1              |
| Hedinger / Noweda         | Acetone          | 11333B       | 1              |
| Hedinger / Noweda 26.9... | Acetone          | 11302B       | 1              |
| Hedinger / Phoenix        | Acetone          | 11195B       | 1              |
| Hedinger / Sanacorp       | Acetone          | 11188B       | 1              |
| Hedinger / Sanacorp       | Acetone          | 112038       | 1              |
| Hedinger / Sanacorp       | Acetone          | 11210B       | 1              |
| Hedinger / Sanacorp       | Acetone          | 11333B       | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Hedinger / Sanacorp        | Acetone          | 11336B       | 1              |
| Hedinger / Sanacorp        | Acetone          | 11341B       | 1              |
| Hedinger / Sanacorp        | Acetone          | 4209102      | 1              |
| Hedinger / Sana            | Acetone          | 11323B       | 1              |
| Hedinger AHD 08.06.17 E... | Acetone          | 11286B       | 1              |
| Hedinger GmbH              | Acetone          | 11271B       | 1              |
| Hedinger GmbH/Phenix       | Acetone          | 112189B      | 1              |
| Hedinger GmbH/Phenix       | Acetone          | 11302B       | 1              |
| Hedinger GmbH/Phenix       | Acetone          | 11330B       | 1              |
| Hedinger GmbH/Phenix       | Acetone          | 11308B       | 1              |
| Hedinger Jenne             | Acetone          | 11158B       | 1              |
| Hedinger Jenne             | Acetone          | 11193B       | 1              |
| Hedinger Noweda 13.7.18... | Acetone          | 11302B       | 1              |
| Hedinger Phönix            | Acetone          | 11200B       | 1              |
| Hedinger Phönix            | Acetone          | 11308B       | 1              |
| Hedinger über Phoenix      | Acetone          | 11247B       | 1              |
| Hedinger, Heiligenwiese... | Acetone          | 11148B       | 1              |
| Hedinger, Noweda           | Acetone          | 11163B       | 1              |
| Hedinger, Noweda           | Acetone          | 11188B       | 1              |
| Hedinger/                  | Acetone          | 11333B       | 1              |
| Hedinger/ Anzag            | Acetone          | 11158B       | 1              |
| Hedinger/ Gehe             | Acetone          | 11295B       | 1              |
| Hedinger/ Gehe             | Acetone          | 11308B       | 1              |
| Hedinger/ Jenne            | Acetone          | 11200B       | 1              |
| Hedinger/ Noweda           | Acetone          | 11177B       | 1              |
| Hedinger/ Noweda           | Acetone          | 11187B       | 1              |
| Hedinger/ Noweda           | Acetone          | 11283B       | 1              |
| Hedinger/ Noweda           | Acetone          | 11302B       | 1              |
| Hedinger/ NOWEDA           | Acetone          | 11252B       | 1              |
| Hedinger/ Phoenix          | Acetone          | 1214M1002    | 1              |
| Hedinger/ Phönix           | Acetone          | 11341B       | 3              |
| Hedinger/ Sanacorp         | Acetone          | 11336B       | 1              |
| Hedinger/ Sanacorp         | Acetone          | 11345B       | 3              |
| Hedinger/ Sanacorp         | Acetone          | 11247B       | 1              |
| Hedinger/ VDL              | Acetone          | 11277B       | 1              |
| Hedinger/ VDL              | Acetone          | 111328B      | 1              |
| Hedinger/ VDL              | Acetone          | 11328B       | 1              |
| Hedinger/AHD               | Acetone          | 110958A2010  | 1              |
| Hedinger/AHD               | Acetone          | 11158B       | 1              |
| Hedinger/AHD               | Acetone          | 11227B       | 1              |
| Hedinger/AHD               | Acetone          | 11282B       | 1              |
| Hedinger/AHD               | Acetone          | 11333B       | 1              |
| Hedinger/AHD               | Acetone          | 11349B       | 1              |
| Hedinger/Alliance          | Acetone          | 11297B       | 1              |
| Hedinger/Alliance          | Acetone          | 11295B       | 1              |
| Hedinger/Alliance          | Acetone          | 11323B       | 1              |
| Hedinger/Alliance          | Acetone          | 11333B       | 2              |
| Hedinger/Alliance          | Acetone          | 11328B       | 1              |
| Hedinger/Alliance Haelt... | Acetone          | 11277B       | 1              |
| Hedinger/Anzag             | Acetone          | 11173B       | 1              |
| Hedinger/Anzg              | Acetone          | 11256B       | 1              |
| Caelo                      | Acetone          | 11271B       | 2              |
| Hedinger/Fiebig            | Acetone          | 11241        | 1              |
| Hedinger/Gehe              | Acetone          | 11158B       | 1              |
| Hedinger/Gehe              | Acetone          | 11177B       | 1              |
| Hedinger/Gehe              | Acetone          | 11210B       | 1              |
| Hedinger/Gehe              | Acetone          | 311092       | 1              |
| Hedinger/Gehe              | Acetone          | 11227B       | 1              |
| Hedinger/Geibo             | Acetone          | 11185B       | 1              |
| Hedinger/Geibo             | Acetone          | 11282B       | 1              |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------|------------------|--------------|----------------|
| Hedinger/Geibo   | Acetone          | 11336B       | 1              |
| Hedinger/Jenne   | Acetone          | 11358B       | 1              |
| Hedinger/Kehr    | Acetone          | 11227B       | 1              |
| Hedinger/Krieger | Acetone          | 11308B       | 2              |
| Hedinger/Now     | Acetone          | 11289B       | 1              |
| Hedinger/Noweda  | Acetone          | 111528       | 1              |
| Hedinger/Noweda  | Acetone          | 11168B       | 1              |
| Hedinger/Noweda  | Acetone          | 111858       | 1              |
| Hedinger/Noweda  | Acetone          | 11210B       | 1              |
| Hedinger/Noweda  | Acetone          | 11224B       | 1              |
| Hedinger/Noweda  | Acetone          | 11226B       | 2              |
| Hedinger/Noweda  | Acetone          | 11232B       | 2              |
| Hedinger/Noweda  | Acetone          | 11252B       | 1              |
| Hedinger/Noweda  | Acetone          | 11263B       | 1              |
| Hedinger/Noweda  | Acetone          | 11272B       | 1              |
| Hedinger/Noweda  | Acetone          | 11271B       | 2              |
| Hedinger/Noweda  | Acetone          | 112868       | 1              |
| Hedinger/Noweda  | Acetone          | 11308B       | 1              |
| Hedinger/Noweda  | Acetone          | 11323B       | 1              |
| Hedinger/Noweda  | Acetone          | 11333B       | 2              |
| Hedinger/Noweda  | Acetone          | 11341B       | 1              |
| Hedinger/Noweda  | Acetone          | 11336B       | 5              |
| Hedinger/Noweda  | Acetone          | 11349B       | 2              |
| Hedinger/Noweda  | Acetone          | 11322B       | 2              |
| Hedinger/Noweda  | Acetone          | 11358B       | 1              |
| Hedinger/Otto    | Acetone          | 111738       | 1              |
| Hedinger/Otto    | Acetone          | 11193B       | 1              |
| Hedinger/Phoenix | Acetone          | 11185B       | 1              |
| Hedinger/Phoenix | Acetone          | 11187B       | 1              |
| Hedinger/Phoenix | Acetone          | 11215B       | 1              |
| Hedinger/Phoenix | Acetone          | 11224B       | 1              |
| Hedinger/Phoenix | Acetone          | 11232B       | 1              |
| Hedinger/Phoenix | Acetone          | 11260B       | 1              |
| Hedinger/Phoenix | Acetone          | 11278B       | 1              |
| Hedinger/Phoenix | Acetone          | 11272B       | 1              |
| Hedinger/Phoenix | Acetone          | 11283B       | 1              |
| Hedinger/Phoenix | Acetone          | 11289B       | 1              |
| Hedinger/Phoenix | Acetone          | 112893       | 1              |
| Hedinger/Phoenix | Acetone          | 112958       | 1              |
| Hedinger/Phoenix | Acetone          | 11302B       | 1              |
| Hedinger/Phoenix | Acetone          | 11308B       | 1              |
| Hedinger/Phoenix | Acetone          | 11341B       | 1              |
| Hedinger/Phoenix | Acetone          | 11361B       | 1              |
| Hedinger/phönix  | Acetone          | 140131/3     | 1              |
| Hedinger/Phönix  | Acetone          | 11168B       | 1              |
| Hedinger/Phönix  | Acetone          | 11173B       | 2              |
| Hedinger/Phönix  | Acetone          | 11182B       | 1              |
| Hedinger/Phönix  | Acetone          | 11195B       | 1              |
| Hedinger/Phönix  | Acetone          | 11224B       | 1              |
| Hedinger/Phönix  | Acetone          | 11250B       | 1              |
| Hedinger/Phönix  | Acetone          | 11232B       | 1              |
| Hedinger/Phönix  | Acetone          | 11234B       | 1              |
| Hedinger/Phönix  | Acetone          | 11260B       | 1              |
| Hedinger/Phönix  | Acetone          | 11278B       | 1              |
| Hedinger/Phönix  | Acetone          | 11286B       | 1              |
| Hedinger/Phönix  | Acetone          | 11282B       | 1              |
| Hedinger/Phönix  | Acetone          | 112958       | 1              |
| Hedinger/Phönix  | Acetone          | 11289B       | 2              |
| Hedinger/Phönix  | Acetone          | 11302B       | 3              |
| Hedinger/Phönix  | Acetone          | 11319B       | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Hedinger/Phönix            | Acetone          | 11323B       | 1              |
| Hedinger/Phönix            | Acetone          | 11328B       | 2              |
| Hedinger/Phönix            | Acetone          | 11361B       | 1              |
| Hedinger/Phönix            | Acetone          | 112838       | 1              |
| Hedinger/Phönix            | Acetone          | 11372B       | 1              |
| HEDINGER/Phönix            | Acetone          | 11260B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11185B       | 2              |
| Hedinger/Sanacorp          | Acetone          | 11187B       | 2              |
| Hedinger/Sanacorp          | Acetone          | 11200B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11210B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11215B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11232B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 112332B      | 1              |
| Hedinger/Sanacorp          | Acetone          | 11234B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 112788       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11302B       | 1              |
| Hedinger/Sanacorp          | Acetone          | 11349B       | 1              |
| Hedinger/Spangro           | Acetone          | 11295B       | 1              |
| Hedinger/V.d.L.            | Acetone          | 11199B       | 1              |
| Hedonher/Sanacorp          | Acetone          | 113338       | 1              |
| Herdinger                  | Acetone          | 11210B       | 1              |
| Herdinger Phönix           | Acetone          | 11173B       | 1              |
| Holdermann                 | Acetone          | 11158B       | 1              |
| Hubertus Apotheke          | Acetone          | 4205062      | 1              |
| Infectopharm               | Acetone          | 11227B       | 1              |
| JENNE                      | Acetone          | 11302B       | 2              |
| Kehr/A. Hedinger           | Acetone          | 112828       | 1              |
| Kögl                       | Acetone          | 162005152015 | 1              |
| L10                        | Acetone          | 11302B       | 2              |
| L12                        | Acetone          | 11322B       | 1              |
| L12/Apoth.E.Bartel         | Acetone          | 11272B       | 1              |
| Merck                      | Acetone          | 212K17501605 | 1              |
| Noweda                     | Acetone          | 901101       | 1              |
| Noweda                     | Acetone          | 11224B       | 1              |
| Noweda                     | Acetone          | 11226B       | 1              |
| Noweda                     | Acetone          | 4207013      | 1              |
| Noweda                     | Acetone          | 4207073      | 1              |
| Noweda                     | Acetone          | 4208092      | 1              |
| Noweda                     | Acetone          | 11323B       | 1              |
| Noweda                     | Acetone          | 4209052      | 1              |
| Caelo                      | Acetone          | 11349B       | 1              |
| Noweda/Hedinger            | Acetone          | 11252B       | 1              |
| Noweda/Hedinger            | Acetone          | 11272B       | 1              |
| Noweda/Hedinger            | Acetone          | 112883       | 1              |
| Noweda/Hedinger            | Acetone          | 11302B       | 2              |
| Noweda/Hedinger            | Acetone          | 11308B       | 1              |
| Noweda/Hedinger            | Acetone          | 11333B       | 3              |
| O.Fischer GmbH/Anzag 25... | Acetone          | 4209092      | 1              |
| otto fischar               | Acetone          | 12011501     | 1              |
| otto fischar               | Acetone          | 14031502     | 1              |
| otto fischar               | Acetone          | 23061503     | 1              |
| otto fischar               | Acetone          | 1019011      | 1              |
| otto fischar               | Acetone          | 1015081      | 1              |
| otto Fischar               | Acetone          | 4209031      | 1              |
| Otto fischar               | Acetone          | 22121812     | 1              |
| Otto Fischar               | Acetone          | 90110/1      | 1              |
| Otto Fischar               | Acetone          | 90205/1      | 1              |
| Otto Fischar               | Acetone          | 4203101      | 1              |
| Otto Fischar               | Acetone          | 1016031      | 1              |
| Otto Fischar               | Acetone          | 4204091      | 1              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Otto Fischar                | Acetone          | 1018012      | 1              |
| Otto Fischar                | Acetone          | 1018062      | 1              |
| Otto Fischar                | Acetone          | 4208061      | 1              |
| Otto Fischar                | Acetone          | 1018081      | 1              |
| Otto Fischar                | Acetone          | 4208122      | 1              |
| Otto Fischar                | Acetone          | 9011/01      | 1              |
| Otto Fischar / Noweda       | Acetone          | 4206012      | 1              |
| Otto Fischar gmbh           | Acetone          | 1017092      | 1              |
| Otto Fischar GmbH           | Acetone          | 4204032      | 1              |
| Otto Fischar GmbH           | Acetone          | 4206091      | 1              |
| Otto Fischar GmbH           | Acetone          | 4207041      | 1              |
| Otto Fischar GmbH           | Acetone          | 1017101      | 2              |
| Otto Fischar GmbH           | Acetone          | 4207072      | 1              |
| Otto Fischar GmbH           | Acetone          | 1018062      | 1              |
| Otto Fischar GmbH & Co ...  | Acetone          | 4205012      | 1              |
| Otto Fischar GmbH & Co...   | Acetone          | 4204051      | 1              |
| Otto Fischar GmbH & Co...   | Acetone          | 4206012      | 1              |
| Otto Fischar GmbH & Co...   | Acetone          | 4205071      | 1              |
| Otto Fischar GmbH & Co...   | Acetone          | 1015041      | 1              |
| Otto Fischar GmbH & Co...   | Acetone          | 1018011      | 1              |
| Otto Fischar GmbH & Co. KG  | Acetone          | 1018051      | 1              |
| Otto Fischar GmbH & Co. ... | Acetone          | 4209031      | 1              |
| Otto Fischar GmbH & Co. ... | Acetone          | 4200091      | 1              |
| Otto Fischar GmbH / Gehe    | Acetone          | 4205092      | 1              |
| Otto Fischar GmbH&Co.KG...  | Acetone          | 4204032      | 1              |
| Otto Fischar GmbH/AHD       | Acetone          | 4204092      | 1              |
| Otto Fischar GmbH/Phönix    | Acetone          | 4208091      | 1              |
| Otto Fischar GmbH/Phönix    | Acetone          | 4209091      | 1              |
| Otto Fischar GmbH/Sanacorp  | Acetone          | 1018121      | 1              |
| Otto Fischar/ Phönix        | Acetone          | 4209102      | 1              |
| Otto Fischar/ Sanacorp      | Acetone          | 4207042      | 2              |
| Otto Fischar/Anzag          | Acetone          | 4208062      | 1              |
| Otto Fischar/Ebert          | Acetone          | 4205071      | 1              |
| otto fischer/gehe           | Acetone          | 4204032      | 1              |
| Otto Fischar/Gehe           | Acetone          | 4205062      | 1              |
| Otto Fischar/Gehe           | Acetone          | 4207041      | 2              |
| Otto Fischar/Ge-hh          | Acetone          | 4209032      | 1              |
| Otto Fischar/Phoenix        | Acetone          | 4202112      | 1              |
| Otto Fischar/Phönix         | Acetone          | 4205012      | 1              |
| Otto Fischar/Phönix         | Acetone          | 1018091      | 1              |
| Otto Fischar/Phönix         | Acetone          | 1018111      | 1              |
| Otto Fischar/Phönix         | Acetone          | 1019011      | 2              |
| Otto Fischar/Phönix         | Acetone          | 4209092      | 1              |
| Otto Fischar/Sanacorp       | Acetone          | 1017101      | 3              |
| Otto Fischbar               | Acetone          | 4204052      | 1              |
| otto fischer                | Acetone          | 4206071      | 1              |
| Otto Fischer                | Acetone          | 4206061      | 1              |
| Otto Fischer Gehe           | Acetone          | 4209091      | 1              |
| otto fischer noweda 17...   | Acetone          | 1018062      | 1              |
| Otto Fischer GmbH           | Acetone          | 4205092      | 1              |
| Otto Fischer GmbH/Gehe      | Acetone          | 4207012      | 1              |
| Otto Fischer GmbH/Gehe      | Acetone          | 4207071      | 1              |
| Otto Fischer/ Gehe          | Acetone          | 4203101      | 1              |
| Otto Fischer/ Gehe          | Acetone          | 4204091      | 1              |
| Otto Fischer/Krieger        | Acetone          | 4207071      | 1              |
| Otto Fischer/Sanacorp       | Acetone          | 1018041      | 1              |
| OttoFischer/Phönix          | Acetone          | 4208061      | 1              |
| Ph/Hedinger                 | Acetone          | 11341B       | 1              |
| Phoen                       | Acetone          | 4208121      | 2              |
| Phoenix                     | Acetone          | 11234B       | 1              |

*continued on the next page*

continued from previous page

| Supplier                    | Substance | Batch   | Spectra |
|-----------------------------|-----------|---------|---------|
| Phoenix                     | Acetone   | 11271b  | 1       |
| Phoenix                     | Acetone   | 11283B  | 1       |
| Phoenix                     | Acetone   | 11289B  | 1       |
| PHOENIX                     | Acetone   | 11195B  | 2       |
| Phoenix/Cealo               | Acetone   | 112898  | 1       |
| Phoenix/Fischar             | Acetone   | 106091  | 1       |
| Phoenix/Fischar             | Acetone   | 1019082 | 1       |
| Phönix                      | Acetone   | 4202112 | 1       |
| Phönix                      | Acetone   | 11250B  | 1       |
| Phönix                      | Acetone   | 1016111 | 2       |
| Phönix                      | Acetone   | 4209031 | 1       |
| Phönix                      | Acetone   | 11242B  | 1       |
| PHÖNIX                      | Acetone   | 11331B  | 1       |
| Phönix Hedinger             | Acetone   | 11295B  | 1       |
| Phönix W.E:2.03.18 E...     | Acetone   | 11271B  | 1       |
| Phönix / Hedinger           | Acetone   | 11283B  | 1       |
| Phönix Gotha                | Acetone   | 4204032 | 1       |
| Phönix/Fischar              | Acetone   | 4202062 | 1       |
| Phönix/Fischer              | Acetone   | 4202052 | 1       |
| Sana Hedinger 22.08.19 ...  | Acetone   | 11333B  | 1       |
| Sanacorp                    | Acetone   | 4202062 | 1       |
| Sanacorp                    | Acetone   | 11286B  | 1       |
| Sanacorp                    | Acetone   | 11278B  | 1       |
| Sanacorp                    | Acetone   | 11271B  | 1       |
| Sanacorp                    | Acetone   | 4206091 | 1       |
| Sanacorp                    | Acetone   | 11288B  | 1       |
| Sanacorp                    | Acetone   | 11323B  | 1       |
| Caelo                       | Acetone   | 11215B  | 2       |
| Sanacorp / Hedinger WE:...  | Acetone   | 11227B  | 1       |
| Sanacorp Hedinger 13.3...   | Acetone   | 11323B  | 1       |
| sanacorp, 6,64EUR, 20.04... | Acetone   | 11256B  | 1       |
| Sanacorp/ Fischar           | Acetone   | 4203111 | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11308B  | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11322B  | 2       |
| Sanacorp/ Hedinger          | Acetone   | 11331B  | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11328B  | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11341B  | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11349B  | 1       |
| Sanacorp/ Hedinger          | Acetone   | 11358B  | 1       |
| Caelo                       | Acetone   | 11152b  | 1       |
| Caelo                       | Acetone   | 59/AKD1 | 1       |
| Sanacorp/Phoenix            | Acetone   | 11210B  | 1       |
| Seege/ Jenne                | Acetone   | 11199B  | 2       |
| Stumpf/Hedinger             | Acetone   | 11210B  | 1       |
| Caelo                       | Acetone   |         | 1       |
| Fischar / Gehe              | Acetone   |         | 1       |
| Hiperscan                   | Acetone   |         | 1       |
|                             | Acetone   | 281013A | 1       |
| Sanacorp                    | Acetone   |         | 2       |

- 240 462 spectra from 1121 *Apo-Ident* customers from a total of 46 719 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Acetone* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Acetone* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 179           | 0              | 63 760        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 892           | 9              | 240 462       |

The substance/substance group *Acetone* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6480 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.0011 % (> 98.6681 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Acetone* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance          | Distance in main model | Distance in second-stage model |
|--------------------|------------------------|--------------------------------|
| Dimethyl sulfoxide | 131.44                 | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Acetone* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31575     | 31575               | 0.00                         | 156.52                          |
| 31793     | 31575               | 2.84                         | 156.35                          |
| 31796     | 31575               | 6.18                         | 154.89                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Acorus oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31159-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Acorus oil; Oleum calami rectific.

### Special notes

When selecting the *Acorus oil* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Acorus oil                | 3      | 1      | 0      |

## Second-stage model

For differentiation of the substance/substance group *Acorus oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Acorus oil*:

| Supplier | Substance  | Batch    | Sample ID | Spectra | Certificate |
|----------|------------|----------|-----------|---------|-------------|
| Caelo    | Acorus oil | 12356706 | 31159     | 40      | 1404623     |
| Caelo    | Acorus oil | 15081901 | 32180     | 40      | 20150320    |
| Caelo    | Acorus oil | 15081901 | 32348     | 40      | 20150320    |
| Caelo    | Acorus oil | 15081901 | 33251     | 40      | 20150320    |
| Caelo    | Acorus oil | 15081901 | 33835     | 40      | 20150320    |
| Caelo    | Acorus oil | 172878   | 34704     | 40      | 20171017*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 240 spectra of 6 reference samples from the substance/substance group *Acorus oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 699 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Acorus oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance  | Batch    | Sample ID | Spectra |
|----------|------------|----------|-----------|---------|
| Caelo    | Acorus oil | 15081902 | 32347     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Acorus oil*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Acorus oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Acorus oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 240           | 0              | 63 699        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Acorus oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Acorus oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Bergamot oil                              | 22.21                     | —                                 |
| Cedar wood oil                            | 31.97                     | —                                 |
| Lavender oil                              | 35.01                     | —                                 |
| Coriander oil                             | 37.65                     | —                                 |
| Juniper oil                               | 37.87                     | —                                 |
| Verbena oil, nature-identical             | 40.40                     | —                                 |
| Caraway oil                               | 46.56                     | —                                 |
| Dwarf pine oil                            | 47.45                     | —                                 |
| Matricaria oil, rich in (-)-alpha-bisa... | 50.38                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Acorus oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31159     | 31159                  | 0.00                            | 39.17                              |
| 32180     | 31159                  | 4.97                            | 34.68                              |
| 32348     | 31159                  | 5.36                            | 32.83                              |
| 33251     | 31159                  | 5.21                            | 36.10                              |
| 33835     | 31159                  | 5.58                            | 37.32                              |
| 34704     | 34704                  | 0.00                            | 31.97                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **All-rac-alpha-tocopheryl acetate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31020-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

All-rac-alpha-tocopheryl acetate; int-rac-alpha-Tocopherylis acetate

### Special notes

When selecting the *All-rac-alpha-tocopheryl acetate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group        | Type A | Type B | Type C |
|----------------------------------|--------|--------|--------|
| All-rac-alpha-tocopheryl acetate | 6      | 11     | 197    |

## Second-stage model

For differentiation of the substance/substance group *All-rac-alpha-tocopheryl acetate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *All-rac-alpha-tocopheryl acetate*:

| Supplier | Substance           | Batch      | Sample ID | Spectra | Certificate |
|----------|---------------------|------------|-----------|---------|-------------|
| Caelo    | All-rac-alpha-to... | 12362307   | 31020     | 40      | 1402688     |
| Caelo    | All-rac-alpha-to... | 13396304   | 31371     | 40      | 20131211    |
| Euro OTC | All-rac-alpha-to... | 1411025-01 | 31646     | 58      | 20141216    |
| Euro OTC | All-rac-alpha-to... | 1512007    | 31817     | 60      | 20151216*   |
| Euro OTC | All-rac-alpha-to... | 1901048    | 34422     | 40      | 20190304*   |
| Euro OTC | All-rac-alpha-to... | 2002035    | 34828     | 40      | 20200311*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 278 spectra of 6 reference samples from the substance/substance group *All-rac-alpha-tocopheryl acetate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 661 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 480 spectra of 12 reference samples from the substance/substance group *All-rac-alpha-tocopheryl acetate*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



- Among them are spectra of independent samples from 11 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch   | Sample ID | Spectra |
|----------|---------------------------------|---------|-----------|---------|
| Caelo    | All-rac-alpha-tocopheryl ace... | 172397  | 33688     | 40      |
| Caelo    | All-rac-alpha-tocopheryl ace... | 180877  | 34223     | 40      |
| Caelo    | All-rac-alpha-tocopheryl ace... | 190620  | 34652     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1604060 | 32286     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1606011 | 32469     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1704014 | 33446     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1710024 | 33842     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1803012 | 34096     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 1910026 | 34750     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 2010025 | 35123     | 40      |
| Euro OTC | All-rac-alpha-tocopheryl ace... | 2105015 | 35493     | 40      |
| Caelo    | All-rac-alpha-tocopheryl ace... | 172397  | 33886     | 40      |

- 91 011 spectra from a total of 2005 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 905 spectra from 384 *Apo-Ident* customers from 208 batches from the substance/substance group *All-rac-alpha-tocopheryl acetate*.
- Among them are spectra of independent samples from 198 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                 | Substance                       | Batch         | Spectra |
|--------------------------|---------------------------------|---------------|---------|
| Caelo                    | All-rac-alpha-tocopheryl ace... | 12053803      | 6       |
| AHD                      | All-rac-alpha-tocopheryl ace... | 18087703      | 1       |
| AHD                      | All-rac-alpha-tocopheryl ace... | 18087710      | 1       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP15239006T   | 3       |
| Caelo                    | All-rac-alpha-tocopheryl ace... | 16128625      | 18      |
| Alliance health 05.01.15 | All-rac-alpha-tocopheryl ace... | 13396305      | 1       |
| Anzag                    | All-rac-alpha-tocopheryl ace... | AP16128607T   | 1       |
| Anzag                    | All-rac-alpha-tocopheryl ace... | 82943389      | 1       |
| ANZAG                    | All-rac-alpha-tocopheryl ace... | 12319401      | 1       |
| Anzag ek: 7.71           | All-rac-alpha-tocopheryl ace... | 11300002      | 1       |
| Caelo                    | All-rac-alpha-tocopheryl ace... | 1321702       | 1       |
| Apolda/Gehe              | All-rac-alpha-tocopheryl ace... | 18H20-B02     | 1       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP11300004T   | 5       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP12362305T   | 5       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP12362305    | 1       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP11300004    | 1       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP13396303T   | 6       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP14363403T   | 8       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP13396303    | 2       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP42555136WOT | 1       |
| Audor Pharma             | All-rac-alpha-tocopheryl ace... | AP161286T5735 | 1       |

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| Supplier     | Substance                       | Batch         | Spectra |
|--------------|---------------------------------|---------------|---------|
| Audor Pharma | All-rac-alpha-tocopheryl ace... | 12362305T     | 2       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | AP143634003   | 1       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | AP16128607T   | 3       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | AP42555136W0T | 2       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | ap16128607t   | 1       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | 2415E-02500   | 1       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | 13396303      | 1       |
| Audor Pharma | All-rac-alpha-tocopheryl ace... | AP161286T     | 3       |
| Bombastus    | All-rac-alpha-tocopheryl ace... | 17239704      | 1       |
| Brenntag     | All-rac-alpha-tocopheryl ace... | 101907        | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 18087703      | 18      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 11300005      | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 20231012-4    | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 11300001      | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 11043011      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 11043007      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 11300003      | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12053802      | 9       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12319402      | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12319042      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12362302      | 13      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12319401      | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 19071302      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 70913Toc      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 16091301      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 611toc        | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 13217201      | 13      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 13217202      | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 13217207      | 13      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 13396306      | 6       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14011512      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14363408      | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14101714      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14363401      | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14363409      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14363407      | 6       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 26011601      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 15239012      | 11      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 1612809       | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 16128610      | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 16128613      | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 17239702      | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 17239704      | 19      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 1704014-01    | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 17359201      | 12      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12091809      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 1628624       | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 1710024-02    | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | UT17040100    | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 18087710      | 15      |
| Caelo        | All-rac-alpha-tocopheryl ace... | 190620002     | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 192849004     | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 14076808      | 2       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 10247405      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 190620001     | 3       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 15239002      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 12362404      | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 1504020-01    | 4       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 160601102     | 1       |
| Caelo        | All-rac-alpha-tocopheryl ace... | 17359212      | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | All-rac-alpha-tocopheryl ace... | 190620003   | 7       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 12319403    | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 14076806    | 7       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 18087711    | 3       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 18087702    | 7       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 16128624    | 5       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1512007-01  | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15126801    | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 180877033   | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 13201102    | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15239001    | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1803012-01  | 3       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 13075202    | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1606011-02  | 3       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 14076813    | 4       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 14363402    | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 16128604    | 5       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 192849003   | 4       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1411025     | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1504020-02  | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15239011    | 6       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15238808    | 4       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 16128615    | 19      |
| Caelo                      | All-rac-alpha-tocopheryl ace... | Ap16128607T | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 17359211    | 7       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 19062004    | 21      |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 13217205    | 13      |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 7123623     | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 11300002    | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15238806    | 4       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 16128609    | 20      |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 16128614    | 9       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 17359203    | 15      |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 18087716    | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 20003759005 | 2       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 161286T     | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 14363410    | 5       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 15239010    | 8       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 19062003    | 8       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 3312M-02500 | 1       |
| Caelo                      | All-rac-alpha-tocopheryl ace... | 1813M-02500 | 1       |
| Caolo/Noweda               | All-rac-alpha-tocopheryl ace... | 16128610    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 12053802    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 13217202    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 15239011    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 18087704    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 18087711    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 18087710    | 2       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 18087703    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 19062004    | 3       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 18087702    | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 190620003   | 1       |
| Caesar & Loretz GmbH       | All-rac-alpha-tocopheryl ace... | 192849004   | 2       |
| Caesar & Loretz GmbH / ... | All-rac-alpha-tocopheryl ace... | 18087710    | 1       |
| Caesar & Loretz GmbH / ... | All-rac-alpha-tocopheryl ace... | 18087703    | 1       |
| Caesar & Loretz GmbH Hi... | All-rac-alpha-tocopheryl ace... | 11300004    | 1       |
| Caesar & Loretz GmbH/Gehe  | All-rac-alpha-tocopheryl ace... | 20003759003 | 1       |
| Caesar & Loretz GmbH/Ph... | All-rac-alpha-tocopheryl ace... | 18087711    | 1       |
| Caesar & Loretz GmbH/Sa... | All-rac-alpha-tocopheryl ace... | 19062004    | 1       |
| Caesar und Loretz          | All-rac-alpha-tocopheryl ace... | 19062003    | 1       |

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| Supplier                   | Substance                       | Batch                | Spectra |
|----------------------------|---------------------------------|----------------------|---------|
| Caleo                      | All-rac-alpha-tocopheryl ace... | 14363407             | 1       |
| DSM Nutritional Prod./...  | All-rac-alpha-tocopheryl ace... | 15E18-B07            | 1       |
| DSM Nutritional Prod./ ... | All-rac-alpha-tocopheryl ace... | 12E16-N06            | 1       |
| Ebert & Jacobi             | All-rac-alpha-tocopheryl ace... | 1901048              | 1       |
| EuRho/Phoenix              | All-rac-alpha-tocopheryl ace... | 14B03-B06            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1208020-01           | 4       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1504020-1            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1604060-01           | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1606011-01           | 5       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 15E18-B07-317323     | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1604060-02           | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1710024-01           | 12      |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1901048-01           | 17      |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1512007-01           | 12      |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1704014-01           | 4       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1504020              | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1901048-02           | 5       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 140503201            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 11300002             | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1310005-01           | 3       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1411025              | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1606011-02           | 9       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 170401401            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 18087703             | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1405032-01           | 9       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1301010-01           | 3       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1504020-01           | 9       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1910026-01           | 2       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 201201710102         | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 160611-02            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 201201601101         | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 160601102            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 190104801            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 180312-01            | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1803012-01           | 29      |
| EUro/AHD                   | All-rac-alpha-tocopheryl ace... | 1301010-01           | 1       |
| Euro/Fiebig                | All-rac-alpha-tocopheryl ace... | 1606011-02           | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1606011_02           | 1       |
| Euro/Sanacorp              | All-rac-alpha-tocopheryl ace... | 1803012-01           | 1       |
| Euro/Sanacorp              | All-rac-alpha-tocopheryl ace... | 1901048-02           | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 303462               | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 201201707103         | 2       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 17355903             | 1       |
| Euro OTC                   | All-rac-alpha-tocopheryl ace... | 1803012-01-T20190115 | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 12E16-N06            | 2       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 12362307             | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 1228-B40-288705      | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | UT13110302           | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 14602-B05-303462     | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 15e18-b07-311818     | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | UT14030070           | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 15E18-B07-317323     | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 17J02-Bo7-343845     | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 17j02-B07-343845     | 2       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 17J02-B07            | 3       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 18H20-B02            | 2       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 12I28-B40            | 2       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | UT12020065           | 1       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 14G02-B05-303462     | 4       |
| Fagron                     | All-rac-alpha-tocopheryl ace... | 15E18-B07            | 2       |

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| Supplier              | Substance                       | Batch             | Spectra |
|-----------------------|---------------------------------|-------------------|---------|
| Fagron                | All-rac-alpha-tocopheryl ace... | 17J02-B07         | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 12L14-N06         | 4       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 14G02-B05         | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 15E18-B07-311818  | 4       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 14G02-B05-3043462 | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 118H20-B02        | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 14B03-B06-294690  | 4       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 16128604          | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 15E18-B07-322952  | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 17J02-B07-343845  | 7       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 18H20-B02-359684  | 2       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 18H20-B02-363717  | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 18H20-B02-369503  | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 12/28-B40-288705  | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 15E18-B07-326638  | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 18H20-B02-366200  | 1       |
| Fargon                | All-rac-alpha-tocopheryl ace... | 17J02-B07-343845  | 1       |
| Fargon                | All-rac-alpha-tocopheryl ace... | 18H20-B02-363717  | 1       |
| Caelo                 | All-rac-alpha-tocopheryl ace... | 17359204          | 1       |
| Finteler Apotheke     | All-rac-alpha-tocopheryl ace... | 15E18-B07-326638  | 1       |
| Fischar/PX            | All-rac-alpha-tocopheryl ace... | 17359211          | 1       |
| Gatt-Koller           | All-rac-alpha-tocopheryl ace... | 1802578           | 1       |
| Gehe                  | All-rac-alpha-tocopheryl ace... | 14363401          | 1       |
| Gehe                  | All-rac-alpha-tocopheryl ace... | 1512007-01        | 1       |
| Gehe                  | All-rac-alpha-tocopheryl ace... | 16128609          | 1       |
| Gehe                  | All-rac-alpha-tocopheryl ace... | 16128624          | 1       |
| Gehe                  | All-rac-alpha-tocopheryl ace... | 16128625          | 1       |
| GEHE                  | All-rac-alpha-tocopheryl ace... | 15E18-B07-311818  | 2       |
| GEHE                  | All-rac-alpha-tocopheryl ace... | 16128610          | 1       |
| Caelo                 | All-rac-alpha-tocopheryl ace... | 15239009          | 5       |
| Geibo                 | All-rac-alpha-tocopheryl ace... | 1803012-01        | 1       |
| Jenne                 | All-rac-alpha-tocopheryl ace... | AP161286T         | 1       |
| Kögl                  | All-rac-alpha-tocopheryl ace... | 31209164216       | 1       |
| Kögl                  | All-rac-alpha-tocopheryl ace... | 312309164216      | 1       |
| Kögl                  | All-rac-alpha-tocopheryl ace... | 146905172417      | 1       |
| Kögl                  | All-rac-alpha-tocopheryl ace... | 20171469          | 3       |
| L12                   | All-rac-alpha-tocopheryl ace... | 1803012-01        | 1       |
| Noweda                | All-rac-alpha-tocopheryl ace... | 14363410          | 1       |
| Noweda                | All-rac-alpha-tocopheryl ace... | 15239011          | 1       |
| Noweda                | All-rac-alpha-tocopheryl ace... | 16128625          | 1       |
| Noweda                | All-rac-alpha-tocopheryl ace... | 1803012-01        | 3       |
| Noweda                | All-rac-alpha-tocopheryl ace... | 17239704          | 1       |
| Noweda 06.04.2016     | All-rac-alpha-tocopheryl ace... | 14363406          | 1       |
| Euro OTC              | All-rac-alpha-tocopheryl ace... | 16040601          | 1       |
| Caelo                 | All-rac-alpha-tocopheryl ace... | 14363405          | 4       |
| Euro OTC              | All-rac-alpha-tocopheryl ace... | 2002035-01        | 3       |
| Euro OTC              | All-rac-alpha-tocopheryl ace... | 1803012-31        | 1       |
| Euro OTC              | All-rac-alpha-tocopheryl ace... | 171002401         | 2       |
| Euro OTC              | All-rac-alpha-tocopheryl ace... | 1511I-02500       | 1       |
| Phoenix               | All-rac-alpha-tocopheryl ace... | 1803012-01        | 2       |
| Phoenix               | All-rac-alpha-tocopheryl ace... | 1901048-01        | 1       |
| PHOENIX am 27.03.2014 | All-rac-alpha-tocopheryl ace... | 1310005-01        | 1       |
| phönix                | All-rac-alpha-tocopheryl ace... | 1512007-01        | 1       |
| phönix                | All-rac-alpha-tocopheryl ace... | 16128615          | 1       |
| Phönix                | All-rac-alpha-tocopheryl ace... | 1803012-01        | 1       |
| Phönix                | All-rac-alpha-tocopheryl ace... | 191048-01         | 1       |
| Fagron                | All-rac-alpha-tocopheryl ace... | 18H20-B02-355660  | 3       |
| Phönix Gotha          | All-rac-alpha-tocopheryl ace... | 19062004          | 1       |
| Sanacorp              | All-rac-alpha-tocopheryl ace... | 12362307          | 1       |
| Sanacorp              | All-rac-alpha-tocopheryl ace... | 1301010-01        | 1       |

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| Supplier                  | Substance                       | Batch        | Spectra |
|---------------------------|---------------------------------|--------------|---------|
| Sanacorp                  | All-rac-alpha-tocopheryl ace... | Ap12362305T  | 1       |
| Sanacorp                  | All-rac-alpha-tocopheryl ace... | AP11300004T  | 1       |
| Sanacorp                  | All-rac-alpha-tocopheryl ace... | AP161286     | 1       |
| Sanacorp                  | All-rac-alpha-tocopheryl ace... | 18087703     | 1       |
| Sanacorp                  | All-rac-alpha-tocopheryl ace... | 19062004     | 1       |
| Euro OTC                  | All-rac-alpha-tocopheryl ace... | 12362307     | 1       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 15238807     | 10      |
| Spinnrad                  | All-rac-alpha-tocopheryl ace... | 915303112    | 1       |
| Spinnrad                  | All-rac-alpha-tocopheryl ace... | 1116303113   | 2       |
| Spinnrad                  | All-rac-alpha-tocopheryl ace... | 217303111    | 1       |
| Spinnrad / Gehe           | All-rac-alpha-tocopheryl ace... | 116303111    | 1       |
| Stumpf / Hedinger         | All-rac-alpha-tocopheryl ace... | 15126801     | 1       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 13396305     | 2       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 15239003     | 15      |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 14076812     | 10      |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 14076805     | 6       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 14363406     | 6       |
| Fagron                    | All-rac-alpha-tocopheryl ace... | 12G12-No7    | 1       |
| Taoasis                   | All-rac-alpha-tocopheryl ace... | 18087703     | 2       |
| VDL; 24,15EUR; 26.01.2015 | All-rac-alpha-tocopheryl ace... | 13217206     | 1       |
| Wepa                      | All-rac-alpha-tocopheryl ace... | AP15239006T  | 1       |
| Zhejiang Medicine         | All-rac-alpha-tocopheryl ace... | 1803012-01   | 1       |
| Zhejiang Medicine         | All-rac-alpha-tocopheryl ace... | 201201710102 | 1       |
| Euro OTC                  | All-rac-alpha-tocopheryl ace... | 1504020-02   | 2       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 13396304     | 4       |
| Caelo                     | All-rac-alpha-tocopheryl ace... | 12362307     | 17      |
| Caelo                     | All-rac-alpha-tocopheryl ace... |              | 1       |
| Euro OTC                  | All-rac-alpha-tocopheryl ace... | 1411025-01   | 10      |
| Euro OTC                  | All-rac-alpha-tocopheryl ace... | 1901048      | 1       |
| Kehr                      | All-rac-alpha-tocopheryl ace... |              | 1       |
| Zhejiang, Gehe            | All-rac-alpha-tocopheryl ace... |              | 1       |

- 240 458 spectra from 1121 *Apo-Ident* customers from a total of 46 800 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *All-rac-alpha-tocopheryl acetate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *All-rac-alpha-tocopheryl acetate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 278           | 0              | 63 661        |
| <b>Type B</b> | 0              | 480           | 0              | 91 011        |
| <b>Type C</b> | 0              | 901           | 4              | 240 458       |

The substance/substance group *All-rac-alpha-tocopheryl acetate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:



|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.8417 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.7500 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.5580 % (> 99.2265 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *All-rac-alpha-tocopheryl acetate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in main model | Distance in second-stage model |
|---------------------------------------|------------------------|--------------------------------|
| Metronidazole 25% in white petrolatum | 56.64                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *All-rac-alpha-tocopheryl acetate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31020     | 31020               | 0.00                         | 76.16                           |
| 31371     | 31817               | 2.45                         | 75.58                           |
| 31646     | 34422               | 2.48                         | 75.93                           |
| 31817     | 31817               | 0.00                         | 77.24                           |
| 34422     | 34422               | 0.00                         | 76.10                           |
| 34828     | 34828               | 0.00                         | 75.75                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Angelica root oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30939-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Angelica root oil; Oleum angelicae (e radice)

### Special notes

When selecting the *Angelica root oil* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Angelica root oil         | 4      | 2      | 3      |

## Second-stage model

For differentiation of the substance/substance group *Angelica root oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Angelica root oil*:

| Supplier | Substance         | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------------|----------|-----------|---------|-------------|
| Caelo    | Angelica root oil | 11352704 | 30939     | 50      | 1403252     |
| Caelo    | Angelica root oil | 13157610 | 31632     | 60      | 1511618     |
| Caelo    | Angelica root oil | 163376   | 33082     | 40      | 20161213*   |
| Caelo    | Angelica root oil | 172038   | 33909     | 40      | 20170728*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 190 spectra of 4 reference samples from the substance/substance group *Angelica root oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 749 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Angelica root oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance         | Batch    | Sample ID | Spectra |
|----------|-------------------|----------|-----------|---------|
| Caelo    | Angelica root oil | 15337207 | 32929     | 40      |
| Caelo    | Angelica root oil | 15337209 | 33513     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3 spectra from 3 *Apo-Ident* customers from 3 batches from the substance/substance group *Angelica root oil*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance         | Batch    | Spectra |
|----------|-------------------|----------|---------|
| Caelo    | Angelica root oil | 11352706 | 1       |
| Caelo    | Angelica root oil | 15337205 | 1       |
| Caelo    | Angelica root oil | 21111819 | 1       |

- 241 360 spectra from 1121 *Apo-Ident* customers from a total of 47 003 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Angelica root oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Angelica root oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 190           | 0              | 63 749        |
| <b>Type B</b> | 0              | 69            | 11             | 91 411        |
| <b>Type C</b> | 0              | 3             | 0              | 241 360       |

The substance/substance group *Angelica root oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.8421 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 86.2500 % (> 82.5000 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6878 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Angelica root oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance           | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------|---------------------------|-----------------------------------|
| Dwarf pine oil      | 13.49                     | —                                 |
| Juniper oil         | 23.48                     | —                                 |
| Bergamot oil        | 29.32                     | —                                 |
| Pine silvestris oil | 30.45                     | —                                 |
| Caraway oil         | 37.48                     | —                                 |
| Bitter orange oil   | 41.05                     | —                                 |
| Cedar wood oil      | 42.01                     | —                                 |
| Spearmint oil       | 42.69                     | —                                 |
| Eucalyptus oil      | 43.33                     | —                                 |
| Grapefruit oil      | 46.29                     | —                                 |
| Acorus oil          | 48.02                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Angelica root oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30939     | 30939                  | 0.00                            | 26.32                              |
| 31632     | 31632                  | 0.00                            | 20.72                              |
| 33082     | 33082                  | 0.00                            | 22.85                              |
| 33909     | 33909                  | 0.00                            | 19.43                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical

variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Anise oil / Star aniseed oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31158-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Anise oil / Star aniseed oil; Anise oil; Oleum anisi; Oleum anisi stellati; Star anise oil

### Special notes

When selecting the *Anise oil / Star aniseed oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Anise oil / Star aniseed oil | 9      | 7      | 100    |

## Second-stage model

For differentiation of the substance/substance group *Anise oil* / *Star aniseed oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Anise oil* / *Star aniseed oil*:

| Supplier | Substance      | Batch      | Sample ID | Spectra | Certificate        |
|----------|----------------|------------|-----------|---------|--------------------|
| Caelo    | Anise oil      | 14230101   | 31596     | 60      | AR-15-FG-004287-01 |
| Caelo    | Anise oil      | 15148901   | 31785     | 60      | 20150518           |
| Caelo    | Anise oil      | 16306802   | 32930     | 40      | 20161111           |
| Caelo    | Anise oil      | 16306803   | 33507     | 40      | 20161111           |
| Caelo    | Anise oil      | 16306803   | 33509     | 40      | 20161111           |
| Caelo    | Star anise oil | 13056105   | 31158     | 40      | 1405104            |
| Caelo    | Star anise oil | 13358202   | 31404     | 40      | 20131105           |
| Euro OTC | Star anise oil | 1303017-01 | 31525     | 60      | 20130422           |
| Euro OTC | Star anise oil | 511026     | 31810     | 60      | 20151214*          |
| Euro OTC | Star anise oil | 1609007    | 32775     | 40      | 20160919*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 480 spectra of 10 reference samples from the substance/substance group *Anise oil* / *Star aniseed oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 459 spectra from a total of 1298 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



- 270 spectra of 7 reference samples from the substance/substance group *Anise oil / Star aniseed oil*.
- Among them are spectra of independent samples from 7 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Anise oil      | 171500   | 33908     | 40      |
| Caelo    | Anise oil      | 183151   | 34640     | 40      |
| Caelo    | Anise oil      | 19000778 | 35025     | 40      |
| Caelo    | Star anise oil | 170162   | 33061     | 30      |
| Caelo    | Star anise oil | 15337007 | 33468     | 40      |
| Caelo    | Star anise oil | 183075   | 34988     | 40      |
| Euro OTC | Star anise oil | 1903016  | 34497     | 40      |

- 91 221 spectra from a total of 2009 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 267 spectra from 127 *Apo-Ident* customers from 96 batches from the substance/substance group *Anise oil / Star aniseed oil*.
- Among them are spectra of independent samples from 90 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                  | Substance | Batch             | Spectra |
|---------------------------|-----------|-------------------|---------|
| Apotheke Bauer & Cie. oHG | Anise oil | 68952-43-2        | 1       |
| Bergland                  | Anise oil | C700200           | 1       |
| Caelo                     | Anise oil | 1612120A/15428901 | 1       |
| Caelo                     | Anise oil | 202170A15428901   | 1       |
| Caelo                     | Anise oil | 17150001          | 15      |
| Caelo                     | Anise oil | 18066202          | 1       |
| Caelo                     | Anise oil | 18244502          | 8       |
| Caelo                     | Anise oil | 18244505          | 2       |
| Caelo                     | Anise oil | 14(16306803)      | 1       |
| Caelo                     | Anise oil | 5014M-01953       | 1       |
| Caelo                     | Anise oil | 15119401          | 5       |
| Caelo                     | Anise oil | 16308602          | 1       |
| Caelo                     | Anise oil | 15148904          | 2       |
| Caelo                     | Anise oil | 15428906          | 4       |
| Caelo                     | Anise oil | 15428901          | 2       |
| Caelo                     | Anise oil | 17364104          | 1       |
| Caelo                     | Anise oil | 1824505           | 1       |
| Caelo                     | Anise oil | 1824450           | 1       |
| Caesar & Loretz           | Anise oil | 14230104          | 1       |
| Caesar & Loretz           | Anise oil | 15148904          | 1       |
| Caesar & Loretz GmbH      | Anise oil | 15337016          | 1       |
| Caesar & Loretz GmbH      | Anise oil | 18244502          | 4       |
| Caesar & Loretz GmbH      | Anise oil | 18244505          | 3       |

*continued on the next page*

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH      | Anise oil        | 18244508     | 2              |
| Caesar & Loretz GmbH      | Anise oil        | 183075002    | 1              |
| Caesar & Loretz/ Noweda   | Anise oil        | 17150001     | 1              |
| Caesar&Loretz/Noweda      | Anise oil        | 16306802     | 1              |
| Fiebig                    | Anise oil        | 18244502     | 1              |
| Fiebig                    | Anise oil        | 18066208     | 1              |
| GEHE                      | Anise oil        | 17150001     | 1              |
| Caelo                     | Anise oil        | 18244508     | 2              |
| Ichthyol                  | Anise oil        | 17016206     | 1              |
| L12                       | Anise oil        | 15428906     | 1              |
| L12                       | Anise oil        | 17364102     | 1              |
| Caelo                     | Anise oil        | 15428903     | 3              |
| Noweda                    | Anise oil        | 18244502     | 1              |
| Phoenix                   | Anise oil        | 15337020     | 1              |
| Phoenix                   | Anise oil        | 18066204     | 1              |
| Phoenix 07.01.2019        | Anise oil        | 17150001     | 1              |
| Sanacorp/ Lamotte         | Anise oil        | 42803-3438   | 1              |
| Taoasis                   | Anise oil        | 42803-127870 | 1              |
| Taoasis                   | Anise oil        | 42803-2851   | 1              |
| WE:Sanacorp 14.06.2014... | Anise oil        | 13358202     | 1              |
| Anzag 10.12.12            | Star anise oil   | 1206014-01   | 1              |
| Beiersdorf/Noweda         | Star anise oil   | 15337007     | 2              |
| Caelo                     | Star anise oil   | 15337020     | 15             |
| Caelo                     | Star anise oil   | 11352409     | 9              |
| Caelo                     | Star anise oil   | 28051310     | 1              |
| Caelo                     | Star anise oil   | 12322503     | 3              |
| Caelo                     | Star anise oil   | 21111302     | 1              |
| Caelo                     | Star anise oil   | 8012014A     | 1              |
| Caelo                     | Star anise oil   | 5021403      | 1              |
| Caelo                     | Star anise oil   | 31032014C    | 1              |
| Caelo                     | Star anise oil   | 13051404     | 1              |
| Caelo                     | Star anise oil   | 21102014B    | 1              |
| Caelo                     | Star anise oil   | 14150303     | 1              |
| Caelo                     | Star anise oil   | 22122014C    | 1              |
| Caelo                     | Star anise oil   | 14230102     | 1              |
| Caelo                     | Star anise oil   | 22122014D    | 1              |
| Caelo                     | Star anise oil   | 27041501     | 1              |
| Caelo                     | Star anise oil   | 14230104     | 2              |
| Caelo                     | Star anise oil   | 25082015C    | 1              |
| Caelo                     | Star anise oil   | 15085801     | 1              |
| Caelo                     | Star anise oil   | 29081504     | 1              |
| Caelo                     | Star anise oil   | 15085805     | 18             |
| Caelo                     | Star anise oil   | 14195205     | 1              |
| Caelo                     | Star anise oil   | 15085806     | 2              |
| Caelo                     | Star anise oil   | 15337014     | 1              |
| Caelo                     | Star anise oil   | 25021702     | 1              |
| Caelo                     | Star anise oil   | 17016201     | 3              |
| Caelo                     | Star anise oil   | 15337021     | 1              |
| Caelo                     | Star anise oil   | 18111712     | 1              |
| Caelo                     | Star anise oil   | 12011904     | 1              |
| Caelo                     | Star anise oil   | 18307502     | 2              |
| Caelo                     | Star anise oil   | 18066209     | 2              |
| Caelo                     | Star anise oil   | 18066208     | 1              |
| Caelo                     | Star anise oil   | 11352402     | 4              |
| Caelo                     | Star anise oil   | 18066204     | 1              |
| Caelo                     | Star anise oil   | 18307513     | 1              |
| Caelo                     | Star anise oil   | 145230101    | 1              |
| Caelo                     | Star anise oil   | 15(18307502) | 1              |
| Caelo                     | Star anise oil   | 14150301     | 1              |
| Caelo                     | Star anise oil   | 3324         | 1              |

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| Supplier                   | Substance      | Batch      | Spectra |
|----------------------------|----------------|------------|---------|
| Caelo                      | Star anise oil | 1232207    | 1       |
| Caelo                      | Star anise oil | 13358208   | 1       |
| Caelo                      | Star anise oil | 13358201   | 1       |
| Caelo                      | Star anise oil | 12322501   | 2       |
| Caelo                      | Star anise oil | 12322505   | 1       |
| Caelo                      | Star anise oil | 13358209   | 3       |
| Caelo                      | Star anise oil | 14195202   | 6       |
| Caelo                      | Star anise oil | 14195208   | 2       |
| Caelo                      | Star anise oil | 17016209   | 1       |
| Caelo                      | Star anise oil | 15337004   | 1       |
| Caelo                      | Star anise oil | 15337013   | 6       |
| Caelo                      | Star anise oil | 12322507   | 5       |
| Caelo                      | Star anise oil | 13056103   | 1       |
| Caelo                      | Star anise oil | 14125501   | 1       |
| Caesar & Loretz GmbH       | Star anise oil | 18307510   | 1       |
| Caesar & Loretz GmbH       | Star anise oil | 18307513   | 2       |
| Caesar/Noweda              | Star anise oil | 411I-01953 | 1       |
| Caleo/Noweda               | Star anise oil | 15337020   | 3       |
| E Plus                     | Star anise oil | 17016201   | 1       |
| EuRho/GEHE                 | Star anise oil | 1303017-01 | 1       |
| Euro OTC                   | Star anise oil | 1609007-01 | 1       |
| Euro OTC                   | Star anise oil | 1502037-01 | 2       |
| Gatt-Koller                | Star anise oil | 1803381    | 2       |
| Gatt-Koller                | Star anise oil | 803381     | 1       |
| Kögl                       | Star anise oil | 20162385   | 1       |
| Caelo                      | Star anise oil | 15337007   | 5       |
| Caelo                      | Star anise oil | 17016206   | 12      |
| nachprüfung 19.06.2017     | Star anise oil | 15337020   | 1       |
| Noweda                     | Star anise oil | 18066202   | 1       |
| Noweda                     | Star anise oil | 18307508   | 1       |
| Phönix                     | Star anise oil | 11352402   | 1       |
| Phönix                     | Star anise oil | 1502037-01 | 1       |
| Phönix                     | Star anise oil | 17016209   | 2       |
| Taoasis                    | Star anise oil | 106155     | 1       |
| WE:Sanacorp14.06.2014 E... | Star anise oil | 13358202   | 1       |
| Caelo                      | Anise oil      | 15148901   | 1       |
| Caelo                      | Anise oil      | 16306802   | 2       |
| Caelo                      | Anise oil      | 16306803   | 4       |
| Caelo                      | Star anise oil | 13056105   | 8       |
| Caelo                      | Star anise oil | 13358202   | 3       |
| Euro OTC                   | Star anise oil | 1303017-01 | 1       |

- 241 096 spectra from 1121 *Apo-Ident* customers from a total of 46 910 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Anise oil* / *Star aniseed oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Anise oil* / *Star aniseed oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 480           | 0              | 63 459        |
| Type B | 0              | 270           | 0              | 91 221        |
| Type C | 0              | 266           | 1              | 241 096       |

The substance/substance group *Anise oil / Star aniseed oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.7500 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.7778 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.6255 % (> 98.5019 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Anise oil / Star aniseed oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance               | Distance in main model | Distance in second-stage model |
|-------------------------|------------------------|--------------------------------|
| Bitter-fennel fruit oil | 59.81                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Anise oil / Star aniseed oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31158     | 31158               | 0.00                         | 53.13                           |
| 31404     | 31810               | 2.45                         | 55.67                           |
| 31525     | 31810               | 4.16                         | 54.83                           |
| 31596     | 31596               | 0.00                         | 62.38                           |
| 31785     | 31596               | 1.43                         | 60.38                           |
| 31810     | 31810               | 0.00                         | 57.17                           |
| 32775     | 32775               | 0.00                         | 57.33                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32930            | 31596                      | 5.39                                | 59.29                                  |
| 33507            | 31596                      | 4.30                                | 59.18                                  |
| 33509            | 31596                      | 3.00                                | 59.73                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30520-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)

### Special notes

When selecting the *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                                    | Type A | Type B | Type C |
|--------------------------------------------------------------|--------|--------|--------|
| Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR) | 4      | 3      | 134    |

## Second-stage model

For differentiation of the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)*:

| Supplier | Substance           | Batch     | Sample ID | Spectra | Certificate |
|----------|---------------------|-----------|-----------|---------|-------------|
| apomix   | Aqueous salicyli... | 21A250913 | 31119     | 40      | 1404661     |
| apomix   | Aqueous salicyli... | 13B291216 | 32992     | 40      | 20161230    |
| apomix   | Aqueous salicyli... | 06B090617 | 33493     | 40      | 20170609    |
| apomix   | Aqueous salicyli... | 10B011019 | 34682     | 40      | 20191002    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier | Substance                        | Batch     | Sample ID | Spectra |
|----------|----------------------------------|-----------|-----------|---------|
| apomix   | Aqueous salicylic acid 50% (...) | 05B160517 | 33492     | 40      |
| apomix   | Aqueous salicylic acid 50% (...) | 11B021117 | 34035     | 40      |
| apomix   | Aqueous salicylic acid 50% (...) | 04B200421 | 35458     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 493 spectra from 120 *Apo-Ident* customers from 159 batches from the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)*.
- Among them are spectra of independent samples from 134 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier     | Substance                        | Batch      | Spectra |
|--------------|----------------------------------|------------|---------|
| AHD          | Aqueous salicylic acid 50% (...) | 13B291216  | 1       |
| AHD          | Aqueous salicylic acid 50% (...) | 382803317  | 1       |
| AHD          | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| AHD          | Aqueous salicylic acid 50% (...) | 6B020718   | 1       |
| AHD          | Aqueous salicylic acid 50% (...) | 10B231118  | 1       |
| AHD          | Aqueous salicylic acid 50% (...) | 5B060519   | 1       |
| anzag/apomix | Aqueous salicylic acid 50% (...) | 8B180719   | 1       |
| aoi-mix      | Aqueous salicylic acid 50% (...) | 11B021117  | 1       |
| Apomi        | Aqueous salicylic acid 50% (...) | 10B231118  | 2       |
| apomix       | Aqueous salicylic acid 50% (...) | 4a0400313  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 6A030413   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 16a250713  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 11a300513  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 1b270114   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 3b310314   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 6c170714   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 9B051114   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 3B260315   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 5B040615   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 4B280415   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 8B250815   | 2       |
| apomix       | Aqueous salicylic acid 50% (...) | 9c240915   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 10C2601015 | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 10B261015  | 2       |
| apomix       | Aqueous salicylic acid 50% (...) | 11C021215  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 1B20016    | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 3C230316   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 4C030516   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 1b200116   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 6B140616   | 2       |
| apomix       | Aqueous salicylic acid 50% (...) | 4B030516   | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 8B110816   | 3       |
| apomix       | Aqueous salicylic acid 50% (...) | 12B251116  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 11b041116  | 1       |
| apomix       | Aqueous salicylic acid 50% (...) | 1B240117   | 1       |

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| Supplier | Substance                        | Batch         | Spectra |
|----------|----------------------------------|---------------|---------|
| apomix   | Aqueous salicylic acid 50% (...) | 2B270217      | 3       |
| apomix   | Aqueous salicylic acid 50% (...) | 3B280317      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 7B300617      | 3       |
| apomix   | Aqueous salicylic acid 50% (...) | 9B070917      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 11B021117     | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 1b070218      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 1B070218      | 5       |
| apomix   | Aqueous salicylic acid 50% (...) | 13B131217     | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 2B050318      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 6B020718      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 6b020718      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 5B070618      | 2       |
| apomix   | Aqueous salicylic acid 50% (...) | 10B231118     | 2       |
| apomix   | Aqueous salicylic acid 50% (...) | 9B111018      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 1b030119      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 11B101218     | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 5B060519      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 7B030719      | 2       |
| apomix   | Aqueous salicylic acid 50% (...) | 8b180719      | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | o6B170619     | 1       |
| apomix   | Aqueous salicylic acid 50% (...) | 2B200220      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 9A020812      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 19A160913     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 12A300513     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 22C161013     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 2C060314      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 4B200514      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 6B170714      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 8C170914      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 9B051114      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 3B260315      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 1B260115      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 8B250815      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 9B240915      | 2       |
| Apomix   | Aqueous salicylic acid 50% (...) | 1C200116      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 2C230216      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 4B030516      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 3B230316      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 6B140616      | 2       |
| Apomix   | Aqueous salicylic acid 50% (...) | 5B250516      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 9B060916      | 2       |
| Apomix   | Aqueous salicylic acid 50% (...) | 10B121016     | 3       |
| Apomix   | Aqueous salicylic acid 50% (...) | 8B110816      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 12B251116     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 13B291216     | 5       |
| Apomix   | Aqueous salicylic acid 50% (...) | 2B270217      | 4       |
| Apomix   | Aqueous salicylic acid 50% (...) | 3B280317      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 4B180417      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 7B300617      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 8B080817      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 5B160517      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 10B121017     | 3       |
| Apomix   | Aqueous salicylic acid 50% (...) | 5B1605175356  | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 9B070917      | 7       |
| Apomix   | Aqueous salicylic acid 50% (...) | 8B0808175412  | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 6B090617      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 12B211117     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 1B070218      | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 11B021117     | 1       |
| Apomix   | Aqueous salicylic acid 50% (...) | 12B2111175532 | 1       |

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| Supplier                   | Substance                        | Batch        | Spectra |
|----------------------------|----------------------------------|--------------|---------|
| Apomix                     | Aqueous salicylic acid 50% (...) | 13B131217    | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 3B160418     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 2B050318     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 4B150518     | 2       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 6B020718     | 2       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 8B140918     | 2       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 9B111018     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 11B101218    | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 1B030119     | 2       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 5B060519     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 3B120319     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 6B170619     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 10B011019    | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 8B180719     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 1B170120     | 2       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 2B200220     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 13B191219    | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 5B260620     | 1       |
| Apomix                     | Aqueous salicylic acid 50% (...) | 2B250121     | 1       |
| Apomix / 11                | Aqueous salicylic acid 50% (...) | 25B041213    | 1       |
| Apomix / 11                | Aqueous salicylic acid 50% (...) | 10B011214    | 1       |
| APOMIX / 30                | Aqueous salicylic acid 50% (...) | 3B310314     | 1       |
| apomix / AHD               | Aqueous salicylic acid 50% (...) | 2B0503185606 | 1       |
| apomix / Alliance Healt... | Aqueous salicylic acid 50% (...) | 3B230316     | 1       |
| apomix / Alliance Healt... | Aqueous salicylic acid 50% (...) | 5B060519     | 1       |
| Apomix / Alliance Healt... | Aqueous salicylic acid 50% (...) | 10B121016    | 1       |
| Apomix / GEHE              | Aqueous salicylic acid 50% (...) | 6B1708714    | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 6B080715     | 2       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 6B140616     | 2       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 12B251116    | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 7B300617     | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 13B131217    | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 4B150518     | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 9B210819     | 1       |
| apomix / Phoenix           | Aqueous salicylic acid 50% (...) | 8B140918     | 1       |
| apomix / Phoenix           | Aqueous salicylic acid 50% (...) | 1B030119     | 1       |
| Apomix / Phoenix           | Aqueous salicylic acid 50% (...) | 10B231118    | 1       |
| apomix / Phoenix Leipzi... | Aqueous salicylic acid 50% (...) | 6B020718     | 2       |
| apomix / Phoenix Leipzi... | Aqueous salicylic acid 50% (...) | 3b160418     | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 19A160913    | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 12A300513    | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 22C161013    | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 3C310314     | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 6C170714     | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 12B211215    | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 3C230316     | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 8B110816     | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 10B121016    | 1       |
| Apomix / Phönix            | Aqueous salicylic acid 50% (...) | 6B170619     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 16A250713    | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 5B270614     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 7B180814     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 3B260315     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 11B021215    | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 7B060716     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 11B041116    | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 8B080817     | 1       |
| Apomix / Sanacorp          | Aqueous salicylic acid 50% (...) | 13B131217    | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 3b230316     | 1       |
| Apomix / Noweda            | Aqueous salicylic acid 50% (...) | 5b250516     | 1       |

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| Supplier                   | Substance                        | Batch     | Spectra |
|----------------------------|----------------------------------|-----------|---------|
| Apomix /Noweda             | Aqueous salicylic acid 50% (...) | 9b060916  | 1       |
| Apomix /Noweda             | Aqueous salicylic acid 50% (...) | 3b280317  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 5B250516  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 13B291216 | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 3B280317  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 12B11117  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 1B070218  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 6B020718  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 9B111018  | 1       |
| apomix AMH Niemann GmbH... | Aqueous salicylic acid 50% (...) | 2B120219  | 1       |
| apomix PKH                 | Aqueous salicylic acid 50% (...) | 8B180719  | 1       |
| Apomix PKH                 | Aqueous salicylic acid 50% (...) | 4B120520  | 1       |
| apomix PKH / Noweda        | Aqueous salicylic acid 50% (...) | 8B180719  | 1       |
| apomix PKH GmbH Halle      | Aqueous salicylic acid 50% (...) | 6B170714  | 1       |
| Apomix PKH Halle - Noweda  | Aqueous salicylic acid 50% (...) | 7B140820  | 1       |
| apomix, phoenix 28.05.2... | Aqueous salicylic acid 50% (...) | 2b050318  | 1       |
| apomix, Phönix, 09.01.2... | Aqueous salicylic acid 50% (...) | 12b211117 | 2       |
| Apomix, PKH Halle          | Aqueous salicylic acid 50% (...) | 8B180719  | 1       |
| Apomix, PKH Halle          | Aqueous salicylic acid 50% (...) | 10B011019 | 1       |
| Apomix, PKH Halle          | Aqueous salicylic acid 50% (...) | 2B2002220 | 1       |
| Apomix, PKH Halle          | Aqueous salicylic acid 50% (...) | 7B140820  | 1       |
| Apomix, PKH Halle          | Aqueous salicylic acid 50% (...) | 1B040121  | 1       |
| Apomix,Phönix, 16.11.2017  | Aqueous salicylic acid 50% (...) | 10B121017 | 1       |
| Apomix/ Alliance           | Aqueous salicylic acid 50% (...) | 3B110320  | 1       |
| Apomix/ Alliance           | Aqueous salicylic acid 50% (...) | 4B120520  | 1       |
| Apomix/ Anzag              | Aqueous salicylic acid 50% (...) | 10B271020 | 1       |
| apomix/ Anzag 15.08.19     | Aqueous salicylic acid 50% (...) | 6B170619  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 10B121017 | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 13B191219 | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 2B200220  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 1B170120  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 5B260620  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 8B100920  | 2       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 10B271020 | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 2B250121  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 1B040121  | 1       |
| Apomix/ Gehe               | Aqueous salicylic acid 50% (...) | 4B200421  | 1       |
| Apomix/ GEHE               | Aqueous salicylic acid 50% (...) | 6B140616  | 1       |
| Apomix/ GEHE               | Aqueous salicylic acid 50% (...) | 11B041116 | 1       |
| Apomix/ GEHE               | Aqueous salicylic acid 50% (...) | 4B150518  | 1       |
| Apomix/ GEHE               | Aqueous salicylic acid 50% (...) | 11B101218 | 1       |
| Apomix/ NOWEDA             | Aqueous salicylic acid 50% (...) | 3B280317  | 1       |
| Apomix/ NOWEDA             | Aqueous salicylic acid 50% (...) | 8B080817  | 1       |
| Apomix/ NOWEDA             | Aqueous salicylic acid 50% (...) | 13B131217 | 1       |
| Apomix/ Noweda 12.07.18    | Aqueous salicylic acid 50% (...) | 4B150518  | 1       |
| Apomix/ Phoenix            | Aqueous salicylic acid 50% (...) | 4B120520  | 1       |
| apomix/ Phoenix Leipzig... | Aqueous salicylic acid 50% (...) | 3b280317  | 1       |
| Apomix/ Phönix             | Aqueous salicylic acid 50% (...) | 6C170714  | 1       |
| Apomix/ Sana               | Aqueous salicylic acid 50% (...) | 13B191219 | 1       |
| Apomix/ Sanacorp           | Aqueous salicylic acid 50% (...) | 2B230216  | 1       |
| Apomix/ Sanacorp           | Aqueous salicylic acid 50% (...) | 11B041116 | 1       |
| apomix/AHD                 | Aqueous salicylic acid 50% (...) | 9B111018  | 1       |
| Apomix/AHD                 | Aqueous salicylic acid 50% (...) | 10B261015 | 2       |
| Apomix/AHD                 | Aqueous salicylic acid 50% (...) | 7B080818  | 1       |
| Apomix/AHD                 | Aqueous salicylic acid 50% (...) | 3B120319  | 1       |
| Apomix/AHD                 | Aqueous salicylic acid 50% (...) | 12B281119 | 1       |
| Apomix/Alkun               | Aqueous salicylic acid 50% (...) | 4B150518  | 1       |
| Apomix/Alli. HC            | Aqueous salicylic acid 50% (...) | 5B100621  | 1       |
| apomix/alliance            | Aqueous salicylic acid 50% (...) | 8B140918  | 1       |
| Apomix/Alliance            | Aqueous salicylic acid 50% (...) | 12B211215 | 1       |

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| Supplier                   | Substance                        | Batch     | Spectra |
|----------------------------|----------------------------------|-----------|---------|
| Apomix/Alliance            | Aqueous salicylic acid 50% (...) | 10B121016 | 1       |
| Apomix/Alliance            | Aqueous salicylic acid 50% (...) | 10B231118 | 1       |
| Apomix/Alliance            | Aqueous salicylic acid 50% (...) | 7B030719  | 1       |
| Apomix/Alliance            | Aqueous salicylic acid 50% (...) | 5B260620  | 1       |
| Apomix/Alliance Healthc... | Aqueous salicylic acid 50% (...) | 2C230215  | 1       |
| Apomix/Alliance Healthc... | Aqueous salicylic acid 50% (...) | 8B250815  | 1       |
| Apomix/Alliance Healthc... | Aqueous salicylic acid 50% (...) | 9C240915  | 1       |
| Apomix/Alliance Healthc... | Aqueous salicylic acid 50% (...) | 7B080818  | 1       |
| apomix/Anzag               | Aqueous salicylic acid 50% (...) | 10B011214 | 1       |
| Apomix/E&J                 | Aqueous salicylic acid 50% (...) | 7B080818  | 1       |
| apomix/Gehe                | Aqueous salicylic acid 50% (...) | 9B210819  | 2       |
| apomix/Gehe                | Aqueous salicylic acid 50% (...) | 5B260620  | 1       |
| apomix/GEHE                | Aqueous salicylic acid 50% (...) | 11B04116  | 1       |
| apomix/GEHE                | Aqueous salicylic acid 50% (...) | 12b211117 | 1       |
| apomix/GEHE                | Aqueous salicylic acid 50% (...) | 12b281119 | 1       |
| Apomix/Gehe                | Aqueous salicylic acid 50% (...) | 12B211215 | 1       |
| Apomix/Gehe                | Aqueous salicylic acid 50% (...) | 9B060916  | 1       |
| Apomix/Gehe                | Aqueous salicylic acid 50% (...) | 6B130721  | 1       |
| apomix/Geibo               | Aqueous salicylic acid 50% (...) | 4B030516  | 1       |
| apomix/Geibo               | Aqueous salicylic acid 50% (...) | 8B110816  | 1       |
| apomix/Geibo               | Aqueous salicylic acid 50% (...) | 5B260620  | 1       |
| Apomix/Geibo               | Aqueous salicylic acid 50% (...) | 2B050318  | 1       |
| Apomix/Geibo               | Aqueous salicylic acid 50% (...) | 8B140918  | 1       |
| Apomix/Kehr                | Aqueous salicylic acid 50% (...) | 9B051020  | 1       |
| apomix/Noveda              | Aqueous salicylic acid 50% (...) | 3B160418  | 1       |
| apomix/noweda              | Aqueous salicylic acid 50% (...) | 7B280715  | 1       |
| apomix/Noweda              | Aqueous salicylic acid 50% (...) | 10B011019 | 1       |
| apomix/Noweda              | Aqueous salicylic acid 50% (...) | 1B170120  | 1       |
| apomix/Noweda              | Aqueous salicylic acid 50% (...) | 2B200220  | 2       |
| apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B110320  | 1       |
| apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B290321  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 8B250815  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 12b211215 | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B230316  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 2B270217  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 4B180417  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B280317  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 13B291216 | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 8B080817  | 2       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 1B070218  | 2       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 2B050318  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 4b150518  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 6B020718  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 1B030119  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B120319  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 11B231019 | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 12B281119 | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 2B200220  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 3B110320  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 5B260620  | 1       |
| Apomix/Noweda              | Aqueous salicylic acid 50% (...) | 9B051020  | 1       |
| apomix/phö                 | Aqueous salicylic acid 50% (...) | 4B280319  | 1       |
| apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 6C080715  | 1       |
| apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 12B211215 | 1       |
| apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 1B070218  | 1       |
| Apomix/phoenix             | Aqueous salicylic acid 50% (...) | 6B020718  | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 6C170714  | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 10B011214 | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 5B040615  | 2       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 2B050318  | 2       |

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| Supplier                   | Substance                        | Batch        | Spectra |
|----------------------------|----------------------------------|--------------|---------|
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 4B150518     | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 5B070618     | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 6B020718     | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 10B231118    | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 11B101218    | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 1B030119     | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 7B030719     | 3       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 11B231019    | 1       |
| Apomix/Phoenix             | Aqueous salicylic acid 50% (...) | 10B271020    | 1       |
| Apomix/Phoenix Leipzig ... | Aqueous salicylic acid 50% (...) | 7B300617     | 1       |
| Apomix/Phoenix Leipzig ... | Aqueous salicylic acid 50% (...) | 5B160517     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 2B230215     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 1C200116     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 6B140616     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 9B111018     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 3B120319     | 1       |
| apomix/Phönix              | Aqueous salicylic acid 50% (...) | 12B281119    | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 7B060716     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 12B251116    | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 6B090617     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 13B131217    | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 8B140918     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 2B120219     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 7B030719     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 9B210819     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 9B051020     | 1       |
| Apomix/Phönix              | Aqueous salicylic acid 50% (...) | 5B100621     | 1       |
| apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 5B160517     | 1       |
| apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 10B121017    | 1       |
| apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 6B0207185732 | 1       |
| apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 11B101218    | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 6C170714     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 1B260115     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 6B080715     | 2       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 7C280715     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 12B211215    | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 12C211215    | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 7B060716     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 4B030516     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 10B121016    | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 1B240117     | 2       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 4B180417     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 8B080817     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 10B121017    | 3       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 3B160418     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 5B070618     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 7B080818     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 8B140918     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 4B120520     | 1       |
| Apomix/Sanacorp            | Aqueous salicylic acid 50% (...) | 1B040121     | 1       |
| Beiersdorf/Phönix          | Aqueous salicylic acid 50% (...) | 7B060716     | 1       |
| Bombastus                  | Aqueous salicylic acid 50% (...) | 6C170714     | 1       |
| Bombastus                  | Aqueous salicylic acid 50% (...) | 2B050318     | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 10B121016    | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 3B2803175320 | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 3B120319     | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 11B021215    | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 9B111018     | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 2B120219     | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 4B280319     | 2       |

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| Supplier                   | Substance                        | Batch      | Spectra |
|----------------------------|----------------------------------|------------|---------|
| Caelo                      | Aqueous salicylic acid 50% (...) | 1B200116   | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 1B240117   | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| Euro OTC                   | Aqueous salicylic acid 50% (...) | 4B150518   | 1       |
| Euro OTC                   | Aqueous salicylic acid 50% (...) | 10B231118  | 1       |
| Fagron                     | Aqueous salicylic acid 50% (...) | 1B200116   | 1       |
| Fagron                     | Aqueous salicylic acid 50% (...) | 7B060716   | 1       |
| Fiebig/Apomix              | Aqueous salicylic acid 50% (...) | 9B240915   | 1       |
| Fiebig/Apomix              | Aqueous salicylic acid 50% (...) | 8B110816   | 1       |
| Frago/Noweda               | Aqueous salicylic acid 50% (...) | 11B021117  | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 9A020812   | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 4A040313   | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 11A300513  | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 22B161013  | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 13B131217  | 1       |
| Gehe                       | Aqueous salicylic acid 50% (...) | 8B140918   | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 10B121016  | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 11B041116  | 2       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 13B291216  | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 6B090617   | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 7B300617   | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 11B021117  | 1       |
| GEHE                       | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| Gehe / Apomix              | Aqueous salicylic acid 50% (...) | 8B18079    | 1       |
| Gehe/Apomix                | Aqueous salicylic acid 50% (...) | 5B060519   | 1       |
| Geibo/ apomix              | Aqueous salicylic acid 50% (...) | 11B101218  | 1       |
| Geibo/ apomix              | Aqueous salicylic acid 50% (...) | 5B060519   | 1       |
| Henry Lamotte Oils GmbH    | Aqueous salicylic acid 50% (...) | 5B040615   | 1       |
| Jenne                      | Aqueous salicylic acid 50% (...) | 6B090617   | 1       |
| JENNE                      | Aqueous salicylic acid 50% (...) | 11B041116  | 1       |
| Klenk                      | Aqueous salicylic acid 50% (...) | 22B161013  | 1       |
| Noweda                     | Aqueous salicylic acid 50% (...) | 12B-281119 | 1       |
| Noweda                     | Aqueous salicylic acid 50% (...) | 11B231019  | 1       |
| Noweda                     | Aqueous salicylic acid 50% (...) | 9B051020   | 1       |
| Noweda/apomix              | Aqueous salicylic acid 50% (...) | 4B280415   | 1       |
| Noweda/Apomix              | Aqueous salicylic acid 50% (...) | 9C051114   | 1       |
| Noweda/Apomix              | Aqueous salicylic acid 50% (...) | 3B160418   | 1       |
| Noweda/Apomix              | Aqueous salicylic acid 50% (...) | 5B260620   | 1       |
| Noweda/Apomix              | Aqueous salicylic acid 50% (...) | 10B271020  | 1       |
| Caelo                      | Aqueous salicylic acid 50% (...) | 2C060314   | 1       |
| Noweda/PKH GmbH            | Aqueous salicylic acid 50% (...) | 4C280415   | 1       |
| Noweda/PKH GmbH            | Aqueous salicylic acid 50% (...) | 5B250516   | 1       |
| Pharmachem/30              | Aqueous salicylic acid 50% (...) | 38310314   | 1       |
| Phoenix (PKH Halle)        | Aqueous salicylic acid 50% (...) | 3A110213   | 1       |
| Phoenix/ PKH Halle         | Aqueous salicylic acid 50% (...) | 5A030413   | 1       |
| Phönix/apomix              | Aqueous salicylic acid 50% (...) | 4B200514   | 1       |
| PhR Neidhardt              | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| PhR/Sanacorp               | Aqueous salicylic acid 50% (...) | 4A05/13    | 1       |
| PKH / Noweda               | Aqueous salicylic acid 50% (...) | 1B260115   | 2       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 12A300513  | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 25C041213  | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 2C060314   | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 6B170714   | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 4B280415   | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 7B060716   | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 13B191219  | 1       |
| PKH GmbH                   | Aqueous salicylic acid 50% (...) | 3B110320   | 1       |
| PKH GmbH, Phönix 28.03...  | Aqueous salicylic acid 50% (...) | 3B120319   | 1       |
| PKH GmbH/ Alliance Heal... | Aqueous salicylic acid 50% (...) | 8B080817   | 1       |
| PKH GmbH/ Alliance Heal... | Aqueous salicylic acid 50% (...) | 4B150518   | 1       |

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| Supplier                 | Substance                        | Batch      | Spectra |
|--------------------------|----------------------------------|------------|---------|
| PKH Halle                | Aqueous salicylic acid 50% (...) | 2B270217   | 3       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 12B211117  | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 4B150518   | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 4b150518   | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 9B111018   | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 11B231019  | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 13B191219  | 1       |
| PKH Halle                | Aqueous salicylic acid 50% (...) | 3B110320   | 1       |
| PKH Halle / Phoenix      | Aqueous salicylic acid 50% (...) | 21A250913  | 1       |
| PKH Halle -Apomix/Noweda | Aqueous salicylic acid 50% (...) | 9B210819   | 1       |
| PKH Halle -Apomix/Noweda | Aqueous salicylic acid 50% (...) | 1B170120   | 1       |
| PKH Halle/ GEHE          | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| PKH Halle/ Noweda        | Aqueous salicylic acid 50% (...) | 10B011214  | 1       |
| PKH Halle/ Phoenix       | Aqueous salicylic acid 50% (...) | 22C161013  | 1       |
| PKH Halle/ Phoenix       | Aqueous salicylic acid 50% (...) | 1C270114   | 1       |
| PKH Halle/ Phönix        | Aqueous salicylic acid 50% (...) | 11B041116  | 1       |
| PKH Halle/AHD            | Aqueous salicylic acid 50% (...) | 2B050318   | 1       |
| PKH Halle/Noweda         | Aqueous salicylic acid 50% (...) | 4B120520   | 1       |
| PKH Halle/Noweda         | Aqueous salicylic acid 50% (...) | 7B140820   | 1       |
| PKH Halle/Phoenix        | Aqueous salicylic acid 50% (...) | 7B030719   | 1       |
| PKH Halle/Phönix         | Aqueous salicylic acid 50% (...) | 88100920   | 1       |
| PKH Halle/Phönix         | Aqueous salicylic acid 50% (...) | 9B051020   | 1       |
| PKH Halle/Sanacorp       | Aqueous salicylic acid 50% (...) | 1B270114   | 1       |
| PKH Halle/Sanacorp       | Aqueous salicylic acid 50% (...) | 5B250516   | 2       |
| PKH Pharm.               | Aqueous salicylic acid 50% (...) | 1B170120   | 1       |
| Sanacorp                 | Aqueous salicylic acid 50% (...) | 12B211117  | 1       |
| Sanacorp                 | Aqueous salicylic acid 50% (...) | 3B160418   | 1       |
| Sanacorp                 | Aqueous salicylic acid 50% (...) | 4B120520   | 2       |
| Sanacorp / apomix        | Aqueous salicylic acid 50% (...) | 11B101218  | 1       |
| Unisan                   | Aqueous salicylic acid 50% (...) | 15001674/0 | 1       |
| apomix                   | Aqueous salicylic acid 50% (...) | 13B291216  | 1       |

- 240 870 spectra from 1121 *Apo-Ident* customers from a total of 46 847 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 160           | 0              | 63 779        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 489           | 4              | 240 870       |

The substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:



|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.1886 % (> 98.5801 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b> | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|------------------|-------------------------------|---------------------------------------|
| (s)-Lactic acid  | 135.33                        | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Aqueous salicylic acid 50% (non-ionic, hydrophilic cream SR)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31119            | 31119                      | 0.00                                | 147.78                                 |
| 32992            | 31119                      | 10.27                               | 155.38                                 |
| 33493            | 31119                      | 11.68                               | 150.42                                 |
| 34682            | 31119                      | 8.38                                | 149.43                                 |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Base cream DAC                                                   |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30211-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Base cream DAC; Cremor basalis

### Special notes

When selecting the *Base cream DAC* substance/substance group, the following information is displayed to the user:

- Advice for the identification of base cream DAC: Improper storage of samples can result in identification problems. Please homogenise the sample and let it adapt to room temperature before the measurement.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Base cream DAC            | 29     | 223    | 3772   |

## Second-stage model

For differentiation of the substance/substance group *Base cream DAC* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Base cream DAC*:

| Supplier      | Substance      | Batch            | Sample ID | Spectra | Certificate        |
|---------------|----------------|------------------|-----------|---------|--------------------|
| Bombastus     | Base cream DAC | 18005744         | 34318     | 40      | 128927             |
| Bombastus     | Base cream DAC | 19002698         | 34503     | 40      | 20190604           |
| Caelo         | Base cream DAC | 13139901         | 31043     | 40      | 20130513           |
| Caelo         | Base cream DAC | 14052901         | 31474     | 40      | AR-15-FG-000163-02 |
| Caelo         | Base cream DAC | 154204           | 31964     | 60      | 20151218*          |
| Caelo         | Base cream DAC | 17028801         | 34030     | 40      | AR-18-FG-013988-01 |
| Caelo         | Base cream DAC | 20002868         | 35174     | 40      | 20201009*          |
| Caelo         | Base cream DAC | 20002869         | 35175     | 40      | 20201009*          |
| Caelo         | Base cream DAC | 20002870         | 35176     | 40      | 20201009*          |
| Caelo         | Base cream DAC | 20002872         | 35178     | 40      | 20201009*          |
| Caelo         | Base cream DAC | 20002876         | 35182     | 40      | 20201009*          |
| Caelo         | Base cream DAC | 20003469         | 35200     | 40      | 20210111*          |
| Caelo         | Base cream DAC | 20004323         | 35424     | 40      | 20210120*          |
| Caelo         | Base cream DAC | 21001260         | 35557     | 50      | 20210427*          |
| Caelo         | Base cream DAC | 21001255         | 35559     | 50      | 20210503*          |
| Caelo         | Base cream DAC | 21001256         | 35560     | 50      | 20210426*          |
| Caelo         | Base cream DAC | 21001257         | 35561     | 50      | 20210422*          |
| Caelo         | Base cream DAC | 21001258         | 35562     | 50      | 20210423*          |
| Caelo         | Base cream DAC | 21001259         | 35563     | 50      | 20210427*          |
| Euro OTC      | Base cream DAC | 1304006-01       | 31252     | 40      | AR-15-FG-014906-01 |
| Euro OTC      | Base cream DAC | 39210516         | 32345     | 40      | 20160623           |
| Euro OTC      | Base cream DAC | 88590321         | 35488     | 40      | 2109595            |
| Euro OTC      | Base cream DAC | 88610321         | 35489     | 40      | 20210309           |
| Euro OTC      | Base cream DAC | 88620321         | 35490     | 40      | 20210309           |
| Euro OTC      | Base cream DAC | 88600321         | 35491     | 40      | 2109594            |
| Fagron        | Base cream DAC | 18L19-T15-062894 | 34482     | 40      | 1909294            |
| Fagron        | Base cream DAC | 18L20-T12-062935 | 34485     | 40      | 20190408           |
| Henry Lamotte | Base cream DAC | 5215300          | 30923     | 80      | 20120102           |
| Henry Lamotte | Base cream DAC | 8004996002       | 34504     | 40      | 20190319           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 1280 spectra of 29 reference samples from the substance/substance group *Base cream DAC*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 29 different batches.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 62 659 spectra from a total of 1278 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 10 250 spectra of 236 reference samples from the substance/substance group *Base cream DAC*.
- Among them are spectra of independent samples from 223 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch  | Sample ID | Spectra |
|----------|----------------|--------|-----------|---------|
| Caelo    | Base cream DAC | 154198 | 31963     | 60      |
| Caelo    | Base cream DAC | 154201 | 31965     | 60      |
| Caelo    | Base cream DAC | 153911 | 31966     | 60      |
| Caelo    | Base cream DAC | 153910 | 31967     | 60      |
| Caelo    | Base cream DAC | 153909 | 31968     | 60      |
| Caelo    | Base cream DAC | 153905 | 31969     | 60      |
| Caelo    | Base cream DAC | 153904 | 31970     | 60      |
| Caelo    | Base cream DAC | 153903 | 31971     | 60      |
| Caelo    | Base cream DAC | 153902 | 31972     | 60      |
| Caelo    | Base cream DAC | 153578 | 31973     | 60      |
| Caelo    | Base cream DAC | 153869 | 31974     | 60      |
| Caelo    | Base cream DAC | 153872 | 31975     | 60      |
| Caelo    | Base cream DAC | 153868 | 31976     | 60      |
| Caelo    | Base cream DAC | 153576 | 31977     | 60      |
| Caelo    | Base cream DAC | 160051 | 31978     | 60      |
| Caelo    | Base cream DAC | 160052 | 31979     | 60      |
| Caelo    | Base cream DAC | 160053 | 31980     | 60      |
| Caelo    | Base cream DAC | 160054 | 31981     | 60      |
| Caelo    | Base cream DAC | 160055 | 31982     | 60      |
| Caelo    | Base cream DAC | 161021 | 32236     | 40      |
| Caelo    | Base cream DAC | 161347 | 32237     | 40      |
| Caelo    | Base cream DAC | 161348 | 32238     | 40      |
| Caelo    | Base cream DAC | 161349 | 32239     | 40      |
| Caelo    | Base cream DAC | 161356 | 32240     | 40      |
| Caelo    | Base cream DAC | 161357 | 32241     | 40      |
| Caelo    | Base cream DAC | 161358 | 32244     | 40      |
| Caelo    | Base cream DAC | 161359 | 32245     | 40      |
| Caelo    | Base cream DAC | 161360 | 32246     | 40      |
| Caelo    | Base cream DAC | 161361 | 32247     | 40      |
| Caelo    | Base cream DAC | 161362 | 32248     | 40      |
| Caelo    | Base cream DAC | 161363 | 32249     | 40      |
| Caelo    | Base cream DAC | 161456 | 32250     | 40      |
| Caelo    | Base cream DAC | 161038 | 32251     | 40      |
| Caelo    | Base cream DAC | 160556 | 32252     | 40      |
| Caelo    | Base cream DAC | 160588 | 32253     | 40      |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Sample ID</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|------------------|----------------|
| Caelo           | Base cream DAC   | 160559       | 32254            | 40             |
| Caelo           | Base cream DAC   | 161020       | 32255            | 40             |
| Caelo           | Base cream DAC   | 161022       | 32260            | 40             |
| Caelo           | Base cream DAC   | 161501       | 32368            | 40             |
| Caelo           | Base cream DAC   | 161522       | 32369            | 40             |
| Caelo           | Base cream DAC   | 161460       | 32521            | 40             |
| Caelo           | Base cream DAC   | 162378       | 32522            | 40             |
| Caelo           | Base cream DAC   | 161499       | 32524            | 40             |
| Caelo           | Base cream DAC   | 161554       | 32525            | 40             |
| Caelo           | Base cream DAC   | 162204       | 32526            | 40             |
| Caelo           | Base cream DAC   | 162205       | 32527            | 40             |
| Caelo           | Base cream DAC   | 162379       | 32528            | 40             |
| Caelo           | Base cream DAC   | 162380       | 32529            | 40             |
| Caelo           | Base cream DAC   | 162381       | 32530            | 40             |
| Caelo           | Base cream DAC   | 162382       | 32531            | 40             |
| Caelo           | Base cream DAC   | 162383       | 32532            | 40             |
| Caelo           | Base cream DAC   | 162403       | 32533            | 40             |
| Caelo           | Base cream DAC   | 162406       | 32534            | 40             |
| Caelo           | Base cream DAC   | 162407       | 32535            | 40             |
| Caelo           | Base cream DAC   | 162410       | 32539            | 40             |
| Caelo           | Base cream DAC   | 162416       | 32540            | 40             |
| Caelo           | Base cream DAC   | 162417       | 32541            | 40             |
| Caelo           | Base cream DAC   | 162420       | 32542            | 40             |
| Caelo           | Base cream DAC   | 162422       | 32543            | 40             |
| Caelo           | Base cream DAC   | 162617       | 32544            | 40             |
| Caelo           | Base cream DAC   | 161500       | 32547            | 40             |
| Caelo           | Base cream DAC   | 161524       | 32548            | 40             |
| Caelo           | Base cream DAC   | 161558       | 32549            | 40             |
| Caelo           | Base cream DAC   | 171542       | 33380            | 40             |
| Caelo           | Base cream DAC   | 171533       | 33381            | 40             |
| Caelo           | Base cream DAC   | 171474       | 33382            | 40             |
| Caelo           | Base cream DAC   | 171532       | 33383            | 40             |
| Caelo           | Base cream DAC   | 171473       | 33384            | 40             |
| Caelo           | Base cream DAC   | 171082       | 33385            | 40             |
| Caelo           | Base cream DAC   | 171543       | 33386            | 40             |
| Caelo           | Base cream DAC   | 171004       | 33387            | 40             |
| Caelo           | Base cream DAC   | 171039       | 33388            | 40             |
| Caelo           | Base cream DAC   | 171476       | 33389            | 40             |
| Caelo           | Base cream DAC   | 171005       | 33390            | 40             |
| Caelo           | Base cream DAC   | 171557       | 33391            | 40             |
| Caelo           | Base cream DAC   | 171038       | 33392            | 40             |
| Caelo           | Base cream DAC   | 171475       | 33393            | 40             |
| Caelo           | Base cream DAC   | 171477       | 33394            | 40             |
| Caelo           | Base cream DAC   | 171170       | 33395            | 40             |
| Caelo           | Base cream DAC   | 171240       | 33397            | 40             |
| Caelo           | Base cream DAC   | 171534       | 33526            | 40             |
| Caelo           | Base cream DAC   | 171535       | 33527            | 40             |
| Caelo           | Base cream DAC   | 171536       | 33528            | 40             |
| Caelo           | Base cream DAC   | 171537       | 33529            | 40             |
| Caelo           | Base cream DAC   | 171538       | 33530            | 40             |
| Caelo           | Base cream DAC   | 171539       | 33531            | 40             |
| Caelo           | Base cream DAC   | 171540       | 33532            | 40             |
| Caelo           | Base cream DAC   | 171545       | 33533            | 40             |
| Caelo           | Base cream DAC   | 171546       | 33534            | 40             |
| Caelo           | Base cream DAC   | 171547       | 33535            | 40             |
| Caelo           | Base cream DAC   | 171548       | 33536            | 40             |
| Caelo           | Base cream DAC   | 171549       | 33537            | 40             |
| Caelo           | Base cream DAC   | 171550       | 33538            | 40             |
| Caelo           | Base cream DAC   | 171541       | 33539            | 40             |
| Caelo           | Base cream DAC   | 171551       | 33540            | 40             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Sample ID</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|------------------|----------------|
| Caelo           | Base cream DAC   | 171552       | 33541            | 40             |
| Caelo           | Base cream DAC   | 171554       | 33542            | 40             |
| Caelo           | Base cream DAC   | 171555       | 33543            | 40             |
| Caelo           | Base cream DAC   | 171556       | 33544            | 40             |
| Caelo           | Base cream DAC   | 171544       | 33546            | 40             |
| Caelo           | Base cream DAC   | 172259       | 33767            | 40             |
| Caelo           | Base cream DAC   | 182723       | 34352            | 40             |
| Caelo           | Base cream DAC   | 192701       | 34823            | 40             |
| Caelo           | Base cream DAC   | 191702       | 34824            | 40             |
| Caelo           | Base cream DAC   | 191737       | 34825            | 40             |
| Caelo           | Base cream DAC   | 20000048     | 34977            | 40             |
| Caelo           | Base cream DAC   | 20001689     | 34978            | 40             |
| Caelo           | Base cream DAC   | 20002867     | 35167            | 40             |
| Caelo           | Base cream DAC   | 20002866     | 35173            | 40             |
| Caelo           | Base cream DAC   | 20002871     | 35177            | 40             |
| Caelo           | Base cream DAC   | 20002873     | 35179            | 40             |
| Caelo           | Base cream DAC   | 20002874     | 35180            | 40             |
| Caelo           | Base cream DAC   | 20002875     | 35181            | 40             |
| Caelo           | Base cream DAC   | 20002877     | 35183            | 40             |
| Caelo           | Base cream DAC   | 20003181     | 35184            | 40             |
| Caelo           | Base cream DAC   | 20003182     | 35185            | 40             |
| Caelo           | Base cream DAC   | 20003183     | 35186            | 40             |
| Caelo           | Base cream DAC   | 20003185     | 35187            | 40             |
| Caelo           | Base cream DAC   | 20003186     | 35188            | 40             |
| Caelo           | Base cream DAC   | 20003188     | 35189            | 40             |
| Caelo           | Base cream DAC   | 20003189     | 35190            | 40             |
| Caelo           | Base cream DAC   | 20003191     | 35191            | 40             |
| Caelo           | Base cream DAC   | 20003192     | 35192            | 40             |
| Caelo           | Base cream DAC   | 20003193     | 35193            | 40             |
| Caelo           | Base cream DAC   | 20003194     | 35194            | 40             |
| Caelo           | Base cream DAC   | 20003195     | 35195            | 40             |
| Caelo           | Base cream DAC   | 20003196     | 35196            | 40             |
| Caelo           | Base cream DAC   | 20003197     | 35197            | 40             |
| Caelo           | Base cream DAC   | 20003287     | 35198            | 40             |
| Caelo           | Base cream DAC   | 20003288     | 35199            | 40             |
| Caelo           | Base cream DAC   | 20003470     | 35201            | 40             |
| Caelo           | Base cream DAC   | 20003471     | 35202            | 40             |
| Caelo           | Base cream DAC   | 20003472     | 35203            | 40             |
| Caelo           | Base cream DAC   | 20003473     | 35204            | 40             |
| Caelo           | Base cream DAC   | 20003474     | 35205            | 40             |
| Caelo           | Base cream DAC   | 20003475     | 35206            | 40             |
| Caelo           | Base cream DAC   | 20003476     | 35207            | 40             |
| Caelo           | Base cream DAC   | 20003830     | 35208            | 40             |
| Caelo           | Base cream DAC   | 20003831     | 35209            | 40             |
| Caelo           | Base cream DAC   | 20003832     | 35210            | 40             |
| Caelo           | Base cream DAC   | 20003833     | 35211            | 40             |
| Caelo           | Base cream DAC   | 20003834     | 35212            | 40             |
| Caelo           | Base cream DAC   | 20003835     | 35213            | 40             |
| Caelo           | Base cream DAC   | 20003836     | 35214            | 40             |
| Caelo           | Base cream DAC   | 20004315     | 35215            | 40             |
| Caelo           | Base cream DAC   | 20004316     | 35216            | 40             |
| Caelo           | Base cream DAC   | 20004324     | 35423            | 40             |
| Caelo           | Base cream DAC   | 20004328     | 35425            | 40             |
| Caelo           | Base cream DAC   | 20004329     | 35426            | 40             |
| Caelo           | Base cream DAC   | 20004330     | 35427            | 40             |
| Caelo           | Base cream DAC   | 20004331     | 35428            | 40             |
| Caelo           | Base cream DAC   | 20004317     | 35429            | 40             |
| Caelo           | Base cream DAC   | 20004318     | 35430            | 40             |
| Caelo           | Base cream DAC   | 21000601     | 35431            | 40             |
| Caelo           | Base cream DAC   | 21000812     | 35432            | 40             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Sample ID</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|------------------|----------------|
| Caelo           | Base cream DAC   | 21000813     | 35433            | 40             |
| Caelo           | Base cream DAC   | 21000814     | 35434            | 40             |
| Caelo           | Base cream DAC   | 21000815     | 35435            | 40             |
| Caelo           | Base cream DAC   | 21000816     | 35436            | 40             |
| Caelo           | Base cream DAC   | 21000817     | 35437            | 40             |
| Caelo           | Base cream DAC   | 21000818     | 35438            | 40             |
| Caelo           | Base cream DAC   | 21000819     | 35439            | 40             |
| Caelo           | Base cream DAC   | 21000820     | 35440            | 40             |
| Caelo           | Base cream DAC   | 21000821     | 35441            | 40             |
| Caelo           | Base cream DAC   | 21000822     | 35442            | 40             |
| Caelo           | Base cream DAC   | 21001243     | 35443            | 40             |
| Caelo           | Base cream DAC   | 21001244     | 35444            | 40             |
| Caelo           | Base cream DAC   | 21001245     | 35445            | 40             |
| Caelo           | Base cream DAC   | 21001246     | 35446            | 40             |
| Caelo           | Base cream DAC   | 21001247     | 35447            | 40             |
| Caelo           | Base cream DAC   | 21001249     | 35448            | 40             |
| Caelo           | Base cream DAC   | 21001250     | 35449            | 40             |
| Caelo           | Base cream DAC   | 21001251     | 35450            | 40             |
| Caelo           | Base cream DAC   | 21001252     | 35451            | 40             |
| Caelo           | Base cream DAC   | 21001253     | 35452            | 40             |
| Caelo           | Base cream DAC   | 21001764     | 35511            | 50             |
| Caelo           | Base cream DAC   | 21001254     | 35558            | 50             |
| Caelo           | Base cream DAC   | 21001765     | 35682            | 50             |
| Caelo           | Base cream DAC   | 21001766     | 35683            | 50             |
| Caelo           | Base cream DAC   | 21001767     | 35684            | 50             |
| Caelo           | Base cream DAC   | 21001769     | 35685            | 50             |
| Caelo           | Base cream DAC   | 21001770     | 35686            | 50             |
| Caelo           | Base cream DAC   | 21001771     | 35687            | 50             |
| Caelo           | Base cream DAC   | 21001772     | 35688            | 50             |
| Caelo           | Base cream DAC   | 21001773     | 35689            | 50             |
| Caelo           | Base cream DAC   | 21001774     | 35690            | 50             |
| Caelo           | Base cream DAC   | 21001775     | 35691            | 50             |
| Caelo           | Base cream DAC   | 21001776     | 35692            | 50             |
| Caelo           | Base cream DAC   | 21001777     | 35693            | 50             |
| Caelo           | Base cream DAC   | 21001778     | 35694            | 50             |
| Caelo           | Base cream DAC   | 21001779     | 35695            | 50             |
| Caelo           | Base cream DAC   | 21001780     | 35696            | 50             |
| Caelo           | Base cream DAC   | 21002384     | 35697            | 50             |
| Caelo           | Base cream DAC   | 21002385     | 35698            | 50             |
| Caelo           | Base cream DAC   | 21002386     | 35699            | 50             |
| Caelo           | Base cream DAC   | 21002387     | 35700            | 50             |
| Caelo           | Base cream DAC   | 21002388     | 35701            | 50             |
| Caelo           | Base cream DAC   | 21002389     | 35702            | 50             |
| Caelo           | Base cream DAC   | 21002390     | 35703            | 50             |
| Caelo           | Base cream DAC   | 21002391     | 35704            | 50             |
| Caelo           | Base cream DAC   | 21002521     | 35705            | 50             |
| Caelo           | Base cream DAC   | 21002523     | 35706            | 50             |
| Caelo           | Base cream DAC   | 21002524     | 35707            | 50             |
| Caelo           | Base cream DAC   | 21002525     | 35708            | 50             |
| Caelo           | Base cream DAC   | 21002526     | 35709            | 50             |
| Caelo           | Base cream DAC   | 21002527     | 35710            | 50             |
| Caelo           | Base cream DAC   | 21002528     | 35711            | 50             |
| Caelo           | Base cream DAC   | 21002529     | 35712            | 50             |
| Caelo           | Base cream DAC   | 21002604     | 35713            | 50             |
| Caelo           | Base cream DAC   | 21002605     | 35714            | 50             |
| Caelo           | Base cream DAC   | 21002606     | 35715            | 50             |
| Caelo           | Base cream DAC   | 21002607     | 35716            | 50             |
| Caelo           | Base cream DAC   | 21002608     | 35717            | 50             |
| Caelo           | Base cream DAC   | 21002610     | 35718            | 50             |
| D'Oroderm       | Base cream DAC   | 1346001      | 31315            | 40             |

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| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Euro OTC | Base cream DAC | 07570418 | 34319     | 40      |
| Euro OTC | Base cream DAC | 76581018 | 34320     | 40      |
| Euro OTC | Base cream DAC | 92060819 | 34699     | 40      |
| Euro OTC | Base cream DAC | 40180120 | 34826     | 40      |
| Euro OTC | Base cream DAC | 15650621 | 35575     | 50      |
| Euro OTC | Base cream DAC | 15640621 | 35576     | 50      |
| Euro OTC | Base cream DAC | 15620621 | 35577     | 50      |
| Euro OTC | Base cream DAC | 15630621 | 35578     | 50      |
| Caelo    | Base cream DAC | 161357   | 32242     | 40      |
| Caelo    | Base cream DAC | 161357   | 32243     | 40      |
| Caelo    | Base cream DAC | 161020   | 32256     | 40      |
| Caelo    | Base cream DAC | 161020   | 32257     | 40      |
| Caelo    | Base cream DAC | 161021   | 32258     | 40      |
| Caelo    | Base cream DAC | 161021   | 32259     | 40      |
| Caelo    | Base cream DAC | 161022   | 32261     | 40      |
| Caelo    | Base cream DAC | 161361   | 32523     | 40      |
| Caelo    | Base cream DAC | 162407   | 32536     | 40      |
| Caelo    | Base cream DAC | 162407   | 32537     | 40      |
| Caelo    | Base cream DAC | 162407   | 32538     | 40      |
| Caelo    | Base cream DAC | 162617   | 32545     | 40      |
| Caelo    | Base cream DAC | 162617   | 32546     | 40      |

- 81 241 spectra from a total of 1793 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 17 924 spectra from 1054 *Apo-Ident* customers from 3825 batches from the substance/substance group *Base cream DAC*.
- Among them are spectra of independent samples from 3763 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| /Noweda                    | Base cream DAC | 17C16-T08-042619 | 1       |
| 18.10.2016 Phoenix 12,6... | Base cream DAC | 303422           | 1       |
| 18105101                   | Base cream DAC | 18105101         | 1       |
| Euro OTC                   | Base cream DAC | 62560918         | 25      |
| AEP                        | Base cream DAC | 296222           | 1       |
| AEP                        | Base cream DAC | 19170301         | 2       |
| AEP                        | Base cream DAC | 19172501         | 1       |
| Bombastus                  | Base cream DAC | 301158           | 3       |
| Caelo                      | Base cream DAC | 3425             | 1       |
| AH Henry Lamotte GmbH      | Base cream DAC | 6003682017       | 2       |
| AH Henry Lamotte GmbH      | Base cream DAC | 6004860001       | 1       |
| AHC 27.06.13 EK 32,95      | Base cream DAC | 1212025-01       | 1       |
| Bombastus                  | Base cream DAC | 301148           | 1       |
| AHC/Lamotte                | Base cream DAC | 8004134006       | 1       |
| AHD                        | Base cream DAC | 5650700          | 5       |
| AHD                        | Base cream DAC | 16101201         | 1       |
| AHD                        | Base cream DAC | 17240301         | 1       |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| AHD                        | Base cream DAC | 18003943         | 1       |
| AHD                        | Base cream DAC | 18192601         | 1       |
| AHD                        | Base cream DAC | 18232601         | 1       |
| AHD                        | Base cream DAC | 19003701         | 1       |
| AHD                        | Base cream DAC | 19053201         | 1       |
| AHD                        | Base cream DAC | 19118101         | 1       |
| AHD                        | Base cream DAC | 19005669         | 1       |
| AHD                        | Base cream DAC | 19240501         | 1       |
| AHD                        | Base cream DAC | 20000687001      | 2       |
| Bombastus                  | Base cream DAC | 301743           | 3       |
| Bombastus                  | Base cream DAC | 301756           | 1       |
| Euro OTC                   | Base cream DAC | 17006701         | 1       |
| AHD / P.W. Beyvers GmbH    | Base cream DAC | 731/4            | 2       |
| AHD / P.W. Beyvers GmbH    | Base cream DAC | 18001            | 1       |
| Bombastus                  | Base cream DAC | 301755           | 1       |
| Caelo                      | Base cream DAC | 5489900          | 5       |
| Caelo                      | Base cream DAC | 5788000          | 1       |
| AHD 11.12.14 EK 8,79       | Base cream DAC | 289664           | 1       |
| AHD Lamotte GmbH           | Base cream DAC | 5910000          | 1       |
| AHD Lamotte GmbH           | Base cream DAC | 6004860002       | 1       |
| AHD Lamotte GmbH           | Base cream DAC | 800287008        | 1       |
| AHD Lamotte GmbH           | Base cream DAC | 8003325009       | 1       |
| AHD, 02.12.13              | Base cream DAC | 280079           | 1       |
| AHD, 05.04.2013            | Base cream DAC | 275439           | 1       |
| AHD/ Beyvers               | Base cream DAC | 640/2            | 2       |
| AHD/ Beyvers               | Base cream DAC | 640/3            | 3       |
| AHD/ Beyvers               | Base cream DAC | 731/1            | 1       |
| AHD/ Beyvers               | Base cream DAC | 19001            | 2       |
| Bombastus                  | Base cream DAC | 538/2            | 2       |
| AHD/Beyvers                | Base cream DAC | 515/2            | 3       |
| AHD/Beyvers                | Base cream DAC | 538/1            | 1       |
| Bombastus                  | Base cream DAC | 18005749         | 3       |
| Bombastus                  | Base cream DAC | 19000944         | 2       |
| Caelo                      | Base cream DAC | 5909500          | 1       |
| Caelo                      | Base cream DAC | 20001688001      | 2       |
| Fagron                     | Base cream DAC | 16B15-T04-030282 | 1       |
| Fagron                     | Base cream DAC | 15C11-T11-020411 | 4       |
| AHD/Henry Lamotte          | Base cream DAC | 6003682016       | 2       |
| AHD/Lamotte                | Base cream DAC | 8004134010       | 1       |
| AHD/Lamotte                | Base cream DAC | 8004996006       | 1       |
| AHD/Lamotte                | Base cream DAC | 8005713003       | 1       |
| AHDE 21.05.,2015           | Base cream DAC | 1346001          | 1       |
| Caelo                      | Base cream DAC | 17153601         | 5       |
| ALH                        | Base cream DAC | 16227001         | 1       |
| Euro OTC                   | Base cream DAC | 1407018-01       | 7       |
| Euro OTC                   | Base cream DAC | 1502029-01       | 2       |
| Euro OTC                   | Base cream DAC | 13111004-01      | 1       |
| Euro OTC                   | Base cream DAC | 1511002-01       | 16      |
| Euro OTC                   | Base cream DAC | 55760320         | 2       |
| Alliance                   | Base cream DAC | 8004996002       | 1       |
| Alliance H.                | Base cream DAC | 17023601         | 2       |
| Alliance Health 17.01.2... | Base cream DAC | 5490100          | 1       |
| Alliance Healthcare        | Base cream DAC | 12305301         | 1       |
| Alliance Healthcare        | Base cream DAC | 5322400          | 1       |
| Alliance Healthcare        | Base cream DAC | 13139801         | 1       |
| Alliance Healthcare        | Base cream DAC | 13188101         | 1       |
| Alliance Healthcare        | Base cream DAC | 14238501         | 1       |
| Alliance Healthcare        | Base cream DAC | 79000916         | 2       |
| Alliance Healthcare        | Base cream DAC | 303417           | 1       |
| Alliance Healthcare        | Base cream DAC | 304353           | 1       |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------------------|------------------|------------------|----------------|
| Alliance Healthcare         | Base cream DAC   | 18005236         | 1              |
| Alliance Healthcare         | Base cream DAC   | 87251118         | 1              |
| Alliance Healthcare         | Base cream DAC   | 19001            | 2              |
| Alliance Healthcare/Ens...  | Base cream DAC   | 15730518         | 1              |
| Alliance Healthcare/Ens...  | Base cream DAC   | 80340218         | 1              |
| Euro OTC                    | Base cream DAC   | 87241118         | 22             |
| Fagron                      | Base cream DAC   | 19G08-T06-069156 | 6              |
| Alliance Healthcare/Hed...  | Base cream DAC   | 1502026-01       | 2              |
| Fagron                      | Base cream DAC   | 18G13-T09-05B073 | 1              |
| Alliance/Henry              | Base cream DAC   | 6004859002       | 1              |
| Allianz                     | Base cream DAC   | 69530118         | 1              |
| Allianz Healthcare 20.0...  | Base cream DAC   | 14232201         | 1              |
| anzag                       | Base cream DAC   | 18137001         | 1              |
| Anzag                       | Base cream DAC   | 207/2            | 1              |
| Anzag                       | Base cream DAC   | 5215600          | 1              |
| Anzag                       | Base cream DAC   | 1205006-01       | 1              |
| Anzag                       | Base cream DAC   | 5321000          | 1              |
| Anzag                       | Base cream DAC   | 14177801         | 1              |
| Anzag                       | Base cream DAC   | 292258           | 1              |
| Anzag                       | Base cream DAC   | 293196           | 1              |
| Anzag                       | Base cream DAC   | 292260           | 2              |
| Anzag                       | Base cream DAC   | 39590217         | 1              |
| Anzag                       | Base cream DAC   | 72270417         | 1              |
| Anzag                       | Base cream DAC   | 69510118         | 1              |
| Anzag                       | Base cream DAC   | 18270601         | 1              |
| Anzag                       | Base cream DAC   | 19117001         | 1              |
| Anzag                       | Base cream DAC   | 19004713         | 1              |
| Anzag                       | Base cream DAC   | 19G08-T09-069166 | 1              |
| Anzag 09.11.12              | Base cream DAC   | 272216           | 1              |
| Anzag 14.01.2013            | Base cream DAC   | 1210011-01       | 1              |
| Anzag 19.02.2013            | Base cream DAC   | 275444           | 1              |
| Anzag 19.12.14 3,82         | Base cream DAC   | 14177501         | 1              |
| Anzag 25.10.12 ek:33,15EUR  | Base cream DAC   | 1205005-01       | 1              |
| anzag 29.01.13 ek: 33,15EUR | Base cream DAC   | 1212027-01       | 1              |
| Caelo                       | Base cream DAC   | 19170301         | 11             |
| Bombastus                   | Base cream DAC   | 275279           | 1              |
| Bombastus                   | Base cream DAC   | 289589           | 1              |
| Euro OTC                    | Base cream DAC   | 1407021-01       | 1              |
| anzag/ lamotte              | Base cream DAC   | 6018791002       | 1              |
| anzag/ lamotte              | Base cream DAC   | 6018791004       | 1              |
| Bombastus                   | Base cream DAC   | 289804           | 1              |
| Caelo                       | Base cream DAC   | 14151801         | 4              |
| Euro OTC                    | Base cream DAC   | 1205044-01       | 2              |
| Euro OTC                    | Base cream DAC   | 1212027-01       | 1              |
| Anzag/Henry Lamotte         | Base cream DAC   | 5289100          | 1              |
| Anzag/Lamotte               | Base cream DAC   | 5408300          | 1              |
| Anzag/Lamotte               | Base cream DAC   | 591000           | 1              |
| Anzag/Lamotte               | Base cream DAC   | 6003682004       | 1              |
| Anzag;8.14EUR;17.6.15       | Base cream DAC   | 14232301         | 2              |
| Anzag                       | Base cream DAC   | 5910000          | 2              |
| AnzagIchthyol               | Base cream DAC   | 16329201         | 1              |
| Anzah / Henry lamotte       | Base cream DAC   | 57788600         | 1              |
| Apomix                      | Base cream DAC   | 3B250616         | 1              |
| Apomix                      | Base cream DAC   | 9B171019         | 1              |
| Apomix                      | Base cream DAC   | 2B110220         | 1              |
| Apomix                      | Base cream DAC   | 2B030221         | 1              |
| Apomix / AHD                | Base cream DAC   | 281328006/14     | 1              |
| Apomix / Alliance Haelt...  | Base cream DAC   | 17000066         | 2              |
| apomix, Phönix, 09.01.2...  | Base cream DAC   | 17243401         | 1              |
| Apomix/Jenne                | Base cream DAC   | 4D061014         | 1              |

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| <b>Supplier</b>    | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|--------------------|------------------|------------------|----------------|
| apomix/Noweda      | Base cream DAC   | 17108101         | 1              |
| Apomix/Noweda      | Base cream DAC   | 3001016          | 1              |
| Bambastus          | Base cream DAC   | 293736           | 1              |
| Basiscreme         | Base cream DAC   | 1510027-01       | 1              |
| Bayers             | Base cream DAC   | 538/2            | 1              |
| Bayvers            | Base cream DAC   | 440/1            | 1              |
| Bayvers            | Base cream DAC   | 731/1            | 3              |
| Bayvers            | Base cream DAC   | 731/3            | 4              |
| Bayvers/ AHD       | Base cream DAC   | 515/3            | 1              |
| Bayvers/ Phönix    | Base cream DAC   | 538/2            | 1              |
| Berkel AHK         | Base cream DAC   | 17f08-T04-045271 | 1              |
| Berkel AHK         | Base cream DAC   | 17K24-T04-050495 | 1              |
| Beyavers           | Base cream DAC   | 18001            | 1              |
| Beyers             | Base cream DAC   | 234/1            | 1              |
| beyvers            | Base cream DAC   | 538/2            | 2              |
| beyvers            | Base cream DAC   | 440/3            | 1              |
| beyvers            | Base cream DAC   | 731/4            | 1              |
| Beyvers            | Base cream DAC   | 234/2            | 2              |
| Beyvers            | Base cream DAC   | 219/1            | 1              |
| Beyvers            | Base cream DAC   | 234/3            | 1              |
| Beyvers            | Base cream DAC   | 319/1            | 3              |
| Beyvers            | Base cream DAC   | 319-1            | 1              |
| Beyvers            | Base cream DAC   | 329/1            | 1              |
| Beyvers            | Base cream DAC   | 319/2            | 1              |
| Beyvers            | Base cream DAC   | 329/2            | 4              |
| Beyvers            | Base cream DAC   | 340/2            | 3              |
| Beyvers            | Base cream DAC   | 340/1            | 1              |
| Beyvers            | Base cream DAC   | 412/1            | 2              |
| Beyvers            | Base cream DAC   | 412/3            | 4              |
| Beyvers            | Base cream DAC   | 440/1            | 3              |
| Beyvers            | Base cream DAC   | 440/3            | 2              |
| Beyvers            | Base cream DAC   | 440/2            | 2              |
| Beyvers            | Base cream DAC   | 515/5            | 1              |
| Beyvers            | Base cream DAC   | 515/2            | 1              |
| Beyvers            | Base cream DAC   | 515/3            | 2              |
| Beyvers            | Base cream DAC   | 5153             | 1              |
| Beyvers            | Base cream DAC   | 538/2            | 1              |
| Beyvers            | Base cream DAC   | 538/1            | 2              |
| Beyvers            | Base cream DAC   | 640/1            | 5              |
| Beyvers            | Base cream DAC   | 640/2            | 1              |
| Beyvers            | Base cream DAC   | 640/3            | 1              |
| Beyvers            | Base cream DAC   | 731/2            | 9              |
| Beyvers            | Base cream DAC   | 731/3            | 5              |
| Beyvers            | Base cream DAC   | 731/4            | 1              |
| Beyvers            | Base cream DAC   | 18001            | 5              |
| Beyvers            | Base cream DAC   | 18002            | 4              |
| Beyvers            | Base cream DAC   | 19002            | 1              |
| Beyvers            | Base cream DAC   | 19005            | 1              |
| Beyvers            | Base cream DAC   | 538-1            | 1              |
| Beyvers / AHD      | Base cream DAC   | 18001            | 1              |
| Beyvers / AHD      | Base cream DAC   | 19001            | 1              |
| Beyvers / Alliance | Base cream DAC   | 731/4            | 3              |
| Beyvers / Alliance | Base cream DAC   | 19001x2          | 1              |
| Beyvers / Gehe     | Base cream DAC   | 19003            | 1              |
| Beyvers / Phönix   | Base cream DAC   | 515/2            | 2              |
| Beyvers / Phönix   | Base cream DAC   | 731/4            | 1              |
| Beyvers / Sanacorp | Base cream DAC   | 19003            | 5              |
| Beyvers GmbH       | Base cream DAC   | 13170717         | 1              |
| Beyvers GmbH       | Base cream DAC   | 12170717         | 1              |
| Beyvers GmbH       | Base cream DAC   | 329/2            | 1              |

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| <b>Supplier</b>         | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-------------------------|------------------|--------------|----------------|
| Beyvers GmbH            | Base cream DAC   | 440/1        | 1              |
| Beyvers GmbH            | Base cream DAC   | 538/2        | 2              |
| Beyvers GmbH            | Base cream DAC   | 640/1        | 1              |
| Beyvers GmbH            | Base cream DAC   | 731/1        | 1              |
| Beyvers GmbH            | Base cream DAC   | 731/4        | 4              |
| Beyvers GmbH            | Base cream DAC   | 18002        | 4              |
| Beyvers GmbH            | Base cream DAC   | 19001        | 2              |
| Beyvers GmbH /Sanacorp  | Base cream DAC   | 18002        | 1              |
| Beyvers GmbH/ Noweda    | Base cream DAC   | 329/1        | 1              |
| Beyvers/ Phönix         | Base cream DAC   | 538/2        | 1              |
| Beyvers/AEP             | Base cream DAC   | 731/4        | 1              |
| Beyvers/Alliance        | Base cream DAC   | 731/2        | 3              |
| Beyvers/Alliance        | Base cream DAC   | 18001        | 4              |
| Beyvers/Anzag           | Base cream DAC   | 340/1        | 1              |
| Beyvers/Anzag           | Base cream DAC   | 640/3        | 1              |
| Beyvers/Anzag           | Base cream DAC   | 731/2        | 2              |
| Beyvers/Anzag           | Base cream DAC   | 731/3        | 1              |
| Beyvers/Anzag           | Base cream DAC   | 19003        | 3              |
| Beyvers/Beyvers         | Base cream DAC   | 19001        | 1              |
| Beyvers/Beyvers         | Base cream DAC   | 19002        | 1              |
| Beyvers/Gehe            | Base cream DAC   | 180-01       | 1              |
| Beyvers/Gehe            | Base cream DAC   | 538/1        | 2              |
| Beyvers/GEHE            | Base cream DAC   | 18002        | 2              |
| Beyvers/Gumo            | Base cream DAC   | 340/2        | 1              |
| Beyvers/Noweda          | Base cream DAC   | 538/2        | 1              |
| Beyvers/Noweda          | Base cream DAC   | 538/1        | 1              |
| Beyvers/Noweda          | Base cream DAC   | 640/2        | 3              |
| Beyvers/Noweda          | Base cream DAC   | 640/3        | 7              |
| Beyvers/Noweda          | Base cream DAC   | 731/1        | 1              |
| Beyvers/Noweda          | Base cream DAC   | 731/2        | 1              |
| Beyvers/Noweda          | Base cream DAC   | 18001        | 2              |
| Beyvers/Phönix          | Base cream DAC   | 329/1        | 1              |
| Beyvers/Phönix          | Base cream DAC   | 340/2        | 4              |
| Beyvers/Phönix          | Base cream DAC   | 412/1        | 1              |
| Beyvers/Phönix          | Base cream DAC   | 440/3        | 1              |
| Beyvers/Sanacorp        | Base cream DAC   | 19002        | 1              |
| Beyvers/VDL             | Base cream DAC   | 731/3        | 1              |
| Beyvers/VDL             | Base cream DAC   | 18001        | 1              |
| Bionorica/ Gehe         | Base cream DAC   | 18003942     | 1              |
| Bmbastus/Noweda         | Base cream DAC   | 292256       | 1              |
| bomastus                | Base cream DAC   | 19000948     | 1              |
| Bomastus-Werke / Noweda | Base cream DAC   | 18003939     | 1              |
| Bomastus-Werke AG       | Base cream DAC   | 18003108     | 1              |
| Bomastus-Werke AG       | Base cream DAC   | 18001969     | 1              |
| Bomastus-Werke AG       | Base cream DAC   | 18005236     | 1              |
| Bomastus-Werke AG       | Base cream DAC   | 18005240     | 1              |
| Bombastus               | Base cream DAC   | 299325       | 3              |
| Bombastus               | Base cream DAC   | 293801       | 1              |
| Bombastus               | Base cream DAC   | 296231       | 3              |
| Bombastus               | Base cream DAC   | 298263       | 2              |
| Bombastus               | Base cream DAC   | 260416v3     | 1              |
| Bombastus               | Base cream DAC   | 305712       | 1              |
| Bombastus               | Base cream DAC   | 308801       | 6              |
| Bombastus               | Base cream DAC   | 130161       | 1              |
| Bombastus               | Base cream DAC   | 266524       | 1              |
| Bombastus               | Base cream DAC   | 269993       | 1              |
| Bombastus               | Base cream DAC   | 268822       | 1              |
| Bombastus               | Base cream DAC   | 266799       | 1              |
| Bombastus               | Base cream DAC   | 270157       | 1              |
| Bombastus               | Base cream DAC   | 265036       | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 272001       | 1              |
| Bombastus       | Base cream DAC   | 272372       | 1              |
| Bombastus       | Base cream DAC   | 272093       | 1              |
| Bombastus       | Base cream DAC   | 268925       | 2              |
| Bombastus       | Base cream DAC   | 272375       | 2              |
| Bombastus       | Base cream DAC   | 272464       | 2              |
| Bombastus       | Base cream DAC   | 60090504     | 2              |
| Bombastus       | Base cream DAC   | 272219       | 1              |
| Bombastus       | Base cream DAC   | 272084       | 2              |
| Bombastus       | Base cream DAC   | 275277       | 1              |
| Bombastus       | Base cream DAC   | 275175       | 1              |
| Bombastus       | Base cream DAC   | 275447       | 2              |
| Bombastus       | Base cream DAC   | 1210043-01   | 1              |
| Bombastus       | Base cream DAC   | 272214       | 1              |
| Bombastus       | Base cream DAC   | 275443       | 1              |
| Bombastus       | Base cream DAC   | 275184       | 2              |
| Bombastus       | Base cream DAC   | 275438       | 2              |
| Bombastus       | Base cream DAC   | 276944       | 2              |
| Bombastus       | Base cream DAC   | 275172       | 1              |
| Bombastus       | Base cream DAC   | 276950       | 2              |
| Bombastus       | Base cream DAC   | 277248       | 1              |
| Bombastus       | Base cream DAC   | 277099       | 7              |
| Bombastus       | Base cream DAC   | 278398       | 3              |
| Bombastus       | Base cream DAC   | 278563       | 2              |
| Bombastus       | Base cream DAC   | 275275       | 1              |
| Bombastus       | Base cream DAC   | 275278       | 1              |
| Bombastus       | Base cream DAC   | 278475       | 2              |
| Bombastus       | Base cream DAC   | 278553       | 1              |
| Bombastus       | Base cream DAC   | 278557       | 2              |
| Bombastus       | Base cream DAC   | 13064203     | 1              |
| Bombastus       | Base cream DAC   | 277110       | 1              |
| Bombastus       | Base cream DAC   | 278560       | 2              |
| Bombastus       | Base cream DAC   | 278556       | 6              |
| Bombastus       | Base cream DAC   | 278558       | 1              |
| Bombastus       | Base cream DAC   | 279959       | 1              |
| Bombastus       | Base cream DAC   | 280077       | 1              |
| Bombastus       | Base cream DAC   | 278562       | 3              |
| Bombastus       | Base cream DAC   | 280082       | 2              |
| Bombastus       | Base cream DAC   | 281240       | 2              |
| Bombastus       | Base cream DAC   | 279965       | 1              |
| Bombastus       | Base cream DAC   | 281329       | 4              |
| Bombastus       | Base cream DAC   | 281239       | 1              |
| Bombastus       | Base cream DAC   | 281331       | 6              |
| Bombastus       | Base cream DAC   | 282723       | 2              |
| Bombastus       | Base cream DAC   | 281328       | 1              |
| Bombastus       | Base cream DAC   | 279960       | 1              |
| Bombastus       | Base cream DAC   | 278555       | 3              |
| Bombastus       | Base cream DAC   | 282887       | 1              |
| Bombastus       | Base cream DAC   | 279829       | 1              |
| Bombastus       | Base cream DAC   | 281486       | 1              |
| Bombastus       | Base cream DAC   | 281242       | 2              |
| Bombastus       | Base cream DAC   | 280078       | 3              |
| Bombastus       | Base cream DAC   | 282774       | 1              |
| Bombastus       | Base cream DAC   | 281335       | 1              |
| Bombastus       | Base cream DAC   | 282771       | 3              |
| Bombastus       | Base cream DAC   | 282778       | 1              |
| Bombastus       | Base cream DAC   | 283972       | 2              |
| Bombastus       | Base cream DAC   | 283917       | 2              |
| Bombastus       | Base cream DAC   | 286087       | 5              |
| Bombastus       | Base cream DAC   | 283971       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 285220       | 1              |
| Bombastus       | Base cream DAC   | 281333       | 1              |
| Bombastus       | Base cream DAC   | 279962       | 1              |
| Bombastus       | Base cream DAC   | 286158       | 3              |
| Bombastus       | Base cream DAC   | 286161       | 1              |
| Bombastus       | Base cream DAC   | 286088       | 4              |
| Bombastus       | Base cream DAC   | 286162       | 1              |
| Bombastus       | Base cream DAC   | 287193       | 1              |
| Bombastus       | Base cream DAC   | 285227       | 1              |
| Bombastus       | Base cream DAC   | 287195       | 2              |
| Bombastus       | Base cream DAC   | 286157       | 1              |
| Bombastus       | Base cream DAC   | 287946       | 2              |
| Bombastus       | Base cream DAC   | 287111       | 1              |
| Bombastus       | Base cream DAC   | 287248       | 2              |
| Bombastus       | Base cream DAC   | 288058       | 1              |
| Bombastus       | Base cream DAC   | 289661       | 1              |
| Bombastus       | Base cream DAC   | 290866       | 1              |
| Bombastus       | Base cream DAC   | 289660       | 1              |
| Bombastus       | Base cream DAC   | 288055       | 4              |
| Bombastus       | Base cream DAC   | 287942       | 1              |
| Bombastus       | Base cream DAC   | 1401020-01   | 1              |
| Bombastus       | Base cream DAC   | 289530       | 4              |
| Bombastus       | Base cream DAC   | 289591       | 1              |
| Bombastus       | Base cream DAC   | 289529       | 3              |
| Bombastus       | Base cream DAC   | CHB289803    | 1              |
| Bombastus       | Base cream DAC   | 289665       | 1              |
| Bombastus       | Base cream DAC   | 291030       | 1              |
| Bombastus       | Base cream DAC   | 291032       | 2              |
| Bombastus       | Base cream DAC   | 292123       | 1              |
| Bombastus       | Base cream DAC   | 292267       | 2              |
| Bombastus       | Base cream DAC   | 289805       | 2              |
| Bombastus       | Base cream DAC   | 289669       | 2              |
| Bombastus       | Base cream DAC   | 292259       | 1              |
| Bombastus       | Base cream DAC   | 292256       | 3              |
| Bombastus       | Base cream DAC   | 294837       | 1              |
| Bombastus       | Base cream DAC   | 293800       | 1              |
| Bombastus       | Base cream DAC   | 292257       | 1              |
| Bombastus       | Base cream DAC   | 295899       | 2              |
| Bombastus       | Base cream DAC   | 294842       | 4              |
| Bombastus       | Base cream DAC   | 293739       | 2              |
| Bombastus       | Base cream DAC   | 293942       | 4              |
| Bombastus       | Base cream DAC   | 295897       | 4              |
| Bombastus       | Base cream DAC   | 296155       | 5              |
| Bombastus       | Base cream DAC   | 293973       | 2              |
| Bombastus       | Base cream DAC   | 295837       | 1              |
| Bombastus       | Base cream DAC   | 294832       | 2              |
| Bombastus       | Base cream DAC   | 298256       | 5              |
| Bombastus       | Base cream DAC   | 294833       | 3              |
| Bombastus       | Base cream DAC   | 15387001     | 1              |
| Bombastus       | Base cream DAC   | 298264       | 3              |
| Bombastus       | Base cream DAC   | 297482       | 2              |
| Bombastus       | Base cream DAC   | 298172       | 1              |
| Bombastus       | Base cream DAC   | 297500       | 2              |
| Bombastus       | Base cream DAC   | 297495       | 1              |
| Bombastus       | Base cream DAC   | 298267       | 3              |
| Bombastus       | Base cream DAC   | 299321       | 2              |
| Bombastus       | Base cream DAC   | 298261       | 2              |
| Bombastus       | Base cream DAC   | 300011       | 4              |
| Bombastus       | Base cream DAC   | 16005201     | 1              |
| Bombastus       | Base cream DAC   | 298265       | 5              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 298266       | 2              |
| Bombastus       | Base cream DAC   | 300012       | 1              |
| Bombastus       | Base cream DAC   | 299943       | 1              |
| Bombastus       | Base cream DAC   | 299948       | 4              |
| Bombastus       | Base cream DAC   | 299950       | 3              |
| Bombastus       | Base cream DAC   | 300013       | 4              |
| Bombastus       | Base cream DAC   | 301721       | 1              |
| Bombastus       | Base cream DAC   | 297497       | 1              |
| Bombastus       | Base cream DAC   | 299319       | 1              |
| Bombastus       | Base cream DAC   | 301722       | 2              |
| Bombastus       | Base cream DAC   | 301737       | 1              |
| Bombastus       | Base cream DAC   | 301754       | 1              |
| Bombastus       | Base cream DAC   | 303052       | 2              |
| Bombastus       | Base cream DAC   | 301156       | 2              |
| Bombastus       | Base cream DAC   | 301160       | 6              |
| Bombastus       | Base cream DAC   | 303061       | 3              |
| Bombastus       | Base cream DAC   | 303414       | 4              |
| Bombastus       | Base cream DAC   | 303057       | 2              |
| Bombastus       | Base cream DAC   | 301746       | 1              |
| Bombastus       | Base cream DAC   | 303060       | 3              |
| Bombastus       | Base cream DAC   | 303062       | 4              |
| Bombastus       | Base cream DAC   | 303415       | 2              |
| Bombastus       | Base cream DAC   | 303133       | 1              |
| Bombastus       | Base cream DAC   | 303417       | 2              |
| Bombastus       | Base cream DAC   | 303425       | 1              |
| Bombastus       | Base cream DAC   | 16232201     | 1              |
| Bombastus       | Base cream DAC   | 303055       | 6              |
| Bombastus       | Base cream DAC   | 304341       | 1              |
| Bombastus       | Base cream DAC   | 304351       | 2              |
| Bombastus       | Base cream DAC   | 304361       | 3              |
| Bombastus       | Base cream DAC   | 303136       | 1              |
| Bombastus       | Base cream DAC   | 304354       | 4              |
| Bombastus       | Base cream DAC   | 304359       | 3              |
| Bombastus       | Base cream DAC   | 3042362      | 1              |
| Bombastus       | Base cream DAC   | 305731       | 4              |
| Bombastus       | Base cream DAC   | 304358       | 1              |
| Bombastus       | Base cream DAC   | 305711       | 3              |
| Bombastus       | Base cream DAC   | 305728       | 3              |
| Bombastus       | Base cream DAC   | 304343       | 1              |
| Bombastus       | Base cream DAC   | 305694       | 1              |
| Bombastus       | Base cream DAC   | 305734       | 4              |
| Bombastus       | Base cream DAC   | 306621       | 6              |
| Bombastus       | Base cream DAC   | 306617       | 1              |
| Bombastus       | Base cream DAC   | 306624       | 2              |
| Bombastus       | Base cream DAC   | 306623       | 3              |
| Bombastus       | Base cream DAC   | 306618       | 5              |
| Bombastus       | Base cream DAC   | 306610       | 7              |
| Bombastus       | Base cream DAC   | 306607       | 1              |
| Bombastus       | Base cream DAC   | 307964       | 1              |
| Bombastus       | Base cream DAC   | 305714       | 3              |
| Bombastus       | Base cream DAC   | 307971       | 3              |
| Bombastus       | Base cream DAC   | 305715       | 5              |
| Bombastus       | Base cream DAC   | 307996       | 1              |
| Bombastus       | Base cream DAC   | 307834       | 6              |
| Bombastus       | Base cream DAC   | 308794       | 4              |
| Bombastus       | Base cream DAC   | 308799       | 8              |
| Bombastus       | Base cream DAC   | 310723       | 3              |
| Bombastus       | Base cream DAC   | 307832       | 1              |
| Bombastus       | Base cream DAC   | 307959       | 1              |
| Bombastus       | Base cream DAC   | 308804       | 5              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Bombastus       | Base cream DAC   | 310726             | 4              |
| Bombastus       | Base cream DAC   | 306613             | 4              |
| Bombastus       | Base cream DAC   | 310722             | 1              |
| Bombastus       | Base cream DAC   | 310746             | 3              |
| Bombastus       | Base cream DAC   | 310753             | 12             |
| Bombastus       | Base cream DAC   | 308795             | 1              |
| Bombastus       | Base cream DAC   | 310748             | 2              |
| Bombastus       | Base cream DAC   | 17000071           | 3              |
| Bombastus       | Base cream DAC   | 17000070           | 2              |
| Bombastus       | Base cream DAC   | 17000910           | 3              |
| Bombastus       | Base cream DAC   | 17000925           | 4              |
| Bombastus       | Base cream DAC   | 17000923           | 5              |
| Bombastus       | Base cream DAC   | 310751             | 6              |
| Bombastus       | Base cream DAC   | 17266601           | 1              |
| Bombastus       | Base cream DAC   | 17000904           | 5              |
| Bombastus       | Base cream DAC   | 18000487           | 2              |
| Bombastus       | Base cream DAC   | 18000493           | 3              |
| Bombastus       | Base cream DAC   | 18000972           | 5              |
| Bombastus       | Base cream DAC   | 17000913           | 1              |
| Bombastus       | Base cream DAC   | 17000069           | 5              |
| Bombastus       | Base cream DAC   | 18000485           | 1              |
| Bombastus       | Base cream DAC   | 18000958           | 3              |
| Bombastus       | Base cream DAC   | 18000967           | 2              |
| Bombastus       | Base cream DAC   | 18000962           | 6              |
| Bombastus       | Base cream DAC   | 1800960            | 1              |
| Bombastus       | Base cream DAC   | 18001969           | 6              |
| Bombastus       | Base cream DAC   | 18001968           | 8              |
| Bombastus       | Base cream DAC   | 18003098P-180827-4 | 1              |
| Bombastus       | Base cream DAC   | 18003112           | 5              |
| Bombastus       | Base cream DAC   | 18003936           | 4              |
| Bombastus       | Base cream DAC   | 18003098           | 1              |
| Bombastus       | Base cream DAC   | 18167001           | 1              |
| Bombastus       | Base cream DAC   | 18005233           | 3              |
| Bombastus       | Base cream DAC   | 18003929P-181129-1 | 1              |
| Bombastus       | Base cream DAC   | 18005743           | 3              |
| Bombastus       | Base cream DAC   | 18003945           | 5              |
| Bombastus       | Base cream DAC   | 18005754           | 8              |
| Bombastus       | Base cream DAC   | 18005751           | 2              |
| Bombastus       | Base cream DAC   | 18006773           | 6              |
| Bombastus       | Base cream DAC   | 18005232           | 1              |
| Bombastus       | Base cream DAC   | 18005748           | 6              |
| Bombastus       | Base cream DAC   | 18005750           | 8              |
| Bombastus       | Base cream DAC   | 18006764           | 2              |
| Bombastus       | Base cream DAC   | 18006769           | 1              |
| Bombastus       | Base cream DAC   | 19000952           | 10             |
| Bombastus       | Base cream DAC   | 19000937           | 2              |
| Bombastus       | Base cream DAC   | 19000940           | 1              |
| Bombastus       | Base cream DAC   | 19002685           | 3              |
| Bombastus       | Base cream DAC   | 190000954          | 1              |
| Bombastus       | Base cream DAC   | 190026989          | 1              |
| Bombastus       | Base cream DAC   | 19002681           | 4              |
| Bombastus       | Base cream DAC   | 19002693           | 5              |
| Bombastus       | Base cream DAC   | 19002677           | 4              |
| Bombastus       | Base cream DAC   | 19003295           | 4              |
| Bombastus       | Base cream DAC   | 19003278           | 2              |
| Bombastus       | Base cream DAC   | 19003280           | 3              |
| Bombastus       | Base cream DAC   | 19004702           | 1              |
| Bombastus       | Base cream DAC   | 19004715           | 3              |
| Bombastus       | Base cream DAC   | 19004708           | 1              |
| Bombastus       | Base cream DAC   | 19004720           | 6              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 19005672     | 4              |
| Bombastus       | Base cream DAC   | 19005663     | 2              |
| Bombastus       | Base cream DAC   | 20000461     | 2              |
| Bombastus       | Base cream DAC   | 20000472     | 6              |
| Bombastus       | Base cream DAC   | 20000471     | 3              |
| Bombastus       | Base cream DAC   | 20000462     | 3              |
| Bombastus       | Base cream DAC   | 140068       | 1              |
| Bombastus       | Base cream DAC   | 20000485     | 3              |
| Bombastus       | Base cream DAC   | 20000488     | 1              |
| Bombastus       | Base cream DAC   | 20000468     | 1              |
| Bombastus       | Base cream DAC   | 20002379     | 4              |
| Bombastus       | Base cream DAC   | 20002386     | 2              |
| Bombastus       | Base cream DAC   | 200000473    | 1              |
| Bombastus       | Base cream DAC   | 20003537     | 2              |
| Bombastus       | Base cream DAC   | 20003538     | 1              |
| Bombastus       | Base cream DAC   | 20003533     | 1              |
| Bombastus       | Base cream DAC   | 20003541     | 3              |
| Bombastus       | Base cream DAC   | 20002381     | 1              |
| Bombastus       | Base cream DAC   | 20003534     | 1              |
| Bombastus       | Base cream DAC   | 20004587     | 1              |
| Bombastus       | Base cream DAC   | 21000271     | 2              |
| Bombastus       | Base cream DAC   | 20003529     | 1              |
| Bombastus       | Base cream DAC   | 21000280     | 4              |
| Bombastus       | Base cream DAC   | 20004589     | 1              |
| Bombastus       | Base cream DAC   | 20001571     | 1              |
| Bombastus       | Base cream DAC   | 294838       | 2              |
| Bombastus       | Base cream DAC   | 294829       | 2              |
| Bombastus       | Base cream DAC   | 293943       | 2              |
| Bombastus       | Base cream DAC   | 293944       | 3              |
| Bombastus       | Base cream DAC   | 296221       | 1              |
| Bombastus       | Base cream DAC   | 296230       | 3              |
| Bombastus       | Base cream DAC   | 296156       | 2              |
| Bombastus       | Base cream DAC   | 298257       | 2              |
| Bombastus       | Base cream DAC   | 298259       | 5              |
| Bombastus       | Base cream DAC   | 296225       | 6              |
| Bombastus       | Base cream DAC   | 297498       | 2              |
| Bombastus       | Base cream DAC   | 299326       | 1              |
| Bombastus       | Base cream DAC   | 297494       | 4              |
| Bombastus       | Base cream DAC   | 279961       | 1              |
| Bombastus       | Base cream DAC   | 278472       | 4              |
| Bombastus       | Base cream DAC   | 281332       | 1              |
| Bombastus       | Base cream DAC   | 283974       | 2              |
| Bombastus       | Base cream DAC   | 287941       | 1              |
| Bombastus       | Base cream DAC   | 289663       | 4              |
| Bombastus       | Base cream DAC   | 291025       | 2              |
| Bombastus       | Base cream DAC   | 291028       | 1              |
| Bombastus       | Base cream DAC   | 293201       | 2              |
| Bombastus       | Base cream DAC   | 299322       | 3              |
| Bombastus       | Base cream DAC   | 301758       | 3              |
| Bombastus       | Base cream DAC   | 19003299     | 11             |
| Bombastus       | Base cream DAC   | 19004726     | 2              |
| Bombastus       | Base cream DAC   | 20002388     | 2              |
| Bombastus       | Base cream DAC   | 21000822     | 1              |
| Bombastus       | Base cream DAC   | 294836       | 1              |
| Bombastus       | Base cream DAC   | 298171       | 1              |
| Bombastus       | Base cream DAC   | 17000927     | 1              |
| Bombastus       | Base cream DAC   | 18000956     | 5              |
| Bombastus       | Base cream DAC   | 20002385     | 2              |
| Bombastus       | Base cream DAC   | 304342       | 2              |
| Bombastus       | Base cream DAC   | 301151       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 305710       | 3              |
| Bombastus       | Base cream DAC   | 30001        | 1              |
| Bombastus       | Base cream DAC   | 309923       | 2              |
| Bombastus       | Base cream DAC   | 17000067     | 2              |
| Bombastus       | Base cream DAC   | 310750       | 2              |
| Bombastus       | Base cream DAC   | 18000957     | 4              |
| Bombastus       | Base cream DAC   | 310717       | 1              |
| Bombastus       | Base cream DAC   | 190004715    | 1              |
| Bombastus       | Base cream DAC   | 19004719     | 3              |
| Bombastus       | Base cream DAC   | 20000483     | 5              |
| Bombastus       | Base cream DAC   | 20001584     | 2              |
| Bombastus       | Base cream DAC   | 20002393     | 4              |
| Bombastus       | Base cream DAC   | 20004591     | 4              |
| Bombastus       | Base cream DAC   | 20004603     | 1              |
| Bombastus       | Base cream DAC   | 21000279     | 3              |
| Bombastus       | Base cream DAC   | 21000824     | 2              |
| Bombastus       | Base cream DAC   | 21000823     | 1              |
| Bombastus       | Base cream DAC   | 310725       | 2              |
| Bombastus       | Base cream DAC   | 275591       | 1              |
| Bombastus       | Base cream DAC   | 278474       | 6              |
| Bombastus       | Base cream DAC   | 287944       | 2              |
| Bombastus       | Base cream DAC   | 289590       | 1              |
| Bombastus       | Base cream DAC   | 293796       | 1              |
| Bombastus       | Base cream DAC   | 308797       | 1              |
| Bombastus       | Base cream DAC   | 17000924     | 6              |
| Bombastus       | Base cream DAC   | 19000929     | 2              |
| Bombastus       | Base cream DAC   | 17000897     | 2              |
| Bombastus       | Base cream DAC   | 180032925    | 1              |
| Bombastus       | Base cream DAC   | 18005231     | 1              |
| Bombastus       | Base cream DAC   | 18006765     | 1              |
| Bombastus       | Base cream DAC   | 289667       | 1              |
| Bombastus       | Base cream DAC   | 292258       | 1              |
| Bombastus       | Base cream DAC   | 306616       | 2              |
| Bombastus       | Base cream DAC   | 17000918     | 2              |
| Bombastus       | Base cream DAC   | 1700908      | 1              |
| Bombastus       | Base cream DAC   | 18000491     | 1              |
| Bombastus       | Base cream DAC   | 18000966     | 6              |
| Bombastus       | Base cream DAC   | 18000955     | 1              |
| Bombastus       | Base cream DAC   | 18003113     | 3              |
| Bombastus       | Base cream DAC   | 18003934     | 2              |
| Bombastus       | Base cream DAC   | 18003940     | 9              |
| Bombastus       | Base cream DAC   | 18003941     | 4              |
| Bombastus       | Base cream DAC   | 18006771     | 4              |
| Bombastus       | Base cream DAC   | 19000945     | 5              |
| Bombastus       | Base cream DAC   | 19002680     | 6              |
| Bombastus       | Base cream DAC   | 19002686     | 2              |
| Bombastus       | Base cream DAC   | 19004711     | 6              |
| Bombastus       | Base cream DAC   | 19003297     | 7              |
| Bombastus       | Base cream DAC   | 19005673     | 6              |
| Bombastus       | Base cream DAC   | 20000480     | 3              |
| Bombastus       | Base cream DAC   | 20000478     | 1              |
| Bombastus       | Base cream DAC   | 19000935     | 1              |
| Bombastus       | Base cream DAC   | 20000466     | 2              |
| Bombastus       | Base cream DAC   | 19000938     | 1              |
| Bombastus       | Base cream DAC   | 19003279     | 1              |
| Bombastus       | Base cream DAC   | 20003543     | 1              |
| Bombastus       | Base cream DAC   | 298173       | 2              |
| Bombastus       | Base cream DAC   | 296228       | 1              |
| Bombastus       | Base cream DAC   | 292127       | 2              |
| Bombastus       | Base cream DAC   | 18001974     | 6              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Bombastus       | Base cream DAC   | 289526             | 2              |
| Bombastus       | Base cream DAC   | 293939             | 4              |
| Bombastus       | Base cream DAC   | 307958             | 1              |
| Bombastus       | Base cream DAC   | 18001964           | 4              |
| Bombastus       | Base cream DAC   | 19000928           | 2              |
| Bombastus       | Base cream DAC   | 303424             | 1              |
| Bombastus       | Base cream DAC   | 17000902           | 1              |
| Bombastus       | Base cream DAC   | 17000920           | 5              |
| Bombastus       | Base cream DAC   | 18005740           | 2              |
| Bombastus       | Base cream DAC   | 19000927           | 1              |
| Bombastus       | Base cream DAC   | 19003274           | 1              |
| Bombastus       | Base cream DAC   | 293795             | 6              |
| Bombastus       | Base cream DAC   | 1212029-01         | 3              |
| Bombastus       | Base cream DAC   | 295900             | 1              |
| Bombastus       | Base cream DAC   | 287251             | 3              |
| Bombastus       | Base cream DAC   | 19002678P-190718-5 | 1              |
| Bombastus       | Base cream DAC   | 19004709P-200116-4 | 1              |
| Bombastus       | Base cream DAC   | 19005668P-200326-5 | 1              |
| Bombastus       | Base cream DAC   | 19004701P-191028-2 | 1              |
| Bombastus       | Base cream DAC   | 19000937P-190531-2 | 1              |
| Bombastus       | Base cream DAC   | 19000931P-190312-5 | 1              |
| Bombastus       | Base cream DAC   | 306604             | 3              |
| Bombastus       | Base cream DAC   | 292122             | 2              |
| Bombastus       | Base cream DAC   | 293738             | 1              |
| Bombastus       | Base cream DAC   | 297496             | 1              |
| Bombastus       | Base cream DAC   | 303428             | 2              |
| Bombastus       | Base cream DAC   | 285228             | 4              |
| Bombastus       | Base cream DAC   | 281334             | 1              |
| Bombastus       | Base cream DAC   | 287112             | 1              |
| Bombastus       | Base cream DAC   | 287117             | 1              |
| Bombastus       | Base cream DAC   | 289803             | 1              |
| Bombastus       | Base cream DAC   | 291026             | 2              |
| Bombastus       | Base cream DAC   | 292125             | 4              |
| Bombastus       | Base cream DAC   | 292263             | 3              |
| Bombastus       | Base cream DAC   | 296226             | 3              |
| Bombastus       | Base cream DAC   | 297484             | 3              |
| Bombastus       | Base cream DAC   | 299323             | 4              |
| Bombastus       | Base cream DAC   | 300014             | 6              |
| Bombastus       | Base cream DAC   | 300015             | 3              |
| Bombastus       | Base cream DAC   | 301153             | 1              |
| Bombastus       | Base cream DAC   | 301760             | 2              |
| Bombastus       | Base cream DAC   | 301157             | 2              |
| Bombastus       | Base cream DAC   | 303135             | 2              |
| Bombastus       | Base cream DAC   | 304344             | 1              |
| Bombastus       | Base cream DAC   | 305733             | 2              |
| Bombastus       | Base cream DAC   | 307967             | 5              |
| Bombastus       | Base cream DAC   | 305713             | 2              |
| Bombastus       | Base cream DAC   | 306602             | 1              |
| Bombastus       | Base cream DAC   | 310747             | 6              |
| Bombastus       | Base cream DAC   | 310720             | 2              |
| Bombastus       | Base cream DAC   | 18000964           | 4              |
| Bombastus       | Base cream DAC   | 18000690           | 1              |
| Bombastus       | Base cream DAC   | 18003094           | 2              |
| Bombastus       | Base cream DAC   | 18003107           | 5              |
| Bombastus       | Base cream DAC   | 296224             | 4              |
| Bombastus       | Base cream DAC   | 287876             | 1              |
| Bombastus       | Base cream DAC   | 287875             | 1              |
| Bombastus       | Base cream DAC   | 18000492           | 1              |
| Bombastus       | Base cream DAC   | 18000971           | 2              |
| Bombastus       | Base cream DAC   | 18005230           | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 188006778    | 1              |
| Bombastus       | Base cream DAC   | 18005760     | 1              |
| Bombastus       | Base cream DAC   | 18006778     | 1              |
| Bombastus       | Base cream DAC   | 19000951     | 1              |
| Bombastus       | Base cream DAC   | 19003298     | 12             |
| Bombastus       | Base cream DAC   | 19003301     | 1              |
| Bombastus       | Base cream DAC   | 19003290     | 5              |
| Bombastus       | Base cream DAC   | 190056702x   | 1              |
| Bombastus       | Base cream DAC   | 19004724     | 3              |
| Bombastus       | Base cream DAC   | 20004594     | 2              |
| Bombastus       | Base cream DAC   | 19002674     | 1              |
| Bombastus       | Base cream DAC   | 18000498     | 1              |
| Bombastus       | Base cream DAC   | 18003108     | 2              |
| Bombastus       | Base cream DAC   | 19002689     | 9              |
| Bombastus       | Base cream DAC   | 19002695     | 4              |
| Bombastus       | Base cream DAC   | 17000907     | 4              |
| Bombastus       | Base cream DAC   | 19005669     | 10             |
| Bombastus       | Base cream DAC   | 19005662     | 4              |
| Bombastus       | Base cream DAC   | 294831       | 1              |
| Bombastus       | Base cream DAC   | 301757       | 5              |
| Bombastus       | Base cream DAC   | 304352       | 5              |
| Bombastus       | Base cream DAC   | 306620       | 1              |
| Bombastus       | Base cream DAC   | 307963       | 1              |
| Bombastus       | Base cream DAC   | 1511002-01   | 1              |
| Bombastus       | Base cream DAC   | 18000496     | 1              |
| Bombastus       | Base cream DAC   | 18003114     | 2              |
| Bombastus       | Base cream DAC   | 18003943     | 11             |
| Bombastus       | Base cream DAC   | 18006772     | 4              |
| Bombastus       | Base cream DAC   | 19000948     | 4              |
| Bombastus       | Base cream DAC   | 18003944     | 4              |
| Bombastus       | Base cream DAC   | 18006774     | 14             |
| Bombastus       | Base cream DAC   | 272216       | 1              |
| Bombastus       | Base cream DAC   | 18003929     | 2              |
| Bombastus       | Base cream DAC   | 303427       | 1              |
| Bombastus       | Base cream DAC   | 306611       | 4              |
| Bombastus       | Base cream DAC   | 305692       | 1              |
| Bombastus       | Base cream DAC   | 308791       | 1              |
| Bombastus       | Base cream DAC   | 310719       | 3              |
| Bombastus       | Base cream DAC   | 18003946     | 3              |
| Bombastus       | Base cream DAC   | 19003293     | 4              |
| Bombastus       | Base cream DAC   | 294843       | 5              |
| Bombastus       | Base cream DAC   | 286090       | 2              |
| Bombastus       | Base cream DAC   | 17000066     | 3              |
| Bombastus       | Base cream DAC   | 18003925     | 3              |
| Bombastus       | Base cream DAC   | 19002682     | 3              |
| Bombastus       | Base cream DAC   | 19002670     | 2              |
| Bombastus       | Base cream DAC   | 19002697     | 1              |
| Bombastus       | Base cream DAC   | 20000479     | 2              |
| Bombastus       | Base cream DAC   | 20004599     | 2              |
| Bombastus       | Base cream DAC   | 301147       | 1              |
| Bombastus       | Base cream DAC   | 303413       | 2              |
| Bombastus       | Base cream DAC   | 305693       | 2              |
| Bombastus       | Base cream DAC   | 17000899     | 4              |
| Bombastus       | Base cream DAC   | 280080       | 3              |
| Bombastus       | Base cream DAC   | 286159       | 1              |
| Bombastus       | Base cream DAC   | 19003291     | 3              |
| Bombastus       | Base cream DAC   | 19004712     | 3              |
| Bombastus       | Base cream DAC   | 19005670     | 8              |
| Bombastus       | Base cream DAC   | 275282       | 1              |
| Bombastus       | Base cream DAC   | 278397       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 278561       | 1              |
| Bombastus       | Base cream DAC   | 280079       | 2              |
| Bombastus       | Base cream DAC   | 281243       | 2              |
| Bombastus       | Base cream DAC   | 288054       | 1              |
| Bombastus       | Base cream DAC   | 289531       | 2              |
| Bombastus       | Base cream DAC   | 19000950     | 6              |
| Bombastus       | Base cream DAC   | 19003288     | 9              |
| Bombastus       | Base cream DAC   | 19004714     | 2              |
| Bombastus       | Base cream DAC   | 20001583     | 5              |
| Bombastus       | Base cream DAC   | 20002389     | 3              |
| Bombastus       | Base cream DAC   | 297480       | 1              |
| Bombastus       | Base cream DAC   | 19002679     | 15             |
| Bombastus       | Base cream DAC   | 279964       | 3              |
| Bombastus       | Base cream DAC   | 283918       | 1              |
| Bombastus       | Base cream DAC   | 18000963     | 2              |
| Bombastus       | Base cream DAC   | 180003943    | 1              |
| Bombastus       | Base cream DAC   | 19000942     | 9              |
| Bombastus       | Base cream DAC   | 18005746     | 2              |
| Bombastus       | Base cream DAC   | 1900292      | 1              |
| Bombastus       | Base cream DAC   | 19003292     | 15             |
| Bombastus       | Base cream DAC   | 19003294     | 6              |
| Bombastus       | Base cream DAC   | 19004713     | 2              |
| Bombastus       | Base cream DAC   | 20001580     | 1              |
| Bombastus       | Base cream DAC   | 20002397     | 7              |
| Bombastus       | Base cream DAC   | 20004600     | 1              |
| Bombastus       | Base cream DAC   | 293940       | 1              |
| Bombastus       | Base cream DAC   | 17000917     | 4              |
| Bombastus       | Base cream DAC   | 18003938     | 5              |
| Bombastus       | Base cream DAC   | 19003287     | 5              |
| Bombastus       | Base cream DAC   | 291029       | 1              |
| Bombastus       | Base cream DAC   | 292260       | 2              |
| Bombastus       | Base cream DAC   | 293196       | 1              |
| Bombastus       | Base cream DAC   | 299320       | 4              |
| Bombastus       | Base cream DAC   | 301159       | 4              |
| Bombastus       | Base cream DAC   | 306608       | 1              |
| Bombastus       | Base cream DAC   | 275273       | 2              |
| Bombastus       | Base cream DAC   | 275590       | 2              |
| Bombastus       | Base cream DAC   | 301741       | 1              |
| Bombastus       | Base cream DAC   | 310724       | 2              |
| Bombastus       | Base cream DAC   | 17000064     | 1              |
| Bombastus       | Base cream DAC   | 17000068     | 1              |
| Bombastus       | Base cream DAC   | 17000922     | 4              |
| Bombastus       | Base cream DAC   | 18000965     | 4              |
| Bombastus       | Base cream DAC   | 18003109     | 2              |
| Bombastus       | Base cream DAC   | 18005236     | 3              |
| Bombastus       | Base cream DAC   | 19000947     | 3              |
| Bombastus       | Base cream DAC   | 268821       | 1              |
| Bombastus       | Base cream DAC   | 296227       | 1              |
| Bombastus       | Base cream DAC   | 303058       | 4              |
| Bombastus       | Base cream DAC   | 303420       | 3              |
| Bombastus       | Base cream DAC   | 306606       | 1              |
| Bombastus       | Base cream DAC   | 18005742     | 1              |
| Bombastus       | Base cream DAC   | 282773       | 2              |
| Bombastus       | Base cream DAC   | 272373       | 1              |
| Bombastus       | Base cream DAC   | 275173       | 1              |
| Bombastus       | Base cream DAC   | 293200       | 2              |
| Bombastus       | Base cream DAC   | 299947       | 3              |
| Bombastus       | Base cream DAC   | 304356       | 1              |
| Bombastus       | Base cream DAC   | 308802       | 1              |
| Bombastus       | Base cream DAC   | 17000906     | 3              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Base cream DAC   | 17000905     | 5              |
| Bombastus       | Base cream DAC   | 18000960     | 7              |
| Bombastus       | Base cream DAC   | 18000968     | 4              |
| Bombastus       | Base cream DAC   | 18003110     | 4              |
| Bombastus       | Base cream DAC   | 18003111     | 5              |
| Bombastus       | Base cream DAC   | 18003099     | 1              |
| Bombastus       | Base cream DAC   | 18005234     | 3              |
| Bombastus       | Base cream DAC   | 18005239     | 7              |
| Bombastus       | Base cream DAC   | 18005235     | 2              |
| Bombastus       | Base cream DAC   | 18005238     | 4              |
| Bombastus       | Base cream DAC   | 180005749    | 1              |
| Bombastus       | Base cream DAC   | 18005237     | 3              |
| Bombastus       | Base cream DAC   | 19000953     | 1              |
| Bombastus       | Base cream DAC   | 19000936     | 1              |
| Bombastus       | Base cream DAC   | 19002690     | 7              |
| Bombastus       | Base cream DAC   | 19002691     | 1              |
| Bombastus       | Base cream DAC   | 19003296     | 1              |
| Bombastus       | Base cream DAC   | 19004718     | 4              |
| Bombastus       | Base cream DAC   | 20000469     | 1              |
| Bombastus       | Base cream DAC   | 19005667     | 3              |
| Bombastus       | Base cream DAC   | 20000476     | 3              |
| Bombastus       | Base cream DAC   | 200000471    | 2              |
| Bombastus       | Base cream DAC   | 19005678     | 3              |
| Bombastus       | Base cream DAC   | 20000481     | 5              |
| Bombastus       | Base cream DAC   | 19005677     | 1              |
| Bombastus       | Base cream DAC   | 20000486     | 3              |
| Bombastus       | Base cream DAC   | 60090501     | 1              |
| Bombastus       | Base cream DAC   | 288057       | 1              |
| Bombastus       | Base cream DAC   | 303416       | 1              |
| Bombastus       | Base cream DAC   | 18001962     | 2              |
| Bombastus       | Base cream DAC   | 278559       | 1              |
| Bombastus       | Base cream DAC   | 286155       | 1              |
| Bombastus       | Base cream DAC   | 306609       | 5              |
| Bombastus       | Base cream DAC   | 18006629     | 1              |
| Bombastus       | Base cream DAC   | 20003536     | 1              |
| Bombastus       | Base cream DAC   | 21000814     | 1              |
| Bombastus       | Base cream DAC   | 306601       | 2              |
| Bombastus       | Base cream DAC   | 18000494     | 4              |
| Bombastus       | Base cream DAC   | 18001970     | 3              |
| Bombastus       | Base cream DAC   | 18005240     | 4              |
| Bombastus       | Base cream DAC   | 19002694     | 1              |
| Bombastus       | Base cream DAC   | 20002384     | 2              |
| Bombastus       | Base cream DAC   | 20002394     | 3              |
| Bombastus       | Base cream DAC   | 20003542     | 1              |
| Bombastus       | Base cream DAC   | 21000818     | 1              |
| Bombastus       | Base cream DAC   | 19003300     | 3              |
| Bombastus       | Base cream DAC   | 289802       | 1              |
| Bombastus       | Base cream DAC   | 292261       | 2              |
| Bombastus       | Base cream DAC   | 291034       | 2              |
| Bombastus       | Base cream DAC   | 304355       | 4              |
| Bombastus       | Base cream DAC   | 6004859006   | 1              |
| Bombastus       | Base cream DAC   | 17000921     | 5              |
| Bombastus       | Base cream DAC   | 18003932     | 1              |
| Bombastus       | Base cream DAC   | 18005242     | 1              |
| Bombastus       | Base cream DAC   | 19000941     | 3              |
| Bombastus       | Base cream DAC   | 19004707     | 2              |
| Bombastus       | Base cream DAC   | 2000479      | 1              |
| Bombastus       | Base cream DAC   | 20001586     | 1              |
| Bombastus       | Base cream DAC   | 2004596      | 1              |
| Bombastus       | Base cream DAC   | 301738       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Bombastus       | Base cream DAC   | 18005745         | 2              |
| Bombastus       | Base cream DAC   | 310755           | 2              |
| Bombastus       | Base cream DAC   | 17000915         | 5              |
| Bombastus       | Base cream DAC   | 18006777         | 3              |
| Bombastus       | Base cream DAC   | 19002688         | 1              |
| Bombastus       | Base cream DAC   | 307961           | 4              |
| Bombastus       | Base cream DAC   | 10753            | 1              |
| Bombastus       | Base cream DAC   | 17000908         | 3              |
| Bombastus       | Base cream DAC   | 108000966        | 1              |
| Bombastus       | Base cream DAC   | 18000961         | 5              |
| Bombastus       | Base cream DAC   | 18003942         | 4              |
| Bombastus       | Base cream DAC   | 18003927         | 1              |
| Bombastus       | Base cream DAC   | 18006775         | 2              |
| Bombastus       | Base cream DAC   | 190522705        | 1              |
| Bombastus       | Base cream DAC   | 190872108        | 2              |
| Bombastus       | Base cream DAC   | 19004721         | 5              |
| Bombastus       | Base cream DAC   | 1903298          | 1              |
| Bombastus       | Base cream DAC   | 19005675         | 1              |
| Bombastus       | Base cream DAC   | 20003535         | 1              |
| Bombastus       | Base cream DAC   | 20000484         | 2              |
| Bombastus       | Base cream DAC   | 20004593         | 1              |
| Bombastus       | Base cream DAC   | 20004601         | 4              |
| Bombastus       | Base cream DAC   | 286094           | 3              |
| Bombastus       | Base cream DAC   | 287197           | 5              |
| Bombastus       | Base cream DAC   | 301155           | 5              |
| Bombastus       | Base cream DAC   | 301759           | 4              |
| Bombastus       | Base cream DAC   | 303423           | 4              |
| Bombastus       | Base cream DAC   | 303429           | 8              |
| Bombastus       | Base cream DAC   | 304353           | 2              |
| Bombastus       | Base cream DAC   | 304360           | 4              |
| Bombastus       | Base cream DAC   | 16319501         | 4              |
| Bombastus       | Base cream DAC   | 17000909         | 2              |
| Bombastus       | Base cream DAC   | 17000916         | 1              |
| Bombastus       | Base cream DAC   | 18000969         | 2              |
| Bombastus       | Base cream DAC   | 18001967         | 4              |
| Bombastus       | Base cream DAC   | 18001973         | 1              |
| Bombastus       | Base cream DAC   | 18E23-T16-056321 | 1              |
| Bombastus       | Base cream DAC   | 190322802        | 1              |
| Bombastus       | Base cream DAC   | 190431104        | 1              |
| Bombastus       | Base cream DAC   | 190682106        | 1              |
| Bombastus       | Base cream DAC   | 190205670        | 1              |
| Bombastus       | Base cream DAC   | 20000473         | 5              |
| Bombastus       | Base cream DAC   | 20000477         | 3              |
| Bombastus       | Base cream DAC   | 2000473          | 1              |
| Bombastus       | Base cream DAC   | 20000482         | 2              |
| Bombastus       | Base cream DAC   | 295901           | 1              |
| Bombastus       | Base cream DAC   | 276948           | 1              |
| Bombastus       | Base cream DAC   | 279958           | 3              |
| Bombastus       | Base cream DAC   | 286093           | 2              |
| Bombastus       | Base cream DAC   | 287945           | 3              |
| Bombastus       | Base cream DAC   | 286089           | 1              |
| Bombastus       | Base cream DAC   | 293199           | 1              |
| Bombastus       | Base cream DAC   | 293941           | 1              |
| Bombastus       | Base cream DAC   | 296152           | 2              |
| Bombastus       | Base cream DAC   | 299324           | 2              |
| Bombastus       | Base cream DAC   | 60090502         | 12             |
| Bombastus       | Base cream DAC   | 303419           | 4              |
| Bombastus       | Base cream DAC   | 307962           | 1              |
| Bombastus       | Base cream DAC   | 310730           | 1              |
| Bombastus       | Base cream DAC   | 17000065         | 5              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Bombastus       | Base cream DAC   | 310752           | 4              |
| Bombastus       | Base cream DAC   | 18000959         | 4              |
| Bombastus       | Base cream DAC   | 18001401         | 1              |
| Bombastus       | Base cream DAC   | 1800970          | 1              |
| Bombastus       | Base cream DAC   | 18003102         | 4              |
| Bombastus       | Base cream DAC   | LD251118         | 1              |
| Bombastus       | Base cream DAC   | 19004727         | 6              |
| Bombastus       | Base cream DAC   | 20000470         | 1              |
| Bombastus       | Base cream DAC   | 294841           | 2              |
| Bombastus       | Base cream DAC   | 296229           | 4              |
| Bombastus       | Base cream DAC   | 298260           | 1              |
| Bombastus       | Base cream DAC   | 301745           | 7              |
| Bombastus       | Base cream DAC   | 303422           | 3              |
| Bombastus       | Base cream DAC   | 303059           | 3              |
| Bombastus       | Base cream DAC   | 307970           | 4              |
| Bombastus       | Base cream DAC   | 308798           | 3              |
| Bombastus       | Base cream DAC   | 310749           | 7              |
| Bombastus       | Base cream DAC   | 306614           | 3              |
| Bombastus       | Base cream DAC   | 18003935         | 4              |
| Bombastus       | Base cream DAC   | 18001972         | 4              |
| Bombastus       | Base cream DAC   | 18005747         | 4              |
| Bombastus       | Base cream DAC   | 19004717         | 3              |
| Bombastus       | Base cream DAC   | 20000475         | 1              |
| Bombastus       | Base cream DAC   | 298262           | 3              |
| Bombastus       | Base cream DAC   | 262001           | 1              |
| Bombastus       | Base cream DAC   | 15C-11T05-020388 | 1              |
| Bombastus       | Base cream DAC   | 294840           | 2              |
| Bombastus       | Base cream DAC   | 16B15-T02-030277 | 1              |
| Bombastus       | Base cream DAC   | 301154           | 1              |
| Bombastus       | Base cream DAC   | 305729           | 3              |
| Bombastus       | Base cream DAC   | 305730           | 5              |
| Bombastus       | Base cream DAC   | 306615           | 7              |
| Bombastus       | Base cream DAC   | 305735           | 2              |
| Bombastus       | Base cream DAC   | 306619           | 2              |
| Bombastus       | Base cream DAC   | 307829           | 3              |
| Bombastus       | Base cream DAC   | 307968           | 3              |
| Bombastus       | Base cream DAC   | 17000072         | 3              |
| Bombastus       | Base cream DAC   | 307969           | 1              |
| Bombastus       | Base cream DAC   | 18000497         | 2              |
| Bombastus       | Base cream DAC   | 17000914         | 1              |
| Bombastus       | Base cream DAC   | 17000911         | 4              |
| Bombastus       | Base cream DAC   | 17000912         | 1              |
| Bombastus       | Base cream DAC   | 1800969          | 2              |
| Bombastus       | Base cream DAC   | 18001971         | 4              |
| Bombastus       | Base cream DAC   | 180001971        | 1              |
| Bombastus       | Base cream DAC   | 180001973        | 1              |
| Bombastus       | Base cream DAC   | 19002684         | 6              |
| Bombastus       | Base cream DAC   | 19002692         | 5              |
| Bombastus       | Base cream DAC   | 19002687         | 3              |
| Bombastus       | Base cream DAC   | 19003302         | 6              |
| Bombastus       | Base cream DAC   | 19002683         | 2              |
| Bombastus       | Base cream DAC   | 19003289         | 3              |
| Bombastus       | Base cream DAC   | 19004716         | 1              |
| Bombastus       | Base cream DAC   | 137105           | 1              |
| Bombastus       | Base cream DAC   | 19005681         | 3              |
| Bombastus       | Base cream DAC   | 19004725         | 3              |
| Bombastus       | Base cream DAC   | 20000474         | 2              |
| Bombastus       | Base cream DAC   | 20000487         | 2              |
| Bombastus       | Base cream DAC   | 20001579         | 3              |
| Bombastus       | Base cream DAC   | 20001578         | 2              |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------|------------------|--------------|----------------|
| Bombastus        | Base cream DAC   | 20001585     | 4              |
| Bombastus        | Base cream DAC   | 20001581     | 2              |
| Bombastus        | Base cream DAC   | 20002392     | 1              |
| Bombastus        | Base cream DAC   | 20003548     | 4              |
| Bombastus        | Base cream DAC   | 20003545     | 5              |
| Bombastus        | Base cream DAC   | 20002396     | 2              |
| Bombastus        | Base cream DAC   | 21000283     | 1              |
| Bombastus        | Base cream DAC   | 18000949     | 2              |
| Bombastus        | Base cream DAC   | 18003097     | 6              |
| Bombastus        | Base cream DAC   | 18005741     | 2              |
| Bombastus        | Base cream DAC   | 1508001-01   | 2              |
| Bombastus        | Base cream DAC   | 17000896     | 1              |
| Bombastus        | Base cream DAC   | 303063       | 2              |
| Bombastus        | Base cream DAC   | 307830       | 3              |
| Bombastus        | Base cream DAC   | 307965       | 4              |
| Bombastus        | Base cream DAC   | 17000919     | 4              |
| Bombastus        | Base cream DAC   | 18000954     | 4              |
| Bombastus        | Base cream DAC   | 20003546     | 1              |
| Bombastus        | Base cream DAC   | 20004592     | 6              |
| Bombastus        | Base cream DAC   | 20004598     | 1              |
| Bombastus        | Base cream DAC   | 20004607     | 3              |
| Bombastus        | Base cream DAC   | 305695       | 2              |
| Bombastus        | Base cream DAC   | 308796       | 4              |
| Bombastus        | Base cream DAC   | 303056       | 5              |
| Bombastus        | Base cream DAC   | 287110       | 1              |
| Bombastus        | Base cream DAC   | 291024       | 1              |
| Bombastus        | Base cream DAC   | 298170       | 2              |
| Bombastus        | Base cream DAC   | 19004709     | 1              |
| Bombastus        | Base cream DAC   | 18001965     | 4              |
| Bombastus        | Base cream DAC   | 18003928     | 4              |
| Bombastus        | Base cream DAC   | 18003931     | 1              |
| Bombastus        | Base cream DAC   | 180003931    | 2              |
| Bombastus        | Base cream DAC   | 19000930     | 3              |
| Bombastus        | Base cream DAC   | 18006770     | 1              |
| Bombastus        | Base cream DAC   | 19002671     | 5              |
| Bombastus        | Base cream DAC   | 19002676     | 4              |
| Bombastus        | Base cream DAC   | 19003277     | 1              |
| Bombastus        | Base cream DAC   | 19052901     | 1              |
| Bombastus        | Base cream DAC   | 19002674     | 1              |
| BOMBATUS         | Base cream DAC   | 6009252      | 1              |
| Bombstus         | Base cream DAC   | 1700907      | 1              |
| Bombstus         | Base cream DAC   | 310752       | 1              |
| Bombstus/Gehe    | Base cream DAC   | 301742       | 1              |
| Bombstus/Gehe    | Base cream DAC   | 301744       | 1              |
| Caealo           | Base cream DAC   | 16101901     | 1              |
| Caealo/Gehe      | Base cream DAC   | 19003701     | 1              |
| Caealo           | Base cream DAC   | 16232001     | 1              |
| Caeklo/gehe/8,27 | Base cream DAC   | 18193301     | 1              |
| Caeko            | Base cream DAC   | 16220201     | 1              |
| Cael/Phönix      | Base cream DAC   | 17243401     | 1              |
| Caela/ Noweda    | Base cream DAC   | 18037901     | 1              |
| Caeli / Kehr     | Base cream DAC   | 17029001     | 1              |
| Caelo            | Base cream DAC   | 12191801     | 4              |
| Caelo            | Base cream DAC   | 1713M-01309  | 1              |
| Caelo            | Base cream DAC   | 13120301     | 8              |
| Caelo            | Base cream DAC   | 5490000      | 3              |
| Caelo            | Base cream DAC   | 28031401     | 1              |
| Caelo            | Base cream DAC   | 28031404     | 1              |
| Caelo            | Base cream DAC   | 14053301     | 2              |
| Caelo            | Base cream DAC   | 14326701     | 17             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Base cream DAC   | 13051503     | 1              |
| Caelo           | Base cream DAC   | 15184101     | 4              |
| Caelo           | Base cream DAC   | 15184301     | 8              |
| Caelo           | Base cream DAC   | 16136101     | 1              |
| Caelo           | Base cream DAC   | 16207001     | 1              |
| Caelo           | Base cream DAC   | 16205601     | 1              |
| Caelo           | Base cream DAC   | 15031805     | 1              |
| Caelo           | Base cream DAC   | 17268401     | 9              |
| Caelo           | Base cream DAC   | 18003938     | 1              |
| Caelo           | Base cream DAC   | 18003931     | 1              |
| Caelo           | Base cream DAC   | 18232801     | 12             |
| Caelo           | Base cream DAC   | 191707017    | 1              |
| Caelo           | Base cream DAC   | 19269801     | 5              |
| Caelo           | Base cream DAC   | 20003473001  | 2              |
| Caelo           | Base cream DAC   | 11278701     | 1              |
| Caelo           | Base cream DAC   | 11296301     | 1              |
| Caelo           | Base cream DAC   | 11295801     | 2              |
| Caelo           | Base cream DAC   | 11087101     | 1              |
| Caelo           | Base cream DAC   | 11279401     | 1              |
| Caelo           | Base cream DAC   | 11296601     | 1              |
| Caelo           | Base cream DAC   | 11206201     | 2              |
| Caelo           | Base cream DAC   | 1202001      | 2              |
| Caelo           | Base cream DAC   | 11297001     | 1              |
| Caelo           | Base cream DAC   | 11330201     | 1              |
| Caelo           | Base cream DAC   | 1004211309   | 1              |
| Caelo           | Base cream DAC   | 11330301     | 1              |
| Caelo           | Base cream DAC   | 12000401     | 1              |
| Caelo           | Base cream DAC   | 11330601     | 1              |
| Caelo           | Base cream DAC   | 12000501     | 3              |
| Caelo           | Base cream DAC   | 12005501     | 4              |
| Caelo           | Base cream DAC   | 26061204     | 1              |
| Caelo           | Base cream DAC   | 12005201     | 2              |
| Caelo           | Base cream DAC   | 12004901     | 2              |
| Caelo           | Base cream DAC   | 12071202     | 1              |
| Caelo           | Base cream DAC   | 12062701     | 2              |
| Caelo           | Base cream DAC   | 12062801     | 2              |
| Caelo           | Base cream DAC   | 12005701     | 6              |
| Caelo           | Base cream DAC   | 12159401     | 2              |
| Caelo           | Base cream DAC   | 11297201     | 9              |
| Caelo           | Base cream DAC   | 12174901     | 1              |
| Caelo           | Base cream DAC   | 1205007-01   | 2              |
| Caelo           | Base cream DAC   | 12159301     | 1              |
| Caelo           | Base cream DAC   | 31081205     | 1              |
| Caelo           | Base cream DAC   | 12174801     | 3              |
| Caelo           | Base cream DAC   | 1109211309   | 1              |
| Caelo           | Base cream DAC   | 12175001     | 5              |
| Caelo           | Base cream DAC   | 12178301     | 4              |
| Caelo           | Base cream DAC   | 12159201     | 1              |
| Caelo           | Base cream DAC   | 12101203     | 1              |
| Caelo           | Base cream DAC   | 12111202     | 1              |
| Caelo           | Base cream DAC   | 12245101     | 2              |
| Caelo           | Base cream DAC   | 12249401     | 2              |
| Caelo           | Base cream DAC   | 12175201     | 2              |
| Caelo           | Base cream DAC   | 12249501     | 2              |
| Caelo           | Base cream DAC   | 12262402     | 3              |
| Caelo           | Base cream DAC   | 30111201     | 1              |
| Caelo           | Base cream DAC   | 12262801     | 6              |
| Caelo           | Base cream DAC   | 12192101     | 1              |
| Caelo           | Base cream DAC   | 12191902     | 1              |
| Caelo           | Base cream DAC   | 1226290      | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 12263001         | 1              |
| Caelo           | Base cream DAC   | 4512Q-01309      | 1              |
| Caelo           | Base cream DAC   | 12263301         | 3              |
| Caelo           | Base cream DAC   | 8011302          | 1              |
| Caelo           | Base cream DAC   | 12289701         | 5              |
| Caelo           | Base cream DAC   | 213M-01309       | 1              |
| Caelo           | Base cream DAC   | 12263201         | 6              |
| Caelo           | Base cream DAC   | 272084           | 2              |
| Caelo           | Base cream DAC   | 5012Q-01309      | 1              |
| Caelo           | Base cream DAC   | 12191901         | 14             |
| Caelo           | Base cream DAC   | 1230901          | 1              |
| Caelo           | Base cream DAC   | 12339001         | 2              |
| Caelo           | Base cream DAC   | 2901311309       | 1              |
| Caelo           | Base cream DAC   | 513Q-01309       | 1              |
| Caelo           | Base cream DAC   | 12343801         | 5              |
| Caelo           | Base cream DAC   | 12304701         | 9              |
| Caelo           | Base cream DAC   | 713I-01309       | 1              |
| Caelo           | Base cream DAC   | 19021304         | 1              |
| Caelo           | Base cream DAC   | 12347301         | 5              |
| Caelo           | Base cream DAC   | 12347201         | 1              |
| Caelo           | Base cream DAC   | 12304801         | 12             |
| Caelo           | Base cream DAC   | 913I-01309       | 1              |
| Caelo           | Base cream DAC   | 12304901         | 3              |
| Caelo           | Base cream DAC   | 1013Q-01309      | 2              |
| Caelo           | Base cream DAC   | 12305001         | 5              |
| Caelo           | Base cream DAC   | 12339301         | 4              |
| Caelo           | Base cream DAC   | 13012301         | 2              |
| Caelo           | Base cream DAC   | 1213M-01309      | 1              |
| Caelo           | Base cream DAC   | 275591           | 1              |
| Caelo           | Base cream DAC   | 22031303         | 1              |
| Caelo           | Base cream DAC   | 13000601         | 1              |
| Caelo           | Base cream DAC   | 12305101         | 1              |
| Caelo           | Base cream DAC   | 13012501         | 3              |
| Caelo           | Base cream DAC   | 130000601        | 1              |
| Caelo           | Base cream DAC   | 13007201         | 3              |
| Caelo           | Base cream DAC   | 13017201         | 4              |
| Caelo           | Base cream DAC   | 22041306         | 1              |
| Caelo           | Base cream DAC   | 13115901         | 2              |
| Caelo           | Base cream DAC   | 13083101         | 3              |
| Caelo           | Base cream DAC   | 2213V01309       | 1              |
| Caelo           | Base cream DAC   | 1061303          | 1              |
| Caelo           | Base cream DAC   | 132011-01        | 1              |
| Caelo           | Base cream DAC   | 13115601         | 8              |
| Caelo           | Base cream DAC   | 13119901         | 1              |
| Caelo           | Base cream DAC   | 13111101         | 3              |
| Caelo           | Base cream DAC   | 13111301         | 5              |
| Caelo           | Base cream DAC   | 13116001         | 2              |
| Caelo           | Base cream DAC   | 17061305         | 1              |
| Caelo           | Base cream DAC   | 13017101         | 1              |
| Caelo           | Base cream DAC   | 12116001         | 1              |
| Caelo           | Base cream DAC   | 13120201         | 5              |
| Caelo           | Base cream DAC   | 13139801         | 5              |
| Caelo           | Base cream DAC   | 1239201          | 1              |
| Caelo           | Base cream DAC   | 13120101         | 5              |
| Caelo           | Base cream DAC   | 1306002-01       | 1              |
| Caelo           | Base cream DAC   | 13158440         | 1              |
| Caelo           | Base cream DAC   | 160704           | 1              |
| Caelo           | Base cream DAC   | 13173601         | 14             |
| Caelo           | Base cream DAC   | 13158801         | 2              |
| Caelo           | Base cream DAC   | 13E21-T08-003906 | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 13188101         | 3              |
| Caelo           | Base cream DAC   | 1387801          | 1              |
| Caelo           | Base cream DAC   | 1081302          | 1              |
| Caelo           | Base cream DAC   | 13173701         | 5              |
| Caelo           | Base cream DAC   | 13158401         | 1              |
| Caelo           | Base cream DAC   | 2025-T05         | 1              |
| Caelo           | Base cream DAC   | 5091308          | 1              |
| Caelo           | Base cream DAC   | 16B290713        | 1              |
| Caelo           | Base cream DAC   | 13198601         | 8              |
| Caelo           | Base cream DAC   | 24091301         | 1              |
| Caelo           | Base cream DAC   | 12384002         | 2              |
| Caelo           | Base cream DAC   | 13198701         | 11             |
| Caelo           | Base cream DAC   | 13198901         | 8              |
| Caelo           | Base cream DAC   | 280913B          | 1              |
| Caelo           | Base cream DAC   | 13198801         | 20             |
| Caelo           | Base cream DAC   | 1318701          | 1              |
| Caelo           | Base cream DAC   | 13199001         | 12             |
| Caelo           | Base cream DAC   | 11101302         | 1              |
| Caelo           | Base cream DAC   | 19101302         | 1              |
| Caelo           | Base cream DAC   | 13188801         | 2              |
| Caelo           | Base cream DAC   | 13249901         | 2              |
| Caelo           | Base cream DAC   | 13E21-T06-003900 | 1              |
| Caelo           | Base cream DAC   | 8111302          | 1              |
| Caelo           | Base cream DAC   | 13249702         | 3              |
| Caelo           | Base cream DAC   | 1319901          | 2              |
| Caelo           | Base cream DAC   | 279960           | 1              |
| Caelo           | Base cream DAC   | 3121302          | 1              |
| Caelo           | Base cream DAC   | 13311401         | 10             |
| Caelo           | Base cream DAC   | CH5490000        | 1              |
| Caelo           | Base cream DAC   | 13312301         | 4              |
| Caelo           | Base cream DAC   | 13347101         | 20             |
| Caelo           | Base cream DAC   | 13311801         | 7              |
| Caelo           | Base cream DAC   | 13311606         | 1              |
| Caelo           | Base cream DAC   | 11011405         | 1              |
| Caelo           | Base cream DAC   | 13311901         | 5              |
| Caelo           | Base cream DAC   | 13311502         | 3              |
| Caelo           | Base cream DAC   | 13347201         | 6              |
| Caelo           | Base cream DAC   | 13377201         | 11             |
| Caelo           | Base cream DAC   | 25011401         | 1              |
| Caelo           | Base cream DAC   | 130704501        | 1              |
| Caelo           | Base cream DAC   | 13378201         | 7              |
| Caelo           | Base cream DAC   | 13378101         | 6              |
| Caelo           | Base cream DAC   | 13378001         | 9              |
| Caelo           | Base cream DAC   | 25021402         | 1              |
| Caelo           | Base cream DAC   | 13H14-T01-006203 | 2              |
| Caelo           | Base cream DAC   | 13386201         | 5              |
| Caelo           | Base cream DAC   | 13384901         | 10             |
| Caelo           | Base cream DAC   | 13812013         | 1              |
| Caelo           | Base cream DAC   | 13386001         | 7              |
| Caelo           | Base cream DAC   | 13386101         | 2              |
| Caelo           | Base cream DAC   | 14035901         | 3              |
| Caelo           | Base cream DAC   | 13381101         | 2              |
| Caelo           | Base cream DAC   | 31031405         | 1              |
| Caelo           | Base cream DAC   | 14053701         | 7              |
| Caelo           | Base cream DAC   | 13E22-T08-003987 | 1              |
| Caelo           | Base cream DAC   | 23041403         | 1              |
| Caelo           | Base cream DAC   | 131100701        | 1              |
| Caelo           | Base cream DAC   | 14091401         | 3              |
| Caelo           | Base cream DAC   | 14090401         | 10             |
| Caelo           | Base cream DAC   | 14090601         | 10             |

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| Supplier | Substance      | Batch           | Spectra |
|----------|----------------|-----------------|---------|
| Caelo    | Base cream DAC | 14053201        | 1       |
| Caelo    | Base cream DAC | 14144001        | 4       |
| Caelo    | Base cream DAC | 14092001        | 9       |
| Caelo    | Base cream DAC | 16061402        | 1       |
| Caelo    | Base cream DAC | 14144201        | 3       |
| Caelo    | Base cream DAC | 14091601        | 7       |
| Caelo    | Base cream DAC | 15071405        | 1       |
| Caelo    | Base cream DAC | 14151001        | 8       |
| Caelo    | Base cream DAC | 14144202        | 1       |
| Caelo    | Base cream DAC | 1312001-01      | 1       |
| Caelo    | Base cream DAC | 14151601        | 9       |
| Caelo    | Base cream DAC | 14151901        | 4       |
| Caelo    | Base cream DAC | 21081407        | 1       |
| Caelo    | Base cream DAC | 14178201        | 16      |
| Caelo    | Base cream DAC | 14177801        | 2       |
| Caelo    | Base cream DAC | 26091405        | 1       |
| Caelo    | Base cream DAC | 14177501        | 9       |
| Caelo    | Base cream DAC | 14D08T04-011692 | 1       |
| Caelo    | Base cream DAC | 14263601        | 3       |
| Caelo    | Base cream DAC | 14303501        | 3       |
| Caelo    | Base cream DAC | 14325501        | 1       |
| Caelo    | Base cream DAC | 15167001        | 16      |
| Caelo    | Base cream DAC | 15166601        | 5       |
| Caelo    | Base cream DAC | 14325201        | 1       |
| Caelo    | Base cream DAC | 15190901        | 3       |
| Caelo    | Base cream DAC | 15272402        | 9       |
| Caelo    | Base cream DAC | 15190501        | 1       |
| Caelo    | Base cream DAC | 15313501        | 1       |
| Caelo    | Base cream DAC | 16059201        | 4       |
| Caelo    | Base cream DAC | 16101201        | 11      |
| Caelo    | Base cream DAC | 6002237003      | 1       |
| Caelo    | Base cream DAC | 16232601        | 5       |
| Caelo    | Base cream DAC | 23091703        | 1       |
| Caelo    | Base cream DAC | 1409041         | 1       |
| Caelo    | Base cream DAC | 1415001         | 1       |
| Caelo    | Base cream DAC | 287876          | 1       |
| Caelo    | Base cream DAC | 1417780         | 1       |
| Caelo    | Base cream DAC | 14223201        | 11      |
| Caelo    | Base cream DAC | 14223001        | 1       |
| Caelo    | Base cream DAC | 14238301        | 8       |
| Caelo    | Base cream DAC | 14227901        | 4       |
| Caelo    | Base cream DAC | 14263301        | 6       |
| Caelo    | Base cream DAC | 14232301        | 4       |
| Caelo    | Base cream DAC | 14238401        | 3       |
| Caelo    | Base cream DAC | 14263201        | 3       |
| Caelo    | Base cream DAC | 1426331         | 1       |
| Caelo    | Base cream DAC | 14289601        | 10      |
| Caelo    | Base cream DAC | 1423101         | 1       |
| Caelo    | Base cream DAC | 2121403         | 1       |
| Caelo    | Base cream DAC | 14289701        | 6       |
| Caelo    | Base cream DAC | 14303301        | 3       |
| Caelo    | Base cream DAC | 14289801        | 12      |
| Caelo    | Base cream DAC | 14289901        | 10      |
| Caelo    | Base cream DAC | 14327101        | 3       |
| Caelo    | Base cream DAC | 14327001        | 9       |
| Caelo    | Base cream DAC | 14011515        | 1       |
| Caelo    | Base cream DAC | 14303901        | 16      |
| Caelo    | Base cream DAC | 14303801        | 8       |
| Caelo    | Base cream DAC | 14327901        | 8       |
| Caelo    | Base cream DAC | 140705401       | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 14f05-t07-012965 | 1              |
| Caelo           | Base cream DAC   | 14232001         | 6              |
| Caelo           | Base cream DAC   | 14327401         | 3              |
| Caelo           | Base cream DAC   | 14326901         | 5              |
| Caelo           | Base cream DAC   | 20021503         | 1              |
| Caelo           | Base cream DAC   | 14325801         | 2              |
| Caelo           | Base cream DAC   | 15000801         | 4              |
| Caelo           | Base cream DAC   | 14368201         | 4              |
| Caelo           | Base cream DAC   | 14327801         | 2              |
| Caelo           | Base cream DAC   | 14327601         | 3              |
| Caelo           | Base cream DAC   | 15040701         | 11             |
| Caelo           | Base cream DAC   | 31031506         | 1              |
| Caelo           | Base cream DAC   | 15040901         | 7              |
| Caelo           | Base cream DAC   | 1401020-01       | 1              |
| Caelo           | Base cream DAC   | 14374401         | 2              |
| Caelo           | Base cream DAC   | 15064401         | 7              |
| Caelo           | Base cream DAC   | 15070101         | 11             |
| Caelo           | Base cream DAC   | 14274601         | 1              |
| Caelo           | Base cream DAC   | 15064501         | 4              |
| Caelo           | Base cream DAC   | 15064601         | 2              |
| Caelo           | Base cream DAC   | 15083001         | 1              |
| Caelo           | Base cream DAC   | 14325901         | 1              |
| Caelo           | Base cream DAC   | 15164601         | 13             |
| Caelo           | Base cream DAC   | 180615010        | 1              |
| Caelo           | Base cream DAC   | 23061506         | 1              |
| Caelo           | Base cream DAC   | 15083201         | 1              |
| Caelo           | Base cream DAC   | 15164701         | 11             |
| Caelo           | Base cream DAC   | 15164301         | 1              |
| Caelo           | Base cream DAC   | 15184001         | 4              |
| Caelo           | Base cream DAC   | 15173301         | 1              |
| Caelo           | Base cream DAC   | 15191202         | 8              |
| Caelo           | Base cream DAC   | 151191001        | 1              |
| Caelo           | Base cream DAC   | 15190701         | 1              |
| Caelo           | Base cream DAC   | 1513301          | 1              |
| Caelo           | Base cream DAC   | 19081503         | 1              |
| Caelo           | Base cream DAC   | 15250801         | 9              |
| Caelo           | Base cream DAC   | 15250201         | 7              |
| Caelo           | Base cream DAC   | 15250701         | 3              |
| Caelo           | Base cream DAC   | 15191201         | 1              |
| Caelo           | Base cream DAC   | 1520601          | 1              |
| Caelo           | Base cream DAC   | 15242001         | 14             |
| Caelo           | Base cream DAC   | 15315401         | 11             |
| Caelo           | Base cream DAC   | 15357801         | 8              |
| Caelo           | Base cream DAC   | 15357601         | 17             |
| Caelo           | Base cream DAC   | 1502027-01       | 1              |
| Caelo           | Base cream DAC   | 15390601         | 3              |
| Caelo           | Base cream DAC   | 1509021-01       | 1              |
| Caelo           | Base cream DAC   | 15391001         | 5              |
| Caelo           | Base cream DAC   | 26011602         | 1              |
| Caelo           | Base cream DAC   | 15390801         | 9              |
| Caelo           | Base cream DAC   | 153868           | 1              |
| Caelo           | Base cream DAC   | 298259           | 2              |
| Caelo           | Base cream DAC   | 1518901          | 2              |
| Caelo           | Base cream DAC   | 170216Vi4        | 1              |
| Caelo           | Base cream DAC   | 16005201         | 3              |
| Caelo           | Base cream DAC   | 15420001         | 13             |
| Caelo           | Base cream DAC   | 15390701         | 2              |
| Caelo           | Base cream DAC   | 16005401         | 6              |
| Caelo           | Base cream DAC   | 1587201          | 1              |
| Caelo           | Base cream DAC   | 15J13-T03-026895 | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 16055701         | 13             |
| Caelo           | Base cream DAC   | testmessung      | 1              |
| Caelo           | Base cream DAC   | 16005501         | 7              |
| Caelo           | Base cream DAC   | 1507018-01       | 1              |
| Caelo           | Base cream DAC   | 15420101         | 2              |
| Caelo           | Base cream DAC   | 16058801         | 20             |
| Caelo           | Base cream DAC   | 298260           | 1              |
| Caelo           | Base cream DAC   | 80316-250-376    | 1              |
| Caelo           | Base cream DAC   | 16041301         | 3              |
| Caelo           | Base cream DAC   | 16055501         | 3              |
| Caelo           | Base cream DAC   | 2779             | 1              |
| Caelo           | Base cream DAC   | 16097601         | 7              |
| Caelo           | Base cream DAC   | 16101901         | 8              |
| Caelo           | Base cream DAC   | 2782             | 1              |
| Caelo           | Base cream DAC   | 16102001         | 1              |
| Caelo           | Base cream DAC   | 16103901         | 11             |
| Caelo           | Base cream DAC   | 160592           | 1              |
| Caelo           | Base cream DAC   | 2786             | 1              |
| Caelo           | Base cream DAC   | 16131501         | 9              |
| Caelo           | Base cream DAC   | 16055601         | 3              |
| Caelo           | Base cream DAC   | 160976012        | 1              |
| Caelo           | Base cream DAC   | 16134901         | 6              |
| Caelo           | Base cream DAC   | 16136301         | 12             |
| Caelo           | Base cream DAC   | 16134701         | 14             |
| Caelo           | Base cream DAC   | 16136201         | 8              |
| Caelo           | Base cream DAC   | 16135201         | 8              |
| Caelo           | Base cream DAC   | 16135801         | 3              |
| Caelo           | Base cream DAC   | 16145801         | 11             |
| Caelo           | Base cream DAC   | 301743           | 2              |
| Caelo           | Base cream DAC   | 2817             | 1              |
| Caelo           | Base cream DAC   | 16D06-T10-031951 | 1              |
| Caelo           | Base cream DAC   | 16135001         | 19             |
| Caelo           | Base cream DAC   | 16145701         | 13             |
| Caelo           | Base cream DAC   | 1605101          | 1              |
| Caelo           | Base cream DAC   | 16149901         | 16             |
| Caelo           | Base cream DAC   | 16C24-To5-031490 | 1              |
| Caelo           | Base cream DAC   | 16203301         | 4              |
| Caelo           | Base cream DAC   | 16205501         | 3              |
| Caelo           | Base cream DAC   | 16150201         | 2              |
| Caelo           | Base cream DAC   | 2831             | 1              |
| Caelo           | Base cream DAC   | 16815-T05-030285 | 1              |
| Caelo           | Base cream DAC   | 16152401         | 6              |
| Caelo           | Base cream DAC   | 29220416         | 6              |
| Caelo           | Base cream DAC   | 16227101         | 13             |
| Caelo           | Base cream DAC   | 16220401         | 24             |
| Caelo           | Base cream DAC   | (2x) 16005101    | 1              |
| Caelo           | Base cream DAC   | 16227201         | 4              |
| Caelo           | Base cream DAC   | 16232102         | 3              |
| Caelo           | Base cream DAC   | 16219501         | 3              |
| Caelo           | Base cream DAC   | 16152101         | 2              |
| Caelo           | Base cream DAC   | 16214801         | 12             |
| Caelo           | Base cream DAC   | 303419           | 1              |
| Caelo           | Base cream DAC   | 160809B          | 1              |
| Caelo           | Base cream DAC   | 16240301         | 6              |
| Caelo           | Base cream DAC   | 1652101          | 1              |
| Caelo           | Base cream DAC   | 16220501         | 2              |
| Caelo           | Base cream DAC   | 16231901         | 8              |
| Caelo           | Base cream DAC   | 301744           | 1              |
| Caelo           | Base cream DAC   | 16232201         | 2              |
| Caelo           | Base cream DAC   | 16242001         | 8              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 16232501         | 3              |
| Caelo           | Base cream DAC   | 161111B/16155601 | 1              |
| Caelo           | Base cream DAC   | 19H04T08         | 1              |
| Caelo           | Base cream DAC   | 1623801          | 1              |
| Caelo           | Base cream DAC   | 303421           | 1              |
| Caelo           | Base cream DAC   | 16241701         | 1              |
| Caelo           | Base cream DAC   | 162070           | 1              |
| Caelo           | Base cream DAC   | 16241601         | 8              |
| Caelo           | Base cream DAC   | 16253101         | 7              |
| Caelo           | Base cream DAC   | 16253501         | 8              |
| Caelo           | Base cream DAC   | 16260801         | 12             |
| Caelo           | Base cream DAC   | 16232801         | 1              |
| Caelo           | Base cream DAC   | 16261101         | 14             |
| Caelo           | Base cream DAC   | 2892             | 1              |
| Caelo           | Base cream DAC   | 16261801         | 6              |
| Caelo           | Base cream DAC   | 2894             | 1              |
| Caelo           | Base cream DAC   | 16262301         | 1              |
| Caelo           | Base cream DAC   | 16319601         | 2              |
| Caelo           | Base cream DAC   | 16325801         | 11             |
| Caelo           | Base cream DAC   | 20011701         | 1              |
| Caelo           | Base cream DAC   | 304352           | 1              |
| Caelo           | Base cream DAC   | 16329101         | 3              |
| Caelo           | Base cream DAC   | 16318701         | 6              |
| Caelo           | Base cream DAC   | 304357           | 1              |
| Caelo           | Base cream DAC   | 166349502        | 1              |
| Caelo           | Base cream DAC   | 16360201         | 1              |
| Caelo           | Base cream DAC   | 1234             | 1              |
| Caelo           | Base cream DAC   | 16325901         | 2              |
| Caelo           | Base cream DAC   | 17003401         | 12             |
| Caelo           | Base cream DAC   | 273416352701     | 1              |
| Caelo           | Base cream DAC   | 17010201         | 13             |
| Caelo           | Base cream DAC   | 17003501         | 9              |
| Caelo           | Base cream DAC   | 16352901         | 5              |
| Caelo           | Base cream DAC   | 16352801         | 2              |
| Caelo           | Base cream DAC   | 39590217         | 2              |
| Caelo           | Base cream DAC   | 17014401         | 10             |
| Caelo           | Base cream DAC   | 16281101         | 1              |
| Caelo           | Base cream DAC   | 17014601         | 7              |
| Caelo           | Base cream DAC   | 163505           | 1              |
| Caelo           | Base cream DAC   | 16319301         | 4              |
| Caelo           | Base cream DAC   | 17003301         | 2              |
| Caelo           | Base cream DAC   | 17023401         | 7              |
| Caelo           | Base cream DAC   | 17019601         | 8              |
| Caelo           | Base cream DAC   | 17031901         | 1              |
| Caelo           | Base cream DAC   | 17019301         | 2              |
| Caelo           | Base cream DAC   | 17029301         | 2              |
| Caelo           | Base cream DAC   | 306619           | 1              |
| Caelo           | Base cream DAC   | 17029201         | 5              |
| Caelo           | Base cream DAC   | 126328901        | 1              |
| Caelo           | Base cream DAC   | 16139701         | 1              |
| Caelo           | Base cream DAC   | 17000102         | 4              |
| Caelo           | Base cream DAC   | 301759           | 2              |
| Caelo           | Base cream DAC   | 17035901         | 4              |
| Caelo           | Base cream DAC   | 306618           | 2              |
| Caelo           | Base cream DAC   | 17097401         | 6              |
| Caelo           | Base cream DAC   | 5x17031501       | 1              |
| Caelo           | Base cream DAC   | 17035701         | 2              |
| Caelo           | Base cream DAC   | 17089701         | 2              |
| Caelo           | Base cream DAC   | 17090502         | 3              |
| Caelo           | Base cream DAC   | 17097101         | 12             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 17094401         | 5              |
| Caelo           | Base cream DAC   | 17100401         | 14             |
| Caelo           | Base cream DAC   | 17090901         | 2              |
| Caelo           | Base cream DAC   | 17100501         | 18             |
| Caelo           | Base cream DAC   | 170909015284     | 1              |
| Caelo           | Base cream DAC   | 17090601         | 1              |
| Caelo           | Base cream DAC   | 17104001         | 15             |
| Caelo           | Base cream DAC   | 17094601         | 1              |
| Caelo           | Base cream DAC   | 17023601         | 1              |
| Caelo           | Base cream DAC   | 17094501         | 1              |
| Caelo           | Base cream DAC   | 17A03-T07-040044 | 1              |
| Caelo           | Base cream DAC   | 17116701         | 17             |
| Caelo           | Base cream DAC   | 17124001         | 15             |
| Caelo           | Base cream DAC   | 17116901         | 8              |
| Caelo           | Base cream DAC   | 17103901         | 4              |
| Caelo           | Base cream DAC   | 17116801         | 2              |
| Caelo           | Base cream DAC   | 17133603         | 1              |
| Caelo           | Base cream DAC   | 17117002         | 3              |
| Caelo           | Base cream DAC   | 16107417         | 1              |
| Caelo           | Base cream DAC   | 17147301         | 11             |
| Caelo           | Base cream DAC   | 17155401         | 7              |
| Caelo           | Base cream DAC   | 1714601          | 1              |
| Caelo           | Base cream DAC   | 3811016          | 1              |
| Caelo           | Base cream DAC   | 171476015345     | 1              |
| Caelo           | Base cream DAC   | 17153701         | 7              |
| Caelo           | Base cream DAC   | 17153401         | 2              |
| Caelo           | Base cream DAC   | 86490517         | 4              |
| Caelo           | Base cream DAC   | 17154101         | 2              |
| Caelo           | Base cream DAC   | 17225202         | 1              |
| Caelo           | Base cream DAC   | 17225002         | 8              |
| Caelo           | Base cream DAC   | 17225601         | 11             |
| Caelo           | Base cream DAC   | 731/1            | 3              |
| Caelo           | Base cream DAC   | 171552015374     | 1              |
| Caelo           | Base cream DAC   | 17154201         | 3              |
| Caelo           | Base cream DAC   | 17225801         | 8              |
| Caelo           | Base cream DAC   | 17239901         | 15             |
| Caelo           | Base cream DAC   | 1722501          | 1              |
| Caelo           | Base cream DAC   | 17229601         | 8              |
| Caelo           | Base cream DAC   | 86450517         | 1              |
| Caelo           | Base cream DAC   | 17E11-T07-044186 | 3              |
| Caelo           | Base cream DAC   | 1755701          | 1              |
| Caelo           | Base cream DAC   | 17240301         | 7              |
| Caelo           | Base cream DAC   | 17230001         | 18             |
| Caelo           | Base cream DAC   | 27111703         | 1              |
| Caelo           | Base cream DAC   | 28111708         | 1              |
| Caelo           | Base cream DAC   | 17229801         | 4              |
| Caelo           | Base cream DAC   | 17240101         | 3              |
| Caelo           | Base cream DAC   | 17229701         | 2              |
| Caelo           | Base cream DAC   | 17243501         | 13             |
| Caelo           | Base cream DAC   | 1734041          | 1              |
| Caelo           | Base cream DAC   | 27300917         | 1              |
| Caelo           | Base cream DAC   | 17225701         | 1              |
| Caelo           | Base cream DAC   | 17240701         | 1              |
| Caelo           | Base cream DAC   | 17240201         | 2              |
| Caelo           | Base cream DAC   | 17240601         | 5              |
| Caelo           | Base cream DAC   | 1753501          | 1              |
| Caelo           | Base cream DAC   | 17229501         | 3              |
| Caelo           | Base cream DAC   | 17F08-T02-045262 | 1              |
| Caelo           | Base cream DAC   | 86460517         | 2              |
| Caelo           | Base cream DAC   | 17251501         | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 17264301         | 17             |
| Caelo           | Base cream DAC   | 8003325003       | 5              |
| Caelo           | Base cream DAC   | 17266501         | 16             |
| Caelo           | Base cream DAC   | 17H25-T06-047736 | 3              |
| Caelo           | Base cream DAC   | 17240501         | 1              |
| Caelo           | Base cream DAC   | 13011808         | 1              |
| Caelo           | Base cream DAC   | 17239915453      | 1              |
| Caelo           | Base cream DAC   | 17266701         | 9              |
| Caelo           | Base cream DAC   | 17267001         | 19             |
| Caelo           | Base cream DAC   | 17267301         | 27             |
| Caelo           | Base cream DAC   | 16349501         | 1              |
| Caelo           | Base cream DAC   | 8002875008       | 2              |
| Caelo           | Base cream DAC   | 17266601         | 21             |
| Caelo           | Base cream DAC   | 17F08-T03-045267 | 1              |
| Caelo           | Base cream DAC   | 17264701         | 6              |
| Caelo           | Base cream DAC   | 17230101         | 3              |
| Caelo           | Base cream DAC   | 17267801         | 11             |
| Caelo           | Base cream DAC   | 17090501         | 8              |
| Caelo           | Base cream DAC   | 17264501         | 4              |
| Caelo           | Base cream DAC   | 17267201         | 6              |
| Caelo           | Base cream DAC   | 17000909         | 2              |
| Caelo           | Base cream DAC   | 17268701         | 3              |
| Caelo           | Base cream DAC   | 172668001        | 1              |
| Caelo           | Base cream DAC   | 17000922         | 4              |
| Caelo           | Base cream DAC   | 1726601          | 1              |
| Caelo           | Base cream DAC   | 172668015477     | 1              |
| Caelo           | Base cream DAC   | 69520118         | 1              |
| Caelo           | Base cream DAC   | 17345801         | 12             |
| Caelo           | Base cream DAC   | 17267601         | 15             |
| Caelo           | Base cream DAC   | 17269201         | 5              |
| Caelo           | Base cream DAC   | 17349901         | 15             |
| Caelo           | Base cream DAC   | 17349501         | 4              |
| Caelo           | Base cream DAC   | 18037301         | 5              |
| Caelo           | Base cream DAC   | 17352001         | 17             |
| Caelo           | Base cream DAC   | 172676001        | 1              |
| Caelo           | Base cream DAC   | 17H25-T09        | 1              |
| Caelo           | Base cream DAC   | 16041802         | 1              |
| Caelo           | Base cream DAC   | 18081701         | 3              |
| Caelo           | Base cream DAC   | 18055601         | 8              |
| Caelo           | Base cream DAC   | 51580217         | 2              |
| Caelo           | Base cream DAC   | 17349802         | 1              |
| Caelo           | Base cream DAC   | 18091101         | 6              |
| Caelo           | Base cream DAC   | 18085201         | 8              |
| Caelo           | Base cream DAC   | 1805101          | 1              |
| Caelo           | Base cream DAC   | 18081602         | 8              |
| Caelo           | Base cream DAC   | 18037901         | 4              |
| Caelo           | Base cream DAC   | 17000923         | 1              |
| Caelo           | Base cream DAC   | 107805-815       | 1              |
| Caelo           | Base cream DAC   | 18129301         | 16             |
| Caelo           | Base cream DAC   | 18091202         | 10             |
| Caelo           | Base cream DAC   | 18104701         | 1              |
| Caelo           | Base cream DAC   | 18081702         | 12             |
| Caelo           | Base cream DAC   | 8061802          | 1              |
| Caelo           | Base cream DAC   | 18105101         | 6              |
| Caelo           | Base cream DAC   | 18C19-T18-05352  | 1              |
| Caelo           | Base cream DAC   | 18C19-T18-053952 | 3              |
| Caelo           | Base cream DAC   | 80300218         | 1              |
| Caelo           | Base cream DAC   | 18105201         | 9              |
| Caelo           | Base cream DAC   | 18105301         | 8              |
| Caelo           | Base cream DAC   | 18126301         | 27             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 7071803          | 1              |
| Caelo           | Base cream DAC   | 8003325004       | 1              |
| Caelo           | Base cream DAC   | 18000971         | 1              |
| Caelo           | Base cream DAC   | 18105501         | 7              |
| Caelo           | Base cream DAC   | 7560418          | 2              |
| Caelo           | Base cream DAC   | 11081803         | 1              |
| Caelo           | Base cream DAC   | 18137001         | 13             |
| Caelo           | Base cream DAC   | 18C19-T22-053970 | 2              |
| Caelo           | Base cream DAC   | 18165301         | 17             |
| Caelo           | Base cream DAC   | 18137501         | 1              |
| Caelo           | Base cream DAC   | 18003107         | 1              |
| Caelo           | Base cream DAC   | 8091808          | 1              |
| Caelo           | Base cream DAC   | 18137101         | 5              |
| Caelo           | Base cream DAC   | 18165601         | 32             |
| Caelo           | Base cream DAC   | 1165401          | 1              |
| Caelo           | Base cream DAC   | 22091802         | 1              |
| Caelo           | Base cream DAC   | 18126401         | 11             |
| Caelo           | Base cream DAC   | 18001971         | 1              |
| Caelo           | Base cream DAC   | 18166301         | 14             |
| Caelo           | Base cream DAC   | 18166501         | 24             |
| Caelo           | Base cream DAC   | 18200801         | 1              |
| Caelo           | Base cream DAC   | 18105602         | 2              |
| Caelo           | Base cream DAC   | 18167101         | 13             |
| Caelo           | Base cream DAC   | 181667001        | 1              |
| Caelo           | Base cream DAC   | 18193101         | 30             |
| Caelo           | Base cream DAC   | 18003102         | 1              |
| Caelo           | Base cream DAC   | 18166701         | 2              |
| Caelo           | Base cream DAC   | 28111811         | 1              |
| Caelo           | Base cream DAC   | 18166901         | 8              |
| Caelo           | Base cream DAC   | 18165901         | 6              |
| Caelo           | Base cream DAC   | 18192901         | 6              |
| Caelo           | Base cream DAC   | 18G13-T11-058079 | 5              |
| Caelo           | Base cream DAC   | 19011902         | 1              |
| Caelo           | Base cream DAC   | 18006772         | 1              |
| Caelo           | Base cream DAC   | 18232701         | 18             |
| Caelo           | Base cream DAC   | 18270001         | 7              |
| Caelo           | Base cream DAC   | 18232301         | 1              |
| Caelo           | Base cream DAC   | 18270101         | 11             |
| Caelo           | Base cream DAC   | 18G13-T14-058090 | 2              |
| Caelo           | Base cream DAC   | 18269501         | 22             |
| Caelo           | Base cream DAC   | 18270601         | 4              |
| Caelo           | Base cream DAC   | 18271001         | 5              |
| Caelo           | Base cream DAC   | 18270501         | 10             |
| Caelo           | Base cream DAC   | 18005748         | 1              |
| Caelo           | Base cream DAC   | 18272301         | 23             |
| Caelo           | Base cream DAC   | 8004134004       | 1              |
| Caelo           | Base cream DAC   | 1827050101       | 1              |
| Caelo           | Base cream DAC   | 19003401         | 11             |
| Caelo           | Base cream DAC   | 1826901          | 1              |
| Caelo           | Base cream DAC   | 19003101         | 8              |
| Caelo           | Base cream DAC   | 17K24-T05-050498 | 1              |
| Caelo           | Base cream DAC   | 19000948         | 1              |
| Caelo           | Base cream DAC   | 19020001         | 7              |
| Caelo           | Base cream DAC   | 19052501         | 11             |
| Caelo           | Base cream DAC   | 19052601         | 8              |
| Caelo           | Base cream DAC   | 19002685         | 1              |
| Caelo           | Base cream DAC   | 19052801         | 11             |
| Caelo           | Base cream DAC   | 19052001         | 3              |
| Caelo           | Base cream DAC   | 18L20-T17-062947 | 1              |
| Caelo           | Base cream DAC   | 19083101         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 19116701         | 1              |
| Caelo           | Base cream DAC   | 19052101         | 4              |
| Caelo           | Base cream DAC   | 191171101        | 1              |
| Caelo           | Base cream DAC   | 19076001         | 2              |
| Caelo           | Base cream DAC   | 19117401         | 18             |
| Caelo           | Base cream DAC   | 19117501         | 18             |
| Caelo           | Base cream DAC   | 19116801         | 20             |
| Caelo           | Base cream DAC   | 19117101         | 9              |
| Caelo           | Base cream DAC   | 191117501        | 1              |
| Caelo           | Base cream DAC   | 19117410         | 1              |
| Caelo           | Base cream DAC   | 19118301         | 7              |
| Caelo           | Base cream DAC   | 47890419         | 3              |
| Caelo           | Base cream DAC   | 19D01-T14-065578 | 1              |
| Caelo           | Base cream DAC   | 19172201         | 6              |
| Caelo           | Base cream DAC   | 19172401         | 21             |
| Caelo           | Base cream DAC   | 19171001         | 7              |
| Caelo           | Base cream DAC   | 19173901         | 18             |
| Caelo           | Base cream DAC   | 19173201         | 3              |
| Caelo           | Base cream DAC   | 19172901         | 7              |
| Caelo           | Base cream DAC   | 191172301        | 1              |
| Caelo           | Base cream DAC   | 19174001         | 9              |
| Caelo           | Base cream DAC   | 19173301         | 5              |
| Caelo           | Base cream DAC   | 19239301         | 12             |
| Caelo           | Base cream DAC   | 19240801         | 4              |
| Caelo           | Base cream DAC   | 19240201         | 4              |
| Caelo           | Base cream DAC   | 19269701         | 4              |
| Caelo           | Base cream DAC   | 19240901         | 1              |
| Caelo           | Base cream DAC   | 19270001         | 2              |
| Caelo           | Base cream DAC   | 19301701         | 11             |
| Caelo           | Base cream DAC   | 19269501         | 3              |
| Caelo           | Base cream DAC   | 20000056001      | 4              |
| Caelo           | Base cream DAC   | 20000053001      | 5              |
| Caelo           | Base cream DAC   | 20000580001      | 6              |
| Caelo           | Base cream DAC   | 20000052001      | 5              |
| Caelo           | Base cream DAC   | 200002580001     | 1              |
| Caelo           | Base cream DAC   | 2000036001       | 1              |
| Caelo           | Base cream DAC   | 20000689001      | 12             |
| Caelo           | Base cream DAC   | 20000694001      | 2              |
| Caelo           | Base cream DAC   | 20000693001      | 4              |
| Caelo           | Base cream DAC   | 20001006001      | 11             |
| Caelo           | Base cream DAC   | 20001007001      | 8              |
| Caelo           | Base cream DAC   | T01-0769405      | 1              |
| Caelo           | Base cream DAC   | 200010007001     | 1              |
| Caelo           | Base cream DAC   | 20000586001      | 1              |
| Caelo           | Base cream DAC   | 20000692001      | 2              |
| Caelo           | Base cream DAC   | 20001680001      | 5              |
| Caelo           | Base cream DAC   | 20001689001      | 4              |
| Caelo           | Base cream DAC   | 20001852001      | 3              |
| Caelo           | Base cream DAC   | 20001850001      | 3              |
| Caelo           | Base cream DAC   | 20001853001      | 3              |
| Caelo           | Base cream DAC   | 20001682001      | 3              |
| Caelo           | Base cream DAC   | 20001863001      | 3              |
| Caelo           | Base cream DAC   | 20001862001      | 7              |
| Caelo           | Base cream DAC   | 20002867001      | 1              |
| Caelo           | Base cream DAC   | 20002872001      | 3              |
| Caelo           | Base cream DAC   | 20002067001      | 2              |
| Caelo           | Base cream DAC   | 200031820011     | 1              |
| Caelo           | Base cream DAC   | 20003186001      | 2              |
| Caelo           | Base cream DAC   | 20003191001      | 5              |
| Caelo           | Base cream DAC   | 20003187001      | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|------------------|---------------|----------------|
| Caelo           | Base cream DAC   | 20003188001   | 3              |
| Caelo           | Base cream DAC   | 20002871001   | 2              |
| Caelo           | Base cream DAC   | 20004318001   | 5              |
| Caelo           | Base cream DAC   | 20004317001   | 4              |
| Caelo           | Base cream DAC   | 20003829002   | 3              |
| Caelo           | Base cream DAC   | 20003470001   | 3              |
| Caelo           | Base cream DAC   | 20004323001   | 2              |
| Caelo           | Base cream DAC   | 20004321001   | 1              |
| Caelo           | Base cream DAC   | 21000817001   | 1              |
| Caelo           | Base cream DAC   | 21001249001   | 1              |
| Caelo           | Base cream DAC   | 9876543       | 1              |
| Caelo           | Base cream DAC   | 20004324001   | 1              |
| Caelo           | Base cream DAC   | 21000813001   | 1              |
| Caelo           | Base cream DAC   | 20003835001   | 1              |
| Caelo           | Base cream DAC   | 1501052-01    | 1              |
| Caelo           | Base cream DAC   | 15250601      | 3              |
| Caelo           | Base cream DAC   | 294834        | 1              |
| Caelo           | Base cream DAC   | 1524001       | 4              |
| Caelo           | Base cream DAC   | 8707          | 1              |
| Caelo           | Base cream DAC   | 8723          | 1              |
| Caelo           | Base cream DAC   | 296229        | 1              |
| Caelo           | Base cream DAC   | 2740          | 1              |
| Caelo           | Base cream DAC   | 2753          | 1              |
| Caelo           | Base cream DAC   | 1601023-01    | 1              |
| Caelo           | Base cream DAC   | 16232701      | 1              |
| Caelo           | Base cream DAC   | 25021701      | 1              |
| Caelo           | Base cream DAC   | 17041702      | 1              |
| Caelo           | Base cream DAC   | 3061701       | 1              |
| Caelo           | Base cream DAC   | 30061713      | 1              |
| Caelo           | Base cream DAC   | 3081702       | 1              |
| Caelo           | Base cream DAC   | 16237901      | 8              |
| Caelo           | Base cream DAC   | 17266401      | 15             |
| Caelo           | Base cream DAC   | 18097702      | 18             |
| Caelo           | Base cream DAC   | 19173701      | 16             |
| Caelo           | Base cream DAC   | 200000036001  | 1              |
| Caelo           | Base cream DAC   | 19170701      | 16             |
| Caelo           | Base cream DAC   | 14140817      | 4              |
| Caelo           | Base cream DAC   | 45348616      | 1              |
| Caelo           | Base cream DAC   | CH-B17268601  | 1              |
| Caelo           | Base cream DAC   | CH-B18269001  | 1              |
| Caelo           | Base cream DAC   | CH_B19117601  | 1              |
| Caelo           | Base cream DAC   | CHB19170901   | 1              |
| Caelo           | Base cream DAC   | 12005401      | 1              |
| Caelo           | Base cream DAC   | 13125001      | 4              |
| Caelo           | Base cream DAC   | 310756        | 1              |
| Caelo           | Base cream DAC   | 18015101      | 12             |
| Caelo           | Base cream DAC   | 13187901      | 9              |
| Caelo           | Base cream DAC   | 14151501      | 10             |
| Caelo           | Base cream DAC   | 16240701      | 10             |
| Caelo           | Base cream DAC   | 16349502      | 8              |
| Caelo           | Base cream DAC   | 6003682015    | 1              |
| Caelo           | Base cream DAC   | 625570918     | 1              |
| Caelo           | Base cream DAC   | 19170501      | 17             |
| Caelo           | Base cream DAC   | 20000054001   | 6              |
| Caelo           | Base cream DAC   | 306615        | 1              |
| Caelo           | Base cream DAC   | 18006774      | 2              |
| Caelo           | Base cream DAC   | 16261701      | 7              |
| Caelo           | Base cream DAC   | 100(18166401) | 1              |
| Caelo           | Base cream DAC   | 101(18166602) | 1              |
| Caelo           | Base cream DAC   | 17000905      | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Base cream DAC   | 16350301             | 9              |
| Caelo           | Base cream DAC   | 13A09-T10-232        | 2              |
| Caelo           | Base cream DAC   | 13377901             | 5              |
| Caelo           | Base cream DAC   | 14143901             | 6              |
| Caelo           | Base cream DAC   | 15315301             | 10             |
| Caelo           | Base cream DAC   | 16136001             | 6              |
| Caelo           | Base cream DAC   | 18104801             | 1              |
| Caelo           | Base cream DAC   | 10801968             | 1              |
| Caelo           | Base cream DAC   | 19117301             | 19             |
| Caelo           | Base cream DAC   | 20001008001          | 9              |
| Caelo           | Base cream DAC   | 20002866001          | 2              |
| Caelo           | Base cream DAC   | 20003474001          | 3              |
| Caelo           | Base cream DAC   | 19174201             | 17             |
| Caelo           | Base cream DAC   | 17266601-20180206Ma1 | 1              |
| Caelo           | Base cream DAC   | 15040601             | 15             |
| Caelo           | Base cream DAC   | 18269801             | 24             |
| Caelo           | Base cream DAC   | 20003831001          | 1              |
| Caelo           | Base cream DAC   | 12339201             | 12             |
| Caelo           | Base cream DAC   | 13007001             | 5              |
| Caelo           | Base cream DAC   | 1301681              | 1              |
| Caelo           | Base cream DAC   | 14053002             | 2              |
| Caelo           | Base cream DAC   | 14177701             | 5              |
| Caelo           | Base cream DAC   | 15191001             | 8              |
| Caelo           | Base cream DAC   | 15272201             | 19             |
| Caelo           | Base cream DAC   | 16238301             | 12             |
| Caelo           | Base cream DAC   | 1352701              | 1              |
| Caelo           | Base cream DAC   | 17023301             | 10             |
| Caelo           | Base cream DAC   | 17028901             | 10             |
| Caelo           | Base cream DAC   | 17097301             | 5              |
| Caelo           | Base cream DAC   | 170824CB/17136501    | 1              |
| Caelo           | Base cream DAC   | 17000912             | 1              |
| Caelo           | Base cream DAC   | 15306601             | 3              |
| Caelo           | Base cream DAC   | 15387101             | 7              |
| Caelo           | Base cream DAC   | 16261301             | 8              |
| Caelo           | Base cream DAC   | 17031601             | 13             |
| Caelo           | Base cream DAC   | 17243401             | 12             |
| Caelo           | Base cream DAC   | 17263901             | 9              |
| Caelo           | Base cream DAC   | 13312401             | 2              |
| Caelo           | Base cream DAC   | 55850317             | 1              |
| Caelo           | Base cream DAC   | 13249701             | 10             |
| Caelo           | Base cream DAC   | 17006701             | 2              |
| Caelo           | Base cream DAC   | 305735               | 1              |
| Caelo           | Base cream DAC   | 307964               | 2              |
| Caelo           | Base cream DAC   | 17133602             | 9              |
| Caelo           | Base cream DAC   | 17229301             | 12             |
| Caelo           | Base cream DAC   | 18015301             | 11             |
| Caelo           | Base cream DAC   | 8003325005           | 2              |
| Caelo           | Base cream DAC   | 18037402             | 1              |
| Caelo           | Base cream DAC   | 19172501             | 24             |
| Caelo           | Base cream DAC   | 200001009001         | 1              |
| Caelo           | Base cream DAC   | 20001689002          | 1              |
| Caelo           | Base cream DAC   | 20004316001          | 8              |
| Caelo           | Base cream DAC   | 2x18269501           | 1              |
| Caelo           | Base cream DAC   | 15004001             | 5              |
| Caelo           | Base cream DAC   | 12061701             | 1              |
| Caelo           | Base cream DAC   | 14368001             | 8              |
| Caelo           | Base cream DAC   | 16261501             | 5              |
| Caelo           | Base cream DAC   | 17019501             | 6              |
| Caelo           | Base cream DAC   | 17147501             | 6              |
| Caelo           | Base cream DAC   | 17154501             | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|------------------|---------------------|----------------|
| Caelo           | Base cream DAC   | 17243601            | 13             |
| Caelo           | Base cream DAC   | 18137201            | 17             |
| Caelo           | Base cream DAC   | 18138401            | 25             |
| Caelo           | Base cream DAC   | 19472501            | 1              |
| Caelo           | Base cream DAC   | 19270301            | 10             |
| Caelo           | Base cream DAC   | 2000053001          | 1              |
| Caelo           | Base cream DAC   | 2000113001          | 1              |
| Caelo           | Base cream DAC   | 18105402            | 24             |
| Caelo           | Base cream DAC   | 2x18192701          | 1              |
| Caelo           | Base cream DAC   | 12062001            | 1              |
| Caelo           | Base cream DAC   | 12249701            | 1              |
| Caelo           | Base cream DAC   | 13000501            | 1              |
| Caelo           | Base cream DAC   | 13111401            | 2              |
| Caelo           | Base cream DAC   | 14178001            | 6              |
| Caelo           | Base cream DAC   | 50205/1Gra          | 1              |
| Caelo           | Base cream DAC   | 19301202            | 11             |
| Caelo           | Base cream DAC   | 21000814001         | 1              |
| Caelo           | Base cream DAC   | 13385301            | 5              |
| Caelo           | Base cream DAC   | 14090701            | 7              |
| Caelo           | Base cream DAC   | 19019901            | 3              |
| Caelo           | Base cream DAC   | 20001107001         | 3              |
| Caelo           | Base cream DAC   | 200001862001        | 1              |
| Caelo           | Base cream DAC   | 16269901            | 1              |
| Caelo           | Base cream DAC   | 19240501            | 12             |
| Caelo           | Base cream DAC   | 12168201            | 1              |
| Caelo           | Base cream DAC   | 12240801            | 1              |
| Caelo           | Base cream DAC   | 12262501            | 5              |
| Caelo           | Base cream DAC   | 12245201            | 1              |
| Caelo           | Base cream DAC   | 14143801            | 7              |
| Caelo           | Base cream DAC   | 14290001            | 7              |
| Caelo           | Base cream DAC   | 15420001/20160309/4 | 1              |
| Caelo           | Base cream DAC   | 15166901            | 5              |
| Caelo           | Base cream DAC   | 15420201            | 9              |
| Caelo           | Base cream DAC   | 16055901            | 9              |
| Caelo           | Base cream DAC   | 12263101            | 4              |
| Caelo           | Base cream DAC   | 18137301            | 20             |
| Caelo           | Base cream DAC   | 18165701            | 20             |
| Caelo           | Base cream DAC   | 160102801           | 1              |
| Caelo           | Base cream DAC   | 27310917            | 3              |
| Caelo           | Base cream DAC   | 12062901            | 1              |
| Caelo           | Base cream DAC   | 13000701            | 2              |
| Caelo           | Base cream DAC   | 18071302            | 1              |
| Caelo           | Base cream DAC   | 515/2               | 1              |
| Caelo           | Base cream DAC   | 17225201            | 10             |
| Caelo           | Base cream DAC   | 19270701            | 12             |
| Caelo           | Base cream DAC   | 2000167901          | 1              |
| Caelo           | Base cream DAC   | 20001860001         | 3              |
| Caelo           | Base cream DAC   | 15191102            | 5              |
| Caelo           | Base cream DAC   | 16232401            | 4              |
| Caelo           | Base cream DAC   | 14232101            | 7              |
| Caelo           | Base cream DAC   | 14227701            | 4              |
| Caelo           | Base cream DAC   | 2000692001          | 1              |
| Caelo           | Base cream DAC   | 20001101001         | 4              |
| Caelo           | Base cream DAC   | 20001684001         | 1              |
| Caelo           | Base cream DAC   | 20001857001         | 1              |
| Caelo           | Base cream DAC   | 12159601            | 5              |
| Caelo           | Base cream DAC   | 12240901            | 3              |
| Caelo           | Base cream DAC   | 13125101            | 2              |
| Caelo           | Base cream DAC   | 1319702             | 1              |
| Caelo           | Base cream DAC   | 13198301            | 4              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Base cream DAC   | 15191301             | 2              |
| Caelo           | Base cream DAC   | 13139702             | 10             |
| Caelo           | Base cream DAC   | 5537000              | 2              |
| Caelo           | Base cream DAC   | 18137201-20180830Ma5 | 1              |
| Caelo           | Base cream DAC   | 303058               | 1              |
| Caelo           | Base cream DAC   | 15250001             | 5              |
| Caelo           | Base cream DAC   | 18C19-T20-053962     | 1              |
| Caelo           | Base cream DAC   | 19003502             | 18             |
| Caelo           | Base cream DAC   | 18192501             | 20             |
| Caelo           | Base cream DAC   | 18269401             | 13             |
| Caelo           | Base cream DAC   | 2001863001           | 1              |
| Caelo           | Base cream DAC   | 18L20-T12-062935     | 4              |
| Caelo           | Base cream DAC   | 14178401             | 5              |
| Caelo           | Base cream DAC   | 14232201             | 10             |
| Caelo           | Base cream DAC   | 16158401             | 9              |
| Caelo           | Base cream DAC   | 19000942             | 2              |
| Caelo           | Base cream DAC   | 16152201             | 12             |
| Caelo           | Base cream DAC   | 102(18192701)        | 1              |
| Caelo           | Base cream DAC   | 103(18193201)        | 1              |
| Caelo           | Base cream DAC   | 104(18232501)        | 1              |
| Caelo           | Base cream DAC   | 106(18272301)        | 1              |
| Caelo           | Base cream DAC   | 20003196001          | 5              |
| Caelo           | Base cream DAC   | 20003830001          | 5              |
| Caelo           | Base cream DAC   | 20004314001          | 1              |
| Caelo           | Base cream DAC   | 20001686001          | 2              |
| Caelo           | Base cream DAC   | 305732               | 1              |
| Caelo           | Base cream DAC   | 308795               | 3              |
| Caelo           | Base cream DAC   | 18003937             | 1              |
| Caelo           | Base cream DAC   | 16150101             | 7              |
| Caelo           | Base cream DAC   | 1709501              | 1              |
| Caelo           | Base cream DAC   | 12168301             | 1              |
| Caelo           | Base cream DAC   | 16132001             | 11             |
| Caelo           | Base cream DAC   | 17097001             | 14             |
| Caelo           | Base cream DAC   | 17155701             | 31             |
| Caelo           | Base cream DAC   | 19170601             | 22             |
| Caelo           | Base cream DAC   | 2001677001           | 1              |
| Caelo           | Base cream DAC   | 15000701             | 5              |
| Caelo           | Base cream DAC   | 200000486001         | 1              |
| Caelo           | Base cream DAC   | 13187801             | 11             |
| Caelo           | Base cream DAC   | 108(19052501)        | 1              |
| Caelo           | Base cream DAC   | 18211701             | 23             |
| Caelo           | Base cream DAC   | 18002                | 2              |
| Caelo           | Base cream DAC   | Ch31                 | 1              |
| Caelo           | Base cream DAC   | 279963               | 1              |
| Caelo           | Base cream DAC   | 1604001-01           | 1              |
| Caelo           | Base cream DAC   | 16C24-T05-031490     | 3              |
| Caelo           | Base cream DAC   | 16c24-T05-031490     | 1              |
| Caelo           | Base cream DAC   | 1650201              | 1              |
| Caelo           | Base cream DAC   | 171128BC/17153802    | 1              |
| Caelo           | Base cream DAC   | 15720518             | 1              |
| Caelo           | Base cream DAC   | 19053101             | 8              |
| Caelo           | Base cream DAC   | 19118201             | 3              |
| Caelo           | Base cream DAC   | 19173101             | 5              |
| Caelo           | Base cream DAC   | 19174101             | 3              |
| Caelo           | Base cream DAC   | 19270601             | 2              |
| Caelo           | Base cream DAC   | 2062001intern        | 1              |
| Caelo           | Base cream DAC   | 20000047001          | 2              |
| Caelo           | Base cream DAC   | 7082009              | 1              |
| Caelo           | Base cream DAC   | 200016585001         | 1              |
| Caelo           | Base cream DAC   | 20002877001          | 5              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 21000818001      | 1              |
| Caelo           | Base cream DAC   | 15H04-T08-024987 | 1              |
| Caelo           | Base cream DAC   | 16249801         | 12             |
| Caelo           | Base cream DAC   | 3254             | 1              |
| Caelo           | Base cream DAC   | 3262             | 1              |
| Caelo           | Base cream DAC   | 3268             | 1              |
| Caelo           | Base cream DAC   | 3283             | 1              |
| Caelo           | Base cream DAC   | 3315             | 1              |
| Caelo           | Base cream DAC   | 3329             | 1              |
| Caelo           | Base cream DAC   | 3346             | 1              |
| Caelo           | Base cream DAC   | 3347             | 1              |
| Caelo           | Base cream DAC   | 15357701         | 14             |
| Caelo           | Base cream DAC   | 13115801         | 4              |
| Caelo           | Base cream DAC   | 14036101         | 4              |
| Caelo           | Base cream DAC   | 14053001         | 4              |
| Caelo           | Base cream DAC   | 16238001         | 1              |
| Caelo           | Base cream DAC   | 16241001         | 6              |
| Caelo           | Base cream DAC   | 16260701         | 12             |
| Caelo           | Base cream DAC   | 1620901          | 1              |
| Caelo           | Base cream DAC   | 6671116          | 1              |
| Caelo           | Base cream DAC   | 15272501         | 1              |
| Caelo           | Base cream DAC   | 13007301         | 2              |
| Caelo           | Base cream DAC   | 13310901         | 7              |
| Caelo           | Base cream DAC   | 14228001         | 1              |
| Caelo           | Base cream DAC   | 14290101         | 3              |
| Caelo           | Base cream DAC   | 15083101         | 1              |
| Caelo           | Base cream DAC   | 1542041          | 1              |
| Caelo           | Base cream DAC   | 1605801          | 1              |
| Caelo           | Base cream DAC   | 1607601          | 1              |
| Caelo           | Base cream DAC   | 17265701         | 2              |
| Caelo           | Base cream DAC   | 17265901         | 6              |
| Caelo           | Base cream DAC   | 17000927         | 1              |
| Caelo           | Base cream DAC   | 650118           | 1              |
| Caelo           | Base cream DAC   | 18165101         | 4              |
| Caelo           | Base cream DAC   | 18166801         | 3              |
| Caelo           | Base cream DAC   | 18270701         | 11             |
| Caelo           | Base cream DAC   | 18269901         | 18             |
| Caelo           | Base cream DAC   | 19170201         | 4              |
| Caelo           | Base cream DAC   | 19172101         | 1              |
| Caelo           | Base cream DAC   | 19239201         | 14             |
| Caelo           | Base cream DAC   | 17268301         | 17             |
| Caelo           | Base cream DAC   | 20000687001      | 9              |
| Caelo           | Base cream DAC   | 20001864001      | 1              |
| Caelo           | Base cream DAC   | 19270101         | 12             |
| Caelo           | Base cream DAC   | 2991016          | 1              |
| Caelo           | Base cream DAC   | 16261602         | 4              |
| Caelo           | Base cream DAC   | 19270201         | 8              |
| Caelo           | Base cream DAC   | 13017001         | 2              |
| Caelo           | Base cream DAC   | 5408000          | 1              |
| Caelo           | Base cream DAC   | 18232901         | 17             |
| Caelo           | Base cream DAC   | 5909600          | 1              |
| Caelo           | Base cream DAC   | 161555601        | 1              |
| Caelo           | Base cream DAC   | 6004859005       | 4              |
| Caelo           | Base cream DAC   | 89(17229901)     | 1              |
| Caelo           | Base cream DAC   | 4717A-01309      | 1              |
| Caelo           | Base cream DAC   | 91(17251601)     | 1              |
| Caelo           | Base cream DAC   | 6004859006       | 1              |
| Caelo           | Base cream DAC   | 18003940         | 2              |
| Caelo           | Base cream DAC   | 18232601         | 15             |
| Caelo           | Base cream DAC   | 8004134005       | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 19C19-T18-065187 | 2              |
| Caelo           | Base cream DAC   | 19301801         | 10             |
| Caelo           | Base cream DAC   | 20000036001      | 4              |
| Caelo           | Base cream DAC   | 20000042001      | 3              |
| Caelo           | Base cream DAC   | 21001251001      | 2              |
| Caelo           | Base cream DAC   | 5909300          | 1              |
| Caelo           | Base cream DAC   | 19269901         | 7              |
| Caelo           | Base cream DAC   | 17023701         | 2              |
| Caelo           | Base cream DAC   | 17154901         | 14             |
| Caelo           | Base cream DAC   | 17265101         | 2              |
| Caelo           | Base cream DAC   | 17266901         | 10             |
| Caelo           | Base cream DAC   | 18193301         | 29             |
| Caelo           | Base cream DAC   | 18232401         | 19             |
| Caelo           | Base cream DAC   | 19053301         | 15             |
| Caelo           | Base cream DAC   | 19172301         | 13             |
| Caelo           | Base cream DAC   | 20000058001      | 12             |
| Caelo           | Base cream DAC   | 20000686001      | 8              |
| Caelo           | Base cream DAC   | 200011105001     | 2              |
| Caelo           | Base cream DAC   | 20002065001      | 4              |
| Caelo           | Base cream DAC   | 20004315001      | 4              |
| Caelo           | Base cream DAC   | 21000816001      | 1              |
| Caelo           | Base cream DAC   | 21001257001      | 1              |
| Caelo           | Base cream DAC   | 14035801         | 1              |
| Caelo           | Base cream DAC   | 2x16261801       | 1              |
| Caelo           | Base cream DAC   | 20001678001      | 8              |
| Caelo           | Base cream DAC   | 12262901         | 3              |
| Caelo           | Base cream DAC   | 5289100          | 1              |
| Caelo           | Base cream DAC   | 277111           | 1              |
| Caelo           | Base cream DAC   | 12344001         | 1              |
| Caelo           | Base cream DAC   | 13012401         | 10             |
| Caelo           | Base cream DAC   | 13140001         | 5              |
| Caelo           | Base cream DAC   | 5537500          | 2              |
| Caelo           | Base cream DAC   | 14328001         | 5              |
| Caelo           | Base cream DAC   | 14368101         | 9              |
| Caelo           | Base cream DAC   | 15000901         | 8              |
| Caelo           | Base cream DAC   | 14374501         | 3              |
| Caelo           | Base cream DAC   | 15173401         | 8              |
| Caelo           | Base cream DAC   | 16135101         | 1              |
| Caelo           | Base cream DAC   | 16220201         | 4              |
| Caelo           | Base cream DAC   | 17006501         | 17             |
| Caelo           | Base cream DAC   | 92(17266601)     | 1              |
| Caelo           | Base cream DAC   | 17H25-T07-047741 | 3              |
| Caelo           | Base cream DAC   | 94(17269001)     | 1              |
| Caelo           | Base cream DAC   | 17267702         | 1              |
| Caelo           | Base cream DAC   | 96(18037901)     | 1              |
| Caelo           | Base cream DAC   | 97(18138301)     | 1              |
| Caelo           | Base cream DAC   | 18G13T13058087   | 1              |
| Caelo           | Base cream DAC   | 19174501         | 15             |
| Caelo           | Base cream DAC   | 20001679001      | 7              |
| Caelo           | Base cream DAC   | 14227801         | 9              |
| Caelo           | Base cream DAC   | 18270401         | 6              |
| Caelo           | Base cream DAC   | 20000583001      | 2              |
| Caelo           | Base cream DAC   | 20000585001      | 2              |
| Caelo           | Base cream DAC   | 20001102001      | 1              |
| Caelo           | Base cream DAC   | 20002062001      | 3              |
| Caelo           | Base cream DAC   | 20001013001      | 1              |
| Caelo           | Base cream DAC   | 20001011001      | 1              |
| Caelo           | Base cream DAC   | 20003184001      | 1              |
| Caelo           | Base cream DAC   | 15173601         | 10             |
| Caelo           | Base cream DAC   | 1301023-01       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|------------------|---------------------|----------------|
| Caelo           | Base cream DAC   | 1502016-01          | 1              |
| Caelo           | Base cream DAC   | 16232301            | 11             |
| Caelo           | Base cream DAC   | 17251601            | 16             |
| Caelo           | Base cream DAC   | 18001301            | 13             |
| Caelo           | Base cream DAC   | 19174401            | 24             |
| Caelo           | Base cream DAC   | 1930180120001851001 | 1              |
| Caelo           | Base cream DAC   | 14036001            | 2              |
| Caelo           | Base cream DAC   | 14177901            | 5              |
| Caelo           | Base cream DAC   | 12192001            | 1              |
| Caelo           | Base cream DAC   | 12263401            | 4              |
| Caelo           | Base cream DAC   | 12305301            | 4              |
| Caelo           | Base cream DAC   | 12347101            | 2              |
| Caelo           | Base cream DAC   | 13000801            | 2              |
| Caelo           | Base cream DAC   | 13016901            | 3              |
| Caelo           | Base cream DAC   | 13173501            | 4              |
| Caelo           | Base cream DAC   | 3513I-01309         | 1              |
| Caelo           | Base cream DAC   | 13250001            | 8              |
| Caelo           | Base cream DAC   | 4913E01309          | 1              |
| Caelo           | Base cream DAC   | 13E23-T10-004023    | 1              |
| Caelo           | Base cream DAC   | 1214I01309          | 1              |
| Caelo           | Base cream DAC   | 14053601            | 4              |
| Caelo           | Base cream DAC   | 4121                | 1              |
| Caelo           | Base cream DAC   | 14053101            | 2              |
| Caelo           | Base cream DAC   | 1311009-01          | 1              |
| Caelo           | Base cream DAC   | 13K12-t07-008057    | 1              |
| Caelo           | Base cream DAC   | 13K12-T06-008054    | 2              |
| Caelo           | Base cream DAC   | 14090501            | 1              |
| Caelo           | Base cream DAC   | 412/2               | 1              |
| Caelo           | Base cream DAC   | 1307003-01          | 1              |
| Caelo           | Base cream DAC   | 14222801            | 2              |
| Caelo           | Base cream DAC   | 14D08-011697        | 1              |
| Caelo           | Base cream DAC   | 14327301            | 3              |
| Caelo           | Base cream DAC   | 14325401            | 2              |
| Caelo           | Base cream DAC   | 14303401            | 1              |
| Caelo           | Base cream DAC   | 15064701            | 14             |
| Caelo           | Base cream DAC   | 14325701            | 1              |
| Caelo           | Base cream DAC   | 15191401            | 2              |
| Caelo           | Base cream DAC   | 15241901            | 5              |
| Caelo           | Base cream DAC   | 15390401            | 4              |
| Caelo           | Base cream DAC   | 15390901            | 3              |
| Caelo           | Base cream DAC   | 15391201            | 6              |
| Caelo           | Base cream DAC   | 1140116             | 1              |
| Caelo           | Base cream DAC   | 16/078/B            | 1              |
| Caelo           | Base cream DAC   | 16101401            | 3              |
| Caelo           | Base cream DAC   | 16206801            | 10             |
| Caelo           | Base cream DAC   | 16237801            | 4              |
| Caelo           | Base cream DAC   | 16207101            | 1              |
| Caelo           | Base cream DAC   | 16206902            | 1              |
| Caelo           | Base cream DAC   | 39210516            | 5              |
| Caelo           | Base cream DAC   | 16227001            | 3              |
| Caelo           | Base cream DAC   | 6003682012          | 1              |
| Caelo           | Base cream DAC   | 6003682014          | 1              |
| Caelo           | Base cream DAC   | 306620              | 1              |
| Caelo           | Base cream DAC   | 17103801            | 15             |
| Caelo           | Base cream DAC   | 1110517/16326001    | 1              |
| Caelo           | Base cream DAC   | 171003801           | 1              |
| Caelo           | Base cream DAC   | 1100717/17124001    | 1              |
| Caelo           | Base cream DAC   | 17154801            | 9              |
| Caelo           | Base cream DAC   | 17154401            | 13             |
| Caelo           | Base cream DAC   | 17225901            | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 172294401        | 1              |
| Caelo           | Base cream DAC   | 17229901         | 7              |
| Caelo           | Base cream DAC   | 17264601         | 3              |
| Caelo           | Base cream DAC   | 17267101         | 9              |
| Caelo           | Base cream DAC   | 17267401         | 10             |
| Caelo           | Base cream DAC   | 17267501         | 6              |
| Caelo           | Base cream DAC   | 18016701         | 10             |
| Caelo           | Base cream DAC   | 18085202         | 11             |
| Caelo           | Base cream DAC   | 173522001        | 1              |
| Caelo           | Base cream DAC   | 18138201         | 15             |
| Caelo           | Base cream DAC   | 18166401         | 24             |
| Caelo           | Base cream DAC   | 181666501        | 1              |
| Caelo           | Base cream DAC   | 18137901         | 3              |
| Caelo           | Base cream DAC   | 18192601         | 22             |
| Caelo           | Base cream DAC   | 18192701         | 28             |
| Caelo           | Base cream DAC   | 181933301        | 1              |
| Caelo           | Base cream DAC   | 182325011        | 1              |
| Caelo           | Base cream DAC   | 18269201         | 25             |
| Caelo           | Base cream DAC   | 1827001          | 1              |
| Caelo           | Base cream DAC   | 19075901         | 1              |
| Caelo           | Base cream DAC   | 19117601         | 7              |
| Caelo           | Base cream DAC   | 19153601         | 13             |
| Caelo           | Base cream DAC   | 19173401         | 3              |
| Caelo           | Base cream DAC   | 20000688001      | 4              |
| Caelo           | Base cream DAC   | 12005101         | 3              |
| Caelo           | Base cream DAC   | 12168101         | 2              |
| Caelo           | Base cream DAC   | 12178401         | 3              |
| Caelo           | Base cream DAC   | 12347401         | 5              |
| Caelo           | Base cream DAC   | 13111201         | 4              |
| Caelo           | Base cream DAC   | 13187701         | 2              |
| Caelo           | Base cream DAC   | 13199101         | 19             |
| Caelo           | Base cream DAC   | 13311301         | 11             |
| Caelo           | Base cream DAC   | 13347301         | 7              |
| Caelo           | Base cream DAC   | 2514U1309        | 1              |
| Caelo           | Base cream DAC   | 14144101         | 11             |
| Caelo           | Base cream DAC   | 14327501         | 6              |
| Caelo           | Base cream DAC   | 16F30-T13-034789 | 1              |
| Caelo           | Base cream DAC   | 18137401         | 4              |
| Caelo           | Base cream DAC   | 18005747         | 2              |
| Caelo           | Base cream DAC   | 15250301         | 12             |
| Caelo           | Base cream DAC   | 19172001         | 7              |
| Caelo           | Base cream DAC   | 15040801         | 6              |
| Caelo           | Base cream DAC   | 171003101        | 1              |
| Caelo           | Base cream DAC   | 18001401         | 15             |
| Caelo           | Base cream DAC   | 15306401         | 16             |
| Caelo           | Base cream DAC   | 2020216          | 2              |
| Caelo           | Base cream DAC   | 13385201         | 5              |
| Caelo           | Base cream DAC   | 90(17229601)     | 1              |
| Caelo           | Base cream DAC   | 93(17266901)     | 1              |
| Caelo           | Base cream DAC   | 17268001         | 11             |
| Caelo           | Base cream DAC   | 173450801        | 1              |
| Caelo           | Base cream DAC   | 18055602         | 2              |
| Caelo           | Base cream DAC   | 95(18085202)     | 1              |
| Caelo           | Base cream DAC   | 99(18126301)     | 1              |
| Caelo           | Base cream DAC   | 18167001         | 20             |
| Caelo           | Base cream DAC   | 105(18269301)    | 1              |
| Caelo           | Base cream DAC   | 107(18269601)    | 1              |
| Caelo           | Base cream DAC   | 19051802         | 2              |
| Caelo           | Base cream DAC   | 109(19170501)    | 1              |
| Caelo           | Base cream DAC   | 110(19147901)    | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 2001105001       | 1              |
| Caelo           | Base cream DAC   | 21001250001      | 1              |
| Caelo           | Base cream DAC   | 18269001         | 23             |
| Caelo           | Base cream DAC   | 15041001         | 8              |
| Caelo           | Base cream DAC   | 16005101         | 12             |
| Caelo           | Base cream DAC   | 16205801         | 13             |
| Caelo           | Base cream DAC   | 18G13-T09-058073 | 3              |
| Caelo           | Base cream DAC   | 20003195001      | 4              |
| Caelo           | Base cream DAC   | 12063001         | 2              |
| Caelo           | Base cream DAC   | 1539101          | 1              |
| Caelo           | Base cream DAC   | 17010001         | 6              |
| Caelo           | Base cream DAC   | 17263801         | 8              |
| Caelo           | Base cream DAC   | 18193201         | 18             |
| Caelo           | Base cream DAC   | 310754           | 1              |
| Caelo           | Base cream DAC   | 13312001         | 6              |
| Caelo           | Base cream DAC   | 13082203         | 7              |
| Caelo           | Base cream DAC   | 16261401         | 7              |
| Caelo           | Base cream DAC   | 1401025-01       | 1              |
| Caelo           | Base cream DAC   | 12167901         | 12             |
| Caelo           | Base cream DAC   | 12241001         | 5              |
| Caelo           | Base cream DAC   | 131203801        | 1              |
| Caelo           | Base cream DAC   | 17153501         | 5              |
| Caelo           | Base cream DAC   | 18105701         | 10             |
| Caelo           | Base cream DAC   | 1755001          | 2              |
| Caelo           | Base cream DAC   | 19147801         | 18             |
| Caelo           | Base cream DAC   | 11279301         | 3              |
| Caelo           | Base cream DAC   | 11330101         | 2              |
| Caelo           | Base cream DAC   | 12062601         | 1              |
| Caelo           | Base cream DAC   | 5490100          | 1              |
| Caelo           | Base cream DAC   | 13381201         | 7              |
| Caelo           | Base cream DAC   | 1338091          | 1              |
| Caelo           | Base cream DAC   | 1334701          | 1              |
| Caelo           | Base cream DAC   | 190814A          | 1              |
| Caelo           | Base cream DAC   | 14238501         | 2              |
| Caelo           | Base cream DAC   | 1401024-01       | 1              |
| Caelo           | Base cream DAC   | 15064301         | 7              |
| Caelo           | Base cream DAC   | 15070201         | 11             |
| Caelo           | Base cream DAC   | 1346001          | 2              |
| Caelo           | Base cream DAC   | 5909200          | 2              |
| Caelo           | Base cream DAC   | 15390501         | 3              |
| Caelo           | Base cream DAC   | 1511001-01       | 1              |
| Caelo           | Base cream DAC   | 15419901         | 12             |
| Caelo           | Base cream DAC   | 1510030-01       | 1              |
| Caelo           | Base cream DAC   | 16041001         | 4              |
| Caelo           | Base cream DAC   | 16101301         | 6              |
| Caelo           | Base cream DAC   | 16091901         | 6              |
| Caelo           | Base cream DAC   | 1603037-01       | 1              |
| Caelo           | Base cream DAC   | 16132101         | 15             |
| Caelo           | Base cream DAC   | 16128901         | 6              |
| Caelo           | Base cream DAC   | 16132201         | 2              |
| Caelo           | Base cream DAC   | 1603015-01       | 1              |
| Caelo           | Base cream DAC   | 16155701         | 3              |
| Caelo           | Base cream DAC   | 16155601         | 9              |
| Caelo           | Base cream DAC   | 45380616         | 5              |
| Caelo           | Base cream DAC   | 45340616         | 1              |
| Caelo           | Base cream DAC   | 16240601         | 3              |
| Caelo           | Base cream DAC   | 16261002         | 3              |
| Caelo           | Base cream DAC   | 6002237005       | 1              |
| Caelo           | Base cream DAC   | 16326001         | 18             |
| Caelo           | Base cream DAC   | 16350101         | 9              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Base cream DAC   | 16352701          | 13             |
| Caelo           | Base cream DAC   | 16319401          | 1              |
| Caelo           | Base cream DAC   | 17023501          | 13             |
| Caelo           | Base cream DAC   | 17009902          | 9              |
| Caelo           | Base cream DAC   | 17031501          | 12             |
| Caelo           | Base cream DAC   | 17009801          | 5              |
| Caelo           | Base cream DAC   | 17031801          | 2              |
| Caelo           | Base cream DAC   | 17031701          | 2              |
| Caelo           | Base cream DAC   | 109647            | 1              |
| Caelo           | Base cream DAC   | 17108101          | 5              |
| Caelo           | Base cream DAC   | 17108201          | 7              |
| Caelo           | Base cream DAC   | 17079201          | 1              |
| Caelo           | Base cream DAC   | 17116902          | 9              |
| Caelo           | Base cream DAC   | 170729185         | 1              |
| Caelo           | Base cream DAC   | 17124101          | 9              |
| Caelo           | Base cream DAC   | 17147401          | 8              |
| Caelo           | Base cream DAC   | 17154701          | 10             |
| Caelo           | Base cream DAC   | 170928B/17155101  | 1              |
| Caelo           | Base cream DAC   | 17125201          | 3              |
| Caelo           | Base cream DAC   | 17155601          | 9              |
| Caelo           | Base cream DAC   | 171550001         | 1              |
| Caelo           | Base cream DAC   | 171114BC/17153802 | 1              |
| Caelo           | Base cream DAC   | 3011016           | 1              |
| Caelo           | Base cream DAC   | 17266301          | 7              |
| Caelo           | Base cream DAC   | 17154301          | 1              |
| Caelo           | Base cream DAC   | 17264001          | 2              |
| Caelo           | Base cream DAC   | 39630217          | 2              |
| Caelo           | Base cream DAC   | 17243301          | 2              |
| Caelo           | Base cream DAC   | 17264201          | 1              |
| Caelo           | Base cream DAC   | 17268801          | 10             |
| Caelo           | Base cream DAC   | 17349601          | 1              |
| Caelo           | Base cream DAC   | 17268901          | 5              |
| Caelo           | Base cream DAC   | 17H25-T11-047756  | 2              |
| Caelo           | Base cream DAC   | 18033702          | 5              |
| Caelo           | Base cream DAC   | 29860117          | 2              |
| Caelo           | Base cream DAC   | 18097701          | 2              |
| Caelo           | Base cream DAC   | 18104901          | 3              |
| Caelo           | Base cream DAC   | 18137801          | 28             |
| Caelo           | Base cream DAC   | 180397901         | 1              |
| Caelo           | Base cream DAC   | 18105001          | 9              |
| Caelo           | Base cream DAC   | 273717268701      | 1              |
| Caelo           | Base cream DAC   | 1805201           | 1              |
| Caelo           | Base cream DAC   | 69500118          | 1              |
| Caelo           | Base cream DAC   | 18137702          | 6              |
| Caelo           | Base cream DAC   | 17105701          | 1              |
| Caelo           | Base cream DAC   | 181465601         | 1              |
| Caelo           | Base cream DAC   | 18e23-t15-056314  | 1              |
| Caelo           | Base cream DAC   | 18E23-T15-056314  | 2              |
| Caelo           | Base cream DAC   | 15690518          | 1              |
| Caelo           | Base cream DAC   | 18166201          | 17             |
| Caelo           | Base cream DAC   | 18003945          | 1              |
| Caelo           | Base cream DAC   | 18192801          | 5              |
| Caelo           | Base cream DAC   | 18003934          | 1              |
| Caelo           | Base cream DAC   | 18005746          | 1              |
| Caelo           | Base cream DAC   | 18271201          | 5              |
| Caelo           | Base cream DAC   | 19000938          | 1              |
| Caelo           | Base cream DAC   | 18G13-T10-058076  | 7              |
| Caelo           | Base cream DAC   | 1805241           | 1              |
| Caelo           | Base cream DAC   | 19003601          | 19             |
| Caelo           | Base cream DAC   | 19239001          | 10             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Base cream DAC   | 19420701             | 1              |
| Caelo           | Base cream DAC   | 20000690001          | 13             |
| Caelo           | Base cream DAC   | 1916801              | 1              |
| Caelo           | Base cream DAC   | 20000057001          | 1              |
| Caelo           | Base cream DAC   | 200069001            | 1              |
| Caelo           | Base cream DAC   | 2000054001           | 1              |
| Caelo           | Base cream DAC   | 20001687001          | 7              |
| Caelo           | Base cream DAC   | 20001683001          | 6              |
| Caelo           | Base cream DAC   | 20001856001          | 1              |
| Caelo           | Base cream DAC   | 20001867001          | 1              |
| Caelo           | Base cream DAC   | 20003197001          | 2              |
| Caelo           | Base cream DAC   | 20003194001          | 3              |
| Caelo           | Base cream DAC   | 20003288003          | 3              |
| Caelo           | Base cream DAC   | 2000328803           | 1              |
| Caelo           | Base cream DAC   | 2000333288003        | 1              |
| Caelo           | Base cream DAC   | 20004330001          | 1              |
| Caelo           | Base cream DAC   | 21000815001          | 2              |
| Caelo           | Base cream DAC   | 20004329001          | 1              |
| Caelo           | Base cream DAC   | 15250902             | 22             |
| Caelo           | Base cream DAC   | 15391101             | 4              |
| Caelo           | Base cream DAC   | 16226901             | 2              |
| Caelo           | Base cream DAC   | 16241707             | 1              |
| Caelo           | Base cream DAC   | 16319701             | 3              |
| Caelo           | Base cream DAC   | 76571018             | 2              |
| Caelo           | Base cream DAC   | 1502028-01           | 1              |
| Caelo           | Base cream DAC   | 1700340117003401     | 1              |
| Fagron          | Base cream DAC   | 18166901             | 1              |
| Fagron          | Base cream DAC   | 18270101             | 1              |
| Caelo           | Base cream DAC   | 13082101             | 10             |
| Caelo           | Base cream DAC   | 13H14T05-006551      | 1              |
| Caelo           | Base cream DAC   | 640/3                | 1              |
| Caelo           | Base cream DAC   | 731/4                | 6              |
| Caelo           | Base cream DAC   | 19052301             | 10             |
| Caelo           | Base cream DAC   | 200006860001         | 1              |
| Caelo           | Base cream DAC   | 4113E-01309          | 1              |
| Caelo           | Base cream DAC   | 14151101             | 3              |
| Caelo           | Base cream DAC   | 150671               | 1              |
| Caelo           | Base cream DAC   | 14374201             | 3              |
| Caelo           | Base cream DAC   | 14130715             | 1              |
| Caelo           | Base cream DAC   | 15313601             | 4              |
| Caelo           | Base cream DAC   | 15386801             | 1              |
| Caelo           | Base cream DAC   | 15390301             | 2              |
| Caelo           | Base cream DAC   | 15386901             | 4              |
| Caelo           | Base cream DAC   | 16102101             | 4              |
| Caelo           | Base cream DAC   | 16145901             | 1              |
| Caelo           | Base cream DAC   | 16104001             | 2              |
| Caelo           | Base cream DAC   | 16155801             | 4              |
| Caelo           | Base cream DAC   | 16150301             | 2              |
| Caelo           | Base cream DAC   | 16219401             | 4              |
| Caelo           | Base cream DAC   | 1621941              | 1              |
| Caelo           | Base cream DAC   | 16260901             | 10             |
| Caelo           | Base cream DAC   | 16262101             | 15             |
| Caelo           | Base cream DAC   | 16328901             | 2              |
| Caelo           | Base cream DAC   | 16F-T14-034792       | 1              |
| Caelo           | Base cream DAC   | 16359502             | 1              |
| Caelo           | Base cream DAC   | 29870117             | 1              |
| Caelo           | Base cream DAC   | 29880117             | 1              |
| Caelo           | Base cream DAC   | 17103701-20170704Ma1 | 1              |
| Caelo           | Base cream DAC   | 17155101             | 13             |
| Caelo           | Base cream DAC   | 17224901             | 8              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Base cream DAC   | 17240001     | 10             |
| Caelo           | Base cream DAC   | 72240417     | 1              |
| Caelo           | Base cream DAC   | 17266801     | 19             |
| Caelo           | Base cream DAC   | 17264401     | 5              |
| Caelo           | Base cream DAC   | 17351901     | 7              |
| Caelo           | Base cream DAC   | 17352101     | 15             |
| Caelo           | Base cream DAC   | 18091102     | 10             |
| Caelo           | Base cream DAC   | 18138301     | 26             |
| Caelo           | Base cream DAC   | 18165401     | 24             |
| Caelo           | Base cream DAC   | 18166101     | 26             |
| Caelo           | Base cream DAC   | 1816602      | 1              |
| Caelo           | Base cream DAC   | 7580418      | 1              |
| Caelo           | Base cream DAC   | 18220401     | 29             |
| Caelo           | Base cream DAC   | 18232501     | 22             |
| Caelo           | Base cream DAC   | 18269101     | 15             |
| Caelo           | Base cream DAC   | 18270801     | 3              |
| Caelo           | Base cream DAC   | 3271218      | 1              |
| Caelo           | Base cream DAC   | 8004996001   | 1              |
| Caelo           | Base cream DAC   | 19051801     | 5              |
| Caelo           | Base cream DAC   | 19052701     | 7              |
| Caelo           | Base cream DAC   | 19147901     | 18             |
| Caelo           | Base cream DAC   | 142285       | 1              |
| Caelo           | Base cream DAC   | 19148001     | 24             |
| Caelo           | Base cream DAC   | 19153801     | 5              |
| Caelo           | Base cream DAC   | 19172801     | 2              |
| Caelo           | Base cream DAC   | 19172701     | 12             |
| Caelo           | Base cream DAC   | 19173001     | 4              |
| Caelo           | Base cream DAC   | 20000581001  | 4              |
| Caelo           | Base cream DAC   | 20001858001  | 3              |
| Caelo           | Base cream DAC   | 21000820001  | 1              |
| Caelo           | Base cream DAC   | 1331201      | 1              |
| Caelo           | Base cream DAC   | 14325601     | 1              |
| Caelo           | Base cream DAC   | 16318702     | 2              |
| Caelo           | Base cream DAC   | 13188501     | 12             |
| Caelo           | Base cream DAC   | 13311201     | 11             |
| Caelo           | Base cream DAC   | 1428201      | 1              |
| Caelo           | Base cream DAC   | 125044-1     | 1              |
| Caelo           | Base cream DAC   | 275438       | 2              |
| Caelo           | Base cream DAC   | 13158501     | 8              |
| Caelo           | Base cream DAC   | 1306031-01   | 1              |
| Caelo           | Base cream DAC   | 13385101     | 6              |
| Caelo           | Base cream DAC   | 14053401     | 3              |
| Caelo           | Base cream DAC   | 14090801     | 10             |
| Caelo           | Base cream DAC   | 412/3        | 1              |
| Caelo           | Base cream DAC   | 1408009-01   | 1              |
| Caelo           | Base cream DAC   | 15/138/B     | 1              |
| Caelo           | Base cream DAC   | 1501039-1    | 1              |
| Caelo           | Base cream DAC   | 1501019-01   | 1              |
| Caelo           | Base cream DAC   | 15173201     | 6              |
| Caelo           | Base cream DAC   | 15054501     | 1              |
| Caelo           | Base cream DAC   | 15184201     | 1              |
| Caelo           | Base cream DAC   | 15318801     | 10             |
| Caelo           | Base cream DAC   | 15387001     | 3              |
| Caelo           | Base cream DAC   | 1601027-01   | 1              |
| Caelo           | Base cream DAC   | 16005301     | 8              |
| Caelo           | Base cream DAC   | 16059101     | 3              |
| Caelo           | Base cream DAC   | 16103701     | 5              |
| Caelo           | Base cream DAC   | 299323       | 1              |
| Caelo           | Base cream DAC   | 16135901     | 7              |
| Caelo           | Base cream DAC   | 16220301     | 19             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 16C14-T02-031202 | 1              |
| Caelo           | Base cream DAC   | 303059           | 1              |
| Caelo           | Base cream DAC   | 1623601          | 1              |
| Caelo           | Base cream DAC   | 16220601         | 3              |
| Caelo           | Base cream DAC   | 16242201         | 7              |
| Caelo           | Base cream DAC   | 16260501         | 3              |
| Caelo           | Base cream DAC   | 16326101         | 20             |
| Caelo           | Base cream DAC   | 16329201         | 6              |
| Caelo           | Base cream DAC   | 1096947          | 2              |
| Caelo           | Base cream DAC   | 17006601         | 11             |
| Caelo           | Base cream DAC   | 16350401         | 1              |
| Caelo           | Base cream DAC   | 170060501        | 1              |
| Caelo           | Base cream DAC   | 170031501        | 1              |
| Caelo           | Base cream DAC   | 17100301         | 14             |
| Caelo           | Base cream DAC   | 17103701         | 8              |
| Caelo           | Base cream DAC   | 17097202         | 3              |
| Caelo           | Base cream DAC   | 17121401         | 9              |
| Caelo           | Base cream DAC   | 171000501        | 3              |
| Caelo           | Base cream DAC   | 17090701         | 1              |
| Caelo           | Base cream DAC   | 17136501         | 6              |
| Caelo           | Base cream DAC   | 17136301         | 17             |
| Caelo           | Base cream DAC   | 86480517         | 1              |
| Caelo           | Base cream DAC   | 86580517         | 1              |
| Caelo           | Base cream DAC   | 17155001         | 27             |
| Caelo           | Base cream DAC   | 17153802         | 14             |
| Caelo           | Base cream DAC   | 17225101         | 8              |
| Caelo           | Base cream DAC   | 72260417         | 2              |
| Caelo           | Base cream DAC   | 17C16-T06-042610 | 2              |
| Caelo           | Base cream DAC   | 17E11/T08-044210 | 1              |
| Caelo           | Base cream DAC   | 17232402         | 2              |
| Caelo           | Base cream DAC   | 72270417         | 1              |
| Caelo           | Base cream DAC   | 17229201         | 9              |
| Caelo           | Base cream DAC   | 27290917         | 1              |
| Caelo           | Base cream DAC   | 88660717         | 1              |
| Caelo           | Base cream DAC   | 17229401         | 15             |
| Caelo           | Base cream DAC   | 39600117         | 1              |
| Caelo           | Base cream DAC   | 17225501         | 3              |
| Caelo           | Base cream DAC   | 17240401         | 4              |
| Caelo           | Base cream DAC   | 223711-779       | 1              |
| Caelo           | Base cream DAC   | 17265001         | 3              |
| Caelo           | Base cream DAC   | 17127001         | 1              |
| Caelo           | Base cream DAC   | 17269101         | 3              |
| Caelo           | Base cream DAC   | 18015401         | 6              |
| Caelo           | Base cream DAC   | 17352201         | 16             |
| Caelo           | Base cream DAC   | 93780318         | 1              |
| Caelo           | Base cream DAC   | 18081601         | 3              |
| Caelo           | Base cream DAC   | 18091201         | 1              |
| Caelo           | Base cream DAC   | 8620717          | 1              |
| Caelo           | Base cream DAC   | 18138001         | 31             |
| Caelo           | Base cream DAC   | 18138101         | 25             |
| Caelo           | Base cream DAC   | 17K24-T02-050485 | 1              |
| Caelo           | Base cream DAC   | 18166602         | 30             |
| Caelo           | Base cream DAC   | 18003935         | 3              |
| Caelo           | Base cream DAC   | 1820401          | 1              |
| Caelo           | Base cream DAC   | 18E23-T16-056321 | 2              |
| Caelo           | Base cream DAC   | 8003325011       | 1              |
| Caelo           | Base cream DAC   | 15700518         | 1              |
| Caelo           | Base cream DAC   | 18269701         | 30             |
| Caelo           | Base cream DAC   | 18271101         | 6              |
| Caelo           | Base cream DAC   | 18271301         | 5              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Base cream DAC   | 19003201         | 5              |
| Caelo           | Base cream DAC   | 19052401         | 10             |
| Caelo           | Base cream DAC   | 19051901         | 5              |
| Caelo           | Base cream DAC   | 19053201         | 12             |
| Caelo           | Base cream DAC   | 1905210401       | 1              |
| Caelo           | Base cream DAC   | 19170901         | 14             |
| Caelo           | Base cream DAC   | 19171801         | 9              |
| Caelo           | Base cream DAC   | 1971801          | 1              |
| Caelo           | Base cream DAC   | 60610519         | 1              |
| Caelo           | Base cream DAC   | 19173903         | 1              |
| Caelo           | Base cream DAC   | 19173801         | 5              |
| Caelo           | Base cream DAC   | 19172601         | 18             |
| Caelo           | Base cream DAC   | 19240401         | 25             |
| Caelo           | Base cream DAC   | 1917250119240701 | 1              |
| Caelo           | Base cream DAC   | 20000473         | 1              |
| Caelo           | Base cream DAC   | 4240919          | 1              |
| Caelo           | Base cream DAC   | 92703011         | 1              |
| Caelo           | Base cream DAC   | 19301901         | 6              |
| Caelo           | Base cream DAC   | 20000051001      | 7              |
| Caelo           | Base cream DAC   | 20001009001      | 8              |
| Caelo           | Base cream DAC   | 55740320         | 1              |
| Caelo           | Base cream DAC   | 20001105001      | 9              |
| Caelo           | Base cream DAC   | 20001103001      | 5              |
| Caelo           | Base cream DAC   | 20001104001      | 5              |
| Caelo           | Base cream DAC   | 20001677001      | 6              |
| Caelo           | Base cream DAC   | 20001855001      | 2              |
| Caelo           | Base cream DAC   | 20002068001      | 5              |
| Caelo           | Base cream DAC   | 20001851001      | 4              |
| Caelo           | Base cream DAC   | 20003192001      | 3              |
| Caelo           | Base cream DAC   | 20003189001      | 4              |
| Caelo           | Base cream DAC   | 20003469001      | 3              |
| Caelo           | Base cream DAC   | 20004319001      | 2              |
| Caelo           | Base cream DAC   | 14263401         | 3              |
| Caelo           | Base cream DAC   | 1566801          | 1              |
| Caelo           | Base cream DAC   | 15166801         | 10             |
| Caelo           | Base cream DAC   | 6002237002       | 1              |
| Caelo           | Base cream DAC   | 3001016          | 2              |
| Caelo           | Base cream DAC   | 17153901         | 5              |
| Caelo           | Base cream DAC   | 17C16-T10-042627 | 2              |
| Caelo           | Base cream DAC   | 8004134008       | 1              |
| Caelo           | Base cream DAC   | 20003190001      | 6              |
| Caelo           | Base cream DAC   | 172686015582     | 1              |
| Caelo           | Base cream DAC   | 180977025637     | 1              |
| Caelo           | Base cream DAC   | 181380015686     | 1              |
| Caelo           | Base cream DAC   | 181656015738     | 1              |
| Caelo           | Base cream DAC   | 19239601         | 1              |
| Caelo           | Base cream DAC   | 12192201         | 2              |
| Caelo           | Base cream DAC   | 13016801         | 2              |
| Caelo           | Base cream DAC   | 13022401         | 3              |
| Caelo           | Base cream DAC   | 13120001         | 2              |
| Caelo           | Base cream DAC   | 13173301         | 2              |
| Caelo           | Base cream DAC   | 13188401         | 6              |
| Caelo           | Base cream DAC   | 13188001         | 6              |
| Caelo           | Base cream DAC   | 13188601         | 4              |
| Caelo           | Base cream DAC   | 13198501         | 2              |
| Caelo           | Base cream DAC   | 13249801         | 6              |
| Caelo           | Base cream DAC   | 13188701         | 11             |
| Caelo           | Base cream DAC   | 13198401         | 1              |
| Caelo           | Base cream DAC   | 13252101         | 4              |
| Caelo           | Base cream DAC   | 13311101         | 3              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|------------------|---------------------|----------------|
| Caelo           | Base cream DAC   | 13312201            | 4              |
| Caelo           | Base cream DAC   | 13311301-3462312170 | 1              |
| Caelo           | Base cream DAC   | 13311601            | 4              |
| Caelo           | Base cream DAC   | 13311701            | 5              |
| Caelo           | Base cream DAC   | 13381001            | 15             |
| Caelo           | Base cream DAC   | 13380901            | 11             |
| Caelo           | Base cream DAC   | 14091501            | 9              |
| Caelo           | Base cream DAC   | 14091701            | 10             |
| Caelo           | Base cream DAC   | 14091801            | 7              |
| Caelo           | Base cream DAC   | 1409101             | 1              |
| Caelo           | Base cream DAC   | 14238201            | 2              |
| Caelo           | Base cream DAC   | 15306701            | 9              |
| Caelo           | Base cream DAC   | 14303101            | 5              |
| Caelo           | Base cream DAC   | 292122              | 1              |
| Caelo           | Base cream DAC   | 15190601            | 2              |
| Caelo           | Base cream DAC   | 15420401            | 14             |
| Caelo           | Base cream DAC   | 16102201            | 9              |
| Caelo           | Base cream DAC   | 16145601            | 7              |
| Caelo           | Base cream DAC   | 301157              | 1              |
| Caelo           | Base cream DAC   | 303061              | 1              |
| Caelo           | Base cream DAC   | 1512002-01          | 1              |
| Caelo           | Base cream DAC   | 79/AKD16            | 1              |
| Caelo           | Base cream DAC   | 16261901            | 5              |
| Caelo           | Base cream DAC   | 16261201            | 5              |
| Caelo           | Base cream DAC   | 16262001            | 4              |
| Caelo           | Base cream DAC   | 16238102            | 4              |
| Caelo           | Base cream DAC   | 16350201            | 5              |
| Caelo           | Base cream DAC   | 305714              | 1              |
| Caelo           | Base cream DAC   | 17014501            | 14             |
| Caelo           | Base cream DAC   | 17029001            | 12             |
| Caelo           | Base cream DAC   | 306624              | 2              |
| Caelo           | Base cream DAC   | 6004860001          | 1              |
| Caelo           | Base cream DAC   | 307833              | 1              |
| Caelo           | Base cream DAC   | 17147601            | 7              |
| Caelo           | Base cream DAC   | 17147701            | 3              |
| Caelo           | Base cream DAC   | 17232401            | 2              |
| Caelo           | Base cream DAC   | 308796              | 1              |
| Caelo           | Base cream DAC   | 17154001            | 2              |
| Caelo           | Base cream DAC   | 172230001           | 1              |
| Caelo           | Base cream DAC   | 17251701            | 19             |
| Caelo           | Base cream DAC   | 17266001            | 15             |
| Caelo           | Base cream DAC   | 17265801            | 4              |
| Caelo           | Base cream DAC   | 17267701            | 11             |
| Caelo           | Base cream DAC   | 17349801            | 10             |
| Caelo           | Base cream DAC   | 18037101            | 8              |
| Caelo           | Base cream DAC   | 18037201            | 3              |
| Caelo           | Base cream DAC   | 1768601             | 1              |
| Caelo           | Base cream DAC   | 18105801            | 18             |
| Caelo           | Base cream DAC   | 1813801             | 1              |
| Caelo           | Base cream DAC   | 18165801            | 32             |
| Caelo           | Base cream DAC   | 1865601             | 2              |
| Caelo           | Base cream DAC   | 1823501             | 3              |
| Caelo           | Base cream DAC   | 18193001            | 2              |
| Caelo           | Base cream DAC   | 18270901            | 18             |
| Caelo           | Base cream DAC   | 18272201            | 24             |
| Caelo           | Base cream DAC   | 19003801            | 14             |
| Caelo           | Base cream DAC   | 19116901            | 3              |
| Caelo           | Base cream DAC   | 19252901            | 1              |
| Caelo           | Base cream DAC   | 19117201            | 1              |
| Caelo           | Base cream DAC   | 19118101            | 26             |

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| Supplier             | Substance      | Batch        | Spectra |
|----------------------|----------------|--------------|---------|
| Caelo                | Base cream DAC | 1911801      | 1       |
| Caelo                | Base cream DAC | 19174301     | 16      |
| Caelo                | Base cream DAC | 1917701      | 1       |
| Caelo                | Base cream DAC | 19239401     | 3       |
| Caelo                | Base cream DAC | 19240301     | 12      |
| Caelo                | Base cream DAC | 19239101     | 3       |
| Caelo                | Base cream DAC | 2000058001   | 1       |
| Caelo                | Base cream DAC | 20000582001  | 10      |
| Caelo                | Base cream DAC | 20000584001  | 4       |
| Caelo                | Base cream DAC | 20000562001  | 1       |
| Caelo                | Base cream DAC | 20001106001  | 8       |
| Caelo                | Base cream DAC | 20001854001  | 2       |
| Caelo                | Base cream DAC | 20003182001  | 4       |
| Caelo                | Base cream DAC | 2002866001   | 1       |
| Caelo                | Base cream DAC | 20003477002  | 1       |
| Caelo                | Base cream DAC | 20003472001  | 2       |
| Caelo                | Base cream DAC | AP210720-01  | 1       |
| Caelo                | Base cream DAC | 15250101     | 10      |
| Caelo                | Base cream DAC | 295898       | 1       |
| Caelo                | Base cream DAC | 15306501     | 8       |
| Caelo                | Base cream DAC | 15306101     | 1       |
| Caelo                | Base cream DAC | 75/AKD7      | 1       |
| Caelo                | Base cream DAC | 15387201     | 13      |
| Caelo                | Base cream DAC | AKD6         | 1       |
| Caelo                | Base cream DAC | 305711       | 1       |
| Caelo                | Base cream DAC | 303428       | 1       |
| Caelo                | Base cream DAC | 618E-01309   | 1       |
| Caelo                | Base cream DAC | 1418E-01309  | 1       |
| Caelo                | Base cream DAC | 15164501     | 9       |
| Caelo                | Base cream DAC | 17003201     | 6       |
| Caelo                | Base cream DAC | 1754601      | 1       |
| Caelo                | Base cream DAC | 13115701     | 2       |
| Caelo                | Base cream DAC | 3013M-01309  | 1       |
| Caelo                | Base cream DAC | 14121-01309  | 1       |
| Caelo                | Base cream DAC | 3413E-01309  | 1       |
| Caelo                | Base cream DAC | 16318801     | 1       |
| Caelo                | Base cream DAC | 16055801     | 9       |
| Caelo                | Base cream DAC | 14151401     | 7       |
| Caelo                | Base cream DAC | 16155401     | 5       |
| Caelo                | Base cream DAC | 200003690001 | 1       |
| Caelo                | Base cream DAC | 15272301     | 9       |
| Caelo                | Base cream DAC | 20001861001  | 3       |
| Caeol/ Noweda        | Base cream DAC | 17014401     | 1       |
| Caeol/Noweda         | Base cream DAC | 18001401     | 1       |
| Caeol/Noweda         | Base cream DAC | 19147801     | 1       |
| Caeol/Phönix         | Base cream DAC | 17029201     | 1       |
| Caeol/Phönix         | Base cream DAC | 17240301     | 1       |
| Caeol/Phönix         | Base cream DAC | 17251701     | 1       |
| Caeol/Phönix         | Base cream DAC | 18015101     | 1       |
| Caeolo               | Base cream DAC | 16005301     | 2       |
| Caeolo ,             | Base cream DAC | 17264401     | 1       |
| Caeolo/Krieger       | Base cream DAC | 17240301     | 2       |
| Caeolo/Noweda        | Base cream DAC | 16152101     | 1       |
| Caeolo/Noweda        | Base cream DAC | 17268801     | 1       |
| Caeolo/Noweda        | Base cream DAC | 18001301     | 1       |
| Caeolo/Sanacorp      | Base cream DAC | 18166801     | 1       |
| Caelo                | Base cream DAC | 20002874001  | 7       |
| Caelo                | Base cream DAC | 2001861001   | 1       |
| Caesar & Loretz      | Base cream DAC | 19003201     | 1       |
| Caesar & Loretz GmbH | Base cream DAC | 18138101     | 1       |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH | Base cream DAC   | 18167001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269001     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269101     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269501     | 9              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269401     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270701     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270001     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269601     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 18193001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18232801     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269801     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269701     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269901     | 9              |
| Caesar & Loretz GmbH | Base cream DAC   | 18271001     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270901     | 8              |
| Caesar & Loretz GmbH | Base cream DAC   | 18269301     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18271101     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270501     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18232701     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 18272201     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270401     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 18272301     | 9              |
| Caesar & Loretz GmbH | Base cream DAC   | 18270801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003502     | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 18271301     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003601     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003701     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19000946     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003101     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003901     | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 19020201     | 6              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003801     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19019901     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052501     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052701     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052601     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19003505     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052401     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19075901     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19053101     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117401     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19076001     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117301     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19116901     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117601     | 6              |
| Caesar & Loretz GmbH | Base cream DAC   | 19052901     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19053301     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117501     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117701     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117801     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19118301     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19053001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19118401     | 7              |
| Caesar & Loretz GmbH | Base cream DAC   | 19118101     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19147901     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19148001     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19153601     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19116801     | 7              |
| Caesar & Loretz GmbH | Base cream DAC   | 19170301     | 3              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH | Base cream DAC   | 19170401     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19170201     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19170701     | 8              |
| Caesar & Loretz GmbH | Base cream DAC   | 19117001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172001     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19147801     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19171001     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19170601     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19170501     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172201     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172701     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19153801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173701     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173901     | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172501     | 12             |
| Caesar & Loretz GmbH | Base cream DAC   | 19172401     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 191272501    | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19171801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173001     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173201     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174401     | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174001     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19239201     | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172101     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174301     | 6              |
| Caesar & Loretz GmbH | Base cream DAC   | 19172601     | 9              |
| Caesar & Loretz GmbH | Base cream DAC   | 19239401     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270601     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174501     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173101     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240201     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240401     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174201     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19269701     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19040801     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19173301     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240601     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240701     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19174101     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270701     | 6              |
| Caesar & Loretz GmbH | Base cream DAC   | 19239301     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240501     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19240301     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270501     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19269801     | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 19239001     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270201     | 9              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270101     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270301     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19269501     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19269901     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19270001     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19301801     | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 19301701     | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000036001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000042001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 19301202     | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000047001  | 1              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH | Base cream DAC   | 20000052001  | 5              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000311001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000580001  | 8              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000057001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000694001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000688001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000579001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000691001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000054001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000053001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000051001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000687001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000583001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000582001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 2000004701   | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000584001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000055001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000689001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001007001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001009001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001006001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000099001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001103001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001105001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001008001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001106001  | 4              |
| Caesar & Loretz GmbH | Base cream DAC   | 20000690001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001680001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | AP20101901   | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001101001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001679001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001686001  | 6              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001108001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001852001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001855001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001683001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001860001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001862001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001689002  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001861001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001866001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20001865001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20002873001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20002067001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003182001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20002069001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003186001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003187001  | 3              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003188001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20002870001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003830001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003192001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003195001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003469001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20004315001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003473001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003197001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20003474001  | 2              |
| Caesar & Loretz GmbH | Base cream DAC   | 20002066001  | 1              |
| Caesar & Loretz GmbH | Base cream DAC   | 20004318001  | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Base cream DAC   | 20002877001  | 3              |
| Caesar & Loretz GmbH       | Base cream DAC   | 2000347001   | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 20003471001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 20003194001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 21000816001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 20004313001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 21000817001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 20004314001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 21001243001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 21000814001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 20003288001  | 1              |
| Caesar & Loretz GmbH       | Base cream DAC   | 210001259001 | 1              |
| Caesar & Loretz GmbH / K   | Base cream DAC   | 19003502     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19117701     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 305728       | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19052801     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19147801     | 3              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19117801     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19147901     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19172501     | 2              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19005676     | 1              |
| Caesar & Loretz GmbH / ... | Base cream DAC   | 19002691     | 1              |
| Caesar & Loretz GmbH Hi... | Base cream DAC   | 1308013-01   | 1              |
| Caesar & Loretz GmbH Je... | Base cream DAC   | 20000686001  | 4              |
| Caesar & Loretz GmbH Je... | Base cream DAC   | 20003190001  | 1              |
| Caesar & Loretz GmbH, 4... | Base cream DAC   | 11278901     | 1              |
| Caesar & Loretz GmbH, 4... | Base cream DAC   | 12062601     | 1              |
| Caesar & Loretz GmbH, 4... | Base cream DAC   | 12339101     | 1              |
| Caesar & Loretz GmbH, 4... | Base cream DAC   | 13139702     | 1              |
| Caesar & Loretz GmbH/ A... | Base cream DAC   | 20000581001  | 1              |
| Caesar & Loretz GmbH/ N... | Base cream DAC   | 18269001     | 1              |
| Caesar & Loretz GmbH/AEP   | Base cream DAC   | 19118101     | 2              |
| Caesar & Loretz GmbH/AEP   | Base cream DAC   | 19269901     | 1              |
| Caesar & Loretz GmbH/AEP   | Base cream DAC   | 19270401     | 2              |
| Caesar & Loretz GmbH/AHD   | Base cream DAC   | 19117701     | 1              |
| Caesar & Loretz GmbH/AHD   | Base cream DAC   | 19172701     | 1              |
| Caesar & Loretz GmbH/AHD   | Base cream DAC   | 19240201     | 1              |
| Caesar & Loretz GmbH/AHD   | Base cream DAC   | 20001103001  | 1              |
| Caesar & Loretz GmbH/Al... | Base cream DAC   | 19240901     | 1              |
| Caesar & Loretz GmbH/Fi... | Base cream DAC   | 19270101     | 1              |
| Caesar & Loretz GmbH/Fi... | Base cream DAC   | 19117601     | 1              |
| Caesar & Loretz GmbH/G     | Base cream DAC   | 18269501     | 1              |
| Caesar & Loretz GmbH/Gehe  | Base cream DAC   | 18232501     | 1              |
| Caesar & Loretz GmbH/Gehe  | Base cream DAC   | 18232601     | 3              |
| Caesar & Loretz GmbH/Gehe  | Base cream DAC   | 19020201     | 1              |
| Caesar & Loretz GmbH/Gehe  | Base cream DAC   | 19239301     | 1              |
| Caesar & Loretz GmbH/Gehe  | Base cream DAC   | 20000687001  | 1              |
| Caesar & Loretz GmbH/GEHE  | Base cream DAC   | 20003193001  | 1              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 20000694001  | 2              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 20001107001  | 1              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 20001866001  | 1              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 20002069001  | 1              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 19240301     | 1              |
| Caesar & Loretz GmbH/Ge... | Base cream DAC   | 19270201     | 1              |
| Caesar & Loretz GmbH/GE... | Base cream DAC   | 19174001     | 1              |
| Caesar & Loretz GmbH/Go... | Base cream DAC   | 19147901     | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 19117601     | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 19172501     | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 19239301     | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 19174501     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 19270201     | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 20000053001  | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 20003477002  | 1              |
| Caesar & Loretz GmbH/Je... | Base cream DAC   | 20004322001  | 1              |
| Caesar & Loretz GmbH/Kr... | Base cream DAC   | 19053001     | 1              |
| Caesar & Loretz GmbH/Kr... | Base cream DAC   | 19174001     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19020201     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19003401     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19003901     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19147801     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19172201     | 4              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19172301     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 19118401     | 1              |
| Caesar & Loretz GmbH/No... | Base cream DAC   | 20000584001  | 2              |
| Caesar & Loretz GmbH/phö   | Base cream DAC   | 20000586001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 19051801     | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 19240501     | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 19270301     | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20001680001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20002068001  | 1              |
| Caesar & Loretz GmbH/ph... | Base cream DAC   | 20000058001  | 5              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 19003701     | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 19172901     | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20000054001  | 2              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20000689001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20001103001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20001678001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20001867001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20003187001  | 1              |
| Caesar & Loretz GmbH/Ph... | Base cream DAC   | 20004317001  | 1              |
| Caesar & Loretz GmbH/sa... | Base cream DAC   | 19239201     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 18269401     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 19153601     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 19147901     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 19170701     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 19239001     | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20000582001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20001105001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20002872001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | AP210212-01  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20003189001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 2000383001   | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20003830001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 200004317001 | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20004323001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 20003472001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | AP210622-06  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 21001258001  | 1              |
| Caesar & Loretz GmbH/Sa... | Base cream DAC   | 21001260001  | 1              |
| Caesar & Loretz GmbHFie... | Base cream DAC   | 19053301     | 1              |
| Caesar & Loretz Hilden/... | Base cream DAC   | 20001854001  | 1              |
| Caesar & Loretz Hilden/... | Base cream DAC   | 20002067001  | 1              |
| Caesar & Loretz Hilden/... | Base cream DAC   | 20003469001  | 1              |
| Caesar & Loretz/ Caesar... | Base cream DAC   | 18037201     | 1              |
| Caesar & Loretz/ Noweda    | Base cream DAC   | 18105101     | 1              |
| Caesar & Loretz/AHC        | Base cream DAC   | 38540516     | 3              |
| Caesar & Loretz/Noweda     | Base cream DAC   | 15184401     | 1              |
| Caesar & Loretz/Noweda     | Base cream DAC   | 17154001     | 1              |
| Caesar /phönix             | Base cream DAC   | 13139901     | 2              |
| Caesar und Loretz GmbH     | Base cream DAC   | 17155001     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar&Loretz              | Base cream DAC   | 16005201     | 1              |
| Caesar&Loretz              | Base cream DAC   | 16219401     | 1              |
| Caesar&Loretz              | Base cream DAC   | 16350501     | 1              |
| Caesar&Loretz              | Base cream DAC   | 17031901     | 1              |
| Caesar&Loretz GmbH         | Base cream DAC   | 16241601     | 1              |
| Caesar&Loretz GmbH         | Base cream DAC   | 16329201     | 3              |
| Caesar&Loretz GmbH         | Base cream DAC   | 18192501     | 1              |
| Caesar&Loretz GmbH 7Anzag  | Base cream DAC   | 39630217     | 1              |
| Caesar&Loretz GmbH/Gehe    | Base cream DAC   | 19116901     | 1              |
| Caesar&Loretz, Anzag       | Base cream DAC   | 15250101     | 1              |
| Caesar&Loretz/Caesar&Lo... | Base cream DAC   | 15272601     | 1              |
| Caeser und Loretz GmbH     | Base cream DAC   | 19117701     | 2              |
| Caeser und Loretz GmbH     | Base cream DAC   | 19153601     | 1              |
| Calea KEHR                 | Base cream DAC   | 19174001     | 1              |
| Caleo/ Ebert               | Base cream DAC   | 18126301     | 1              |
| Caleo/ Gehe                | Base cream DAC   | 18036501     | 1              |
| Caleo/ Noweda              | Base cream DAC   | 16261201     | 2              |
| Caleo/ Noweda              | Base cream DAC   | 18192501     | 1              |
| Caleo/ Noweda              | Base cream DAC   | 1866401      | 1              |
| Caleo/Fiebig               | Base cream DAC   | 16242201     | 1              |
| Caleo/noweda               | Base cream DAC   | 17349801     | 1              |
| calo                       | Base cream DAC   | 13012401     | 1              |
| Calo                       | Base cream DAC   | 15306701     | 1              |
| Carelo/Noweda              | Base cream DAC   | 18165801     | 1              |
| Carlo                      | Base cream DAC   | 20001677001  | 1              |
| cealo                      | Base cream DAC   | 19051801     | 1              |
| Cealo                      | Base cream DAC   | 12249401     | 1              |
| Cealo                      | Base cream DAC   | 142990001    | 1              |
| Cealo                      | Base cream DAC   | 15184301     | 1              |
| Cealo                      | Base cream DAC   | 16055801     | 1              |
| Cealo                      | Base cream DAC   | 17264601     | 1              |
| Cealo                      | Base cream DAC   | 18005240     | 2              |
| Cealo / Noweda             | Base cream DAC   | 14092001     | 1              |
| Cealo/ Noweda              | Base cream DAC   | 17000921     | 1              |
| Cealo/AHD                  | Base cream DAC   | 6003682014   | 1              |
| Cealo/AHD                  | Base cream DAC   | 6004859003   | 2              |
| Cealo/Anzag                | Base cream DAC   | 19240701     | 1              |
| Cealo/Gehe                 | Base cream DAC   | 12175101     | 1              |
| Cealo/Gehe                 | Base cream DAC   | 18138401     | 1              |
| Cealo/Gehe                 | Base cream DAC   | 18165301     | 2              |
| Cealo/GEHE                 | Base cream DAC   | 20000058001  | 1              |
| Cealo/Phönix               | Base cream DAC   | 18165301     | 1              |
| Cealo/Sanacorp             | Base cream DAC   | 16261501     | 1              |
| Cealo/Sanacorp             | Base cream DAC   | 171338001    | 1              |
| Cealo/Sanacorp             | Base cream DAC   | 19053001     | 4              |
| celo                       | Base cream DAC   | 16329201     | 1              |
| Celo                       | Base cream DAC   | 16005101     | 1              |
| Celo                       | Base cream DAC   | 1923901      | 1              |
| celo/phönix                | Base cream DAC   | 13377901     | 3              |
| Euro OTC                   | Base cream DAC   | 1209039-01   | 1              |
| chaelo/gehe                | Base cream DAC   | 17251701     | 1              |
| D'Oroderm                  | Base cream DAC   | 1346001      | 1              |
| DORODERM GmbH & Co.KG      | Base cream DAC   | 1346001      | 2              |
| DAC 2011                   | Base cream DAC   | 12061901     | 1              |
| DAC 2011                   | Base cream DAC   | 13188401     | 1              |
| Defektur                   | Base cream DAC   | 16325901     | 2              |
| Delta                      | Base cream DAC   | 17154401     | 2              |
| Delta                      | Base cream DAC   | 18037101     | 2              |
| Delta                      | Base cream DAC   | 18105402     | 7              |
| Dermasence                 | Base cream DAC   | 260820       | 1              |

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| Supplier                   | Substance      | Batch                | Spectra |
|----------------------------|----------------|----------------------|---------|
| Direkt/Phönix              | Base cream DAC | 50211015             | 4       |
| D'oroderm                  | Base cream DAC | 1346001              | 4       |
| D'ORODERM                  | Base cream DAC | 1346001              | 1       |
| doroderm GmbH              | Base cream DAC | 1202001              | 2       |
| Doroderm GmbH/ Noweda      | Base cream DAC | 1202001              | 4       |
| D'ORODERM/Noweda           | Base cream DAC | 1346001              | 2       |
| Dr. August Wolff/Phönix    | Base cream DAC | 18272301             | 1       |
| Dr. Wolff                  | Base cream DAC | 14325601             | 1       |
| E Plus                     | Base cream DAC | 18000961             | 3       |
| E Plus                     | Base cream DAC | 18005744             | 1       |
| Ebert                      | Base cream DAC | 14053601             | 1       |
| Ebert                      | Base cream DAC | 14090401             | 1       |
| Ebert & Jacobi             | Base cream DAC | 6862441              | 1       |
| Ebert & Jacobi             | Base cream DAC | 19000951             | 1       |
| Ebert und Jacobi           | Base cream DAC | 18105402             | 1       |
| Caelo                      | Base cream DAC | 16135701             | 6       |
| eigene Herstellung         | Base cream DAC | 16261801             | 1       |
| Eimer/ Noweda              | Base cream DAC | 72240417             | 1       |
| Eimerbacher GmbH,Gesche... | Base cream DAC | 61361217-20180830Ma6 | 1       |
| Eimermacher                | Base cream DAC | 2770713              | 1       |
| Eimermacher                | Base cream DAC | 28310913             | 2       |
| Eimermacher                | Base cream DAC | 36140913             | 1       |
| Eimermacher                | Base cream DAC | 97870214             | 2       |
| Eimermacher                | Base cream DAC | 12170214             | 5       |
| Eimermacher                | Base cream DAC | 23090414             | 1       |
| Eimermacher                | Base cream DAC | 8811114              | 1       |
| Eimermacher                | Base cream DAC | 57090315             | 2       |
| Eimermacher                | Base cream DAC | 57080315             | 1       |
| Eimermacher                | Base cream DAC | 502110015            | 1       |
| Eimermacher                | Base cream DAC | 50211015             | 1       |
| Eimermacher                | Base cream DAC | 50221015             | 1       |
| Eimermacher                | Base cream DAC | 39590217             | 5       |
| Eimermacher                | Base cream DAC | 86440517             | 1       |
| Eimermacher                | Base cream DAC | 72240417             | 11      |
| Eimermacher                | Base cream DAC | 52830317             | 1       |
| Eimermacher                | Base cream DAC | 14130817             | 1       |
| Eimermacher                | Base cream DAC | 79000916             | 4       |
| Eimermacher                | Base cream DAC | 61371217             | 4       |
| Eimermacher                | Base cream DAC | 14150817             | 5       |
| Eimermacher                | Base cream DAC | 61381217             | 1       |
| Eimermacher                | Base cream DAC | 62550918             | 1       |
| Eimermacher                | Base cream DAC | 76561018             | 1       |
| Eimermacher                | Base cream DAC | 3301218              | 1       |
| Eimermacher                | Base cream DAC | 23780219             | 1       |
| Eimermacher                | Base cream DAC | 13510119             | 6       |
| Eimermacher                | Base cream DAC | 36500319             | 2       |
| Eimermacher                | Base cream DAC | 87231118             | 1       |
| Eimermacher                | Base cream DAC | 47870419             | 1       |
| Eimermacher                | Base cream DAC | 60640519             | 1       |
| Eimermacher                | Base cream DAC | 47880419             | 3       |
| Eimermacher                | Base cream DAC | 70570420             | 3       |
| Eimermacher                | Base cream DAC | 74420221             | 1       |
| EIMERMACHER                | Base cream DAC | 71940619             | 1       |
| Eimermacher / Sanacorp     | Base cream DAC | 86440517             | 1       |
| Eimermacher / Sonnenapo... | Base cream DAC | 62550918             | 1       |
| Eimermacher / Sonnenapo... | Base cream DAC | 40150120             | 1       |
| Eimermacher Direktbezug    | Base cream DAC | 57080315             | 1       |
| Eimermacher Ensbona        | Base cream DAC | 14150817             | 1       |
| Eimermacher Ensbona        | Base cream DAC | 61361217             | 2       |
| Eimermacher/ 4             | Base cream DAC | 570903158            | 1       |

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| <b>Supplier</b>              | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|------------------------------|------------------|----------------------|----------------|
| Eimermacher/ Eimermacher     | Base cream DAC   | 80340218             | 1              |
| Eimermacher/ Noweda          | Base cream DAC   | 71950619             | 1              |
| Eimermacher/ Phoenix         | Base cream DAC   | 80400719             | 3              |
| Eimermacher/Alliance         | Base cream DAC   | 63340317             | 2              |
| Eimermacher/BC               | Base cream DAC   | 57090315             | 1              |
| Eimermacher/BC               | Base cream DAC   | 14120715             | 1              |
| Eimermacher/BC               | Base cream DAC   | 39590217             | 1              |
| Eimermacher/BC               | Base cream DAC   | 8630717              | 2              |
| Eimermacher/Brunnencenter    | Base cream DAC   | 1200216              | 1              |
| Eimermacher/Brunnencenter    | Base cream DAC   | 6671116              | 2              |
| Eimermacher/Brunnencenter    | Base cream DAC   | 39590217             | 1              |
| Eimermacher/Direkt           | Base cream DAC   | 61361217             | 5              |
| Eimermacher/Direkt           | Base cream DAC   | 10067198             | 1              |
| Eimermacher/Direkt           | Base cream DAC   | 15730518             | 8              |
| Eimermacher/Eimermacher      | Base cream DAC   | 14130715             | 5              |
| Eimermacher/Eimermacher      | Base cream DAC   | 60630519             | 1              |
| Eimermacher/Ensbona          | Base cream DAC   | 14130715             | 1              |
| Eimermacher/Ensbona          | Base cream DAC   | 29230416             | 2              |
| Eimermacher/Ensbona          | Base cream DAC   | 63340317             | 1              |
| Eimermacher/Gehe             | Base cream DAC   | 87231118             | 1              |
| Eimermacher/Gehe             | Base cream DAC   | 71950619             | 2              |
| Eimermacher/Gehe             | Base cream DAC   | 40140120             | 2              |
| Eimermacher/Noweda           | Base cream DAC   | 14120715             | 2              |
| Eimermacher/Noweda           | Base cream DAC   | 39590217             | 1              |
| Eimermacher/Noweda           | Base cream DAC   | 8630717              | 2              |
| Eimermacher/Noweda           | Base cream DAC   | 70570420             | 1              |
| Eimermacher/Phoenix          | Base cream DAC   | 80340218             | 1              |
| Eimermacher/Phoenix          | Base cream DAC   | 95980718             | 1              |
| Eimermacher/Phoenix          | Base cream DAC   | 60630519             | 1              |
| Eimermacher/Phoenix          | Base cream DAC   | 71940619             | 1              |
| Eimermacher/Phoenix          | Base cream DAC   | 80400719             | 2              |
| Eimermacher/Phönix           | Base cream DAC   | 15730518             | 1              |
| Eimermacher/Sanacorp         | Base cream DAC   | 14120715             | 1              |
| EimermacherGmbH-Geschen. . . | Base cream DAC   | 14150817-20180404Ma9 | 1              |
| Eimmermacher                 | Base cream DAC   | 6681116              | 1              |
| Caelo                        | Base cream DAC   | 69510118             | 1              |
| Euro OTC                     | Base cream DAC   | 15700518             | 6              |
| Engel apotheke               | Base cream DAC   | 2119Q-07011          | 1              |
| Engel-Apotheke               | Base cream DAC   | 2119I-07011          | 1              |
| Engel-Apotheke               | Base cream DAC   | 2219Q-07011          | 1              |
| Ensboa                       | Base cream DAC   | 64570816             | 2              |
| Ensboa                       | Base cream DAC   | 6681116              | 1              |
| Ensboa                       | Base cream DAC   | 2020216              | 1              |
| Ensboa                       | Base cream DAC   | 63340317             | 4              |
| ensbona                      | Base cream DAC   | 74000513             | 1              |
| ensbona                      | Base cream DAC   | 79000916             | 1              |
| Ensbona                      | Base cream DAC   | 98480713             | 1              |
| Ensbona                      | Base cream DAC   | 57090315             | 4              |
| Ensbona                      | Base cream DAC   | 14120715             | 2              |
| Ensbona                      | Base cream DAC   | 1200216              | 3              |
| Ensbona                      | Base cream DAC   | 14130715             | 1              |
| Ensbona                      | Base cream DAC   | 29220416             | 1              |
| Ensbona                      | Base cream DAC   | 55350716             | 15             |
| Ensbona                      | Base cream DAC   | 79000916             | 8              |
| Ensbona                      | Base cream DAC   | 3371116              | 1              |
| Ensbona                      | Base cream DAC   | 6671116              | 3              |
| Ensbona                      | Base cream DAC   | 39590217             | 2              |
| Ensbona                      | Base cream DAC   | 52830317             | 9              |
| Ensbona                      | Base cream DAC   | 63350317             | 4              |
| Ensbona                      | Base cream DAC   | 86440517             | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Ensbona                    | Base cream DAC   | 72250417     | 2              |
| Ensbona                    | Base cream DAC   | 1111         | 1              |
| Ensbona                    | Base cream DAC   | 14110817     | 6              |
| Ensbona                    | Base cream DAC   | 61381217     | 2              |
| Ensbona                    | Base cream DAC   | 80340218     | 4              |
| Ensbona                    | Base cream DAC   | 14130817     | 1              |
| Ensbona                    | Base cream DAC   | 7580418      | 2              |
| Ensbona                    | Base cream DAC   | 15730518     | 3              |
| Ensbona                    | Base cream DAC   | 95980718     | 3              |
| Ensbona                    | Base cream DAC   | 93780318     | 1              |
| Ensbona                    | Base cream DAC   | 87231118     | 6              |
| Ensbona                    | Base cream DAC   | 76561018     | 2              |
| Ensbona                    | Base cream DAC   | 62550918     | 1              |
| Ensbona                    | Base cream DAC   | 13520119     | 3              |
| Ensbona                    | Base cream DAC   | 3301218      | 1              |
| Ensbona                    | Base cream DAC   | 36510319     | 5              |
| Ensbona                    | Base cream DAC   | 47880419     | 3              |
| Ensbona                    | Base cream DAC   | 13510119     | 1              |
| Ensbona                    | Base cream DAC   | 23780219     | 1              |
| Ensbona                    | Base cream DAC   | 47870419     | 1              |
| Ensbona                    | Base cream DAC   | 71940619     | 2              |
| Ensbona                    | Base cream DAC   | 71950619     | 1              |
| Ensbona                    | Base cream DAC   | 4271019      | 1              |
| Ensbona                    | Base cream DAC   | 8811114      | 1              |
| Ensbona                    | Base cream DAC   | 2020216      | 2              |
| ENSBONA                    | Base cream DAC   | 22251214     | 1              |
| ENSBONA                    | Base cream DAC   | 2020216      | 1              |
| ENSBONA                    | Base cream DAC   | 63350317     | 1              |
| ENSBONA                    | Base cream DAC   | 29580618     | 1              |
| Ensbona /                  | Base cream DAC   | 15730518     | 1              |
| Ensbona /                  | Base cream DAC   | 23790219     | 1              |
| Ensbona /                  | Base cream DAC   | 47880419     | 1              |
| Ensbona /                  | Base cream DAC   | 80400719     | 1              |
| Ensbona / Ferd. Eimerma... | Base cream DAC   | 55350716     | 5              |
| Ensbona / Ferdinand Eim... | Base cream DAC   | 61361217     | 1              |
| Ensbona / Ferdinand Eim... | Base cream DAC   | 3311218      | 3              |
| Ensbona / Ferdinand Eim... | Base cream DAC   | 4271019      | 2              |
| Ensbona / Jenne            | Base cream DAC   | 13161119     | 1              |
| Ensbona / Phönix           | Base cream DAC   | 47880419     | 3              |
| Ensbona / Phönix           | Base cream DAC   | 80400719     | 2              |
| Ensbona / Phönix           | Base cream DAC   | 804000719    | 1              |
| Ensbona/ Eimermacher       | Base cream DAC   | 70570420     | 1              |
| Ensbona/ Noweda            | Base cream DAC   | 39590217     | 1              |
| Ensbona/ Sanacorp          | Base cream DAC   | 1200216      | 3              |
| Ensbona/ Sanacorp          | Base cream DAC   | 50211015     | 1              |
| Ensbona/4                  | Base cream DAC   | 72240417     | 1              |
| Ensbona/Alliance           | Base cream DAC   | 8630717      | 1              |
| Ensbona/Anzag              | Base cream DAC   | 44960616     | 1              |
| Ensbona/Anzag              | Base cream DAC   | 80400719     | 3              |
| Ensbona/Anzag              | Base cream DAC   | 13161119     | 2              |
| Ensbona/Anzag              | Base cream DAC   | 50211015     | 4              |
| Ensbona/E&J                | Base cream DAC   | 39590217     | 1              |
| Ensbona/E&J                | Base cream DAC   | 72240417     | 3              |
| Ensbona/E&J                | Base cream DAC   | 14150817     | 2              |
| Ensbona/E&J                | Base cream DAC   | 15730518     | 1              |
| Ensbona/E&J                | Base cream DAC   | 95980718     | 1              |
| ensbona/Eimermacher        | Base cream DAC   | 70570420     | 3              |
| Ensbona/Eimermacher        | Base cream DAC   | 14130715     | 1              |
| Ensbona/Eimermacher        | Base cream DAC   | 14120715     | 1              |
| Ensbona/Eimermacher        | Base cream DAC   | 29230416     | 1              |

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| <b>Supplier</b>     | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------|------------------|--------------|----------------|
| Ensbona/Eimermacher | Base cream DAC   | 29220416     | 1              |
| Ensbona/Eimermacher | Base cream DAC   | 45150616     | 1              |
| Ensbona/Eimermacher | Base cream DAC   | 61361217     | 1              |
| Ensbona/Eimermacher | Base cream DAC   | 14110817     | 1              |
| Ensbona/Eimermacher | Base cream DAC   | 71940619     | 1              |
| Ensbona/Eimermacher | Base cream DAC   | 40150120     | 1              |
| ENSBONA/Eimermacher | Base cream DAC   | 79000916     | 2              |
| Ensbona/gehe        | Base cream DAC   | 33012178     | 1              |
| Ensbona/gehe        | Base cream DAC   | 35600319     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 39590217     | 3              |
| Ensbona/Gehe        | Base cream DAC   | 44960616     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 63350317     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 633350317    | 1              |
| Ensbona/Gehe        | Base cream DAC   | 14150817     | 2              |
| Ensbona/Gehe        | Base cream DAC   | 95980718     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 87231118     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 80400719     | 1              |
| Ensbona/Gehe        | Base cream DAC   | 80600520     | 1              |
| Ensbona/Krieger     | Base cream DAC   | 36510319     | 2              |
| Ensbona/Krieger     | Base cream DAC   | 60630519     | 1              |
| Ensbona/Nordwalde   | Base cream DAC   | 63350317     | 1              |
| Ensbona/Nordwalde   | Base cream DAC   | 47870419     | 3              |
| ensbona/Noweda      | Base cream DAC   | 14120715     | 1              |
| Ensbona/Noweda      | Base cream DAC   | 44960616     | 1              |
| Ensbona/Noweda      | Base cream DAC   | 14150817     | 1              |
| Ensbona/Noweda      | Base cream DAC   | 36510319     | 1              |
| Ensbona/Noweda      | Base cream DAC   | 71940619     | 2              |
| Ensbona/Noweda      | Base cream DAC   | 71950619     | 1              |
| Ensbona/phönix      | Base cream DAC   | 50211015     | 1              |
| Ensbona/phönix      | Base cream DAC   | 72240417     | 1              |
| Ensbona/Phönix      | Base cream DAC   | 36510319     | 2              |
| Ensbona/Phönix      | Base cream DAC   | 60630519     | 1              |
| Ensbona/Phönix      | Base cream DAC   | 4271019      | 3              |
| Ensbona/Phönix      | Base cream DAC   | 70570420     | 1              |
| Ensbona/Sanacorp    | Base cream DAC   | 22251214     | 2              |
| Ensbona/Sanacorp    | Base cream DAC   | 57090315     | 3              |
| Ensbona/Sanacorp    | Base cream DAC   | 29220416     | 1              |
| Ensbona/Sanacorp    | Base cream DAC   | 39590217     | 1              |
| Ensbona/Sanacorp    | Base cream DAC   | 63350317     | 1              |
| Ensbona/Sanacorp    | Base cream DAC   | 72240417     | 2              |
| Ensbona/Sanacorp    | Base cream DAC   | 87231118     | 1              |
| Ensbona/Sanacorp    | Base cream DAC   | 71940619     | 3              |
| EnsbonaNoweda       | Base cream DAC   | 72240417     | 1              |
| Enzbona/Eimermacher | Base cream DAC   | 14120715     | 2              |
| Enzbona/Eimermacher | Base cream DAC   | 29220416     | 1              |
| E-plus              | Base cream DAC   | 308799       | 1              |
| Esbona/Alliance     | Base cream DAC   | 10067198     | 1              |
| Euro OTC            | Base cream DAC   | 450380616    | 1              |
| Eur                 | Base cream DAC   | 1407022-01   | 1              |
| EuRh                | Base cream DAC   | 19001        | 2              |
| Eurho               | Base cream DAC   | 38540516     | 1              |
| Eurho               | Base cream DAC   | 93750318     | 3              |
| EuRho               | Base cream DAC   | 1108002-01   | 1              |
| EuRho               | Base cream DAC   | 1111050-01   | 1              |
| EuRho               | Base cream DAC   | 1111048-01   | 1              |
| EuRho               | Base cream DAC   | 1210011-01   | 2              |
| EuRho               | Base cream DAC   | 1204022-01   | 1              |
| EuRho               | Base cream DAC   | 1209037-01   | 1              |
| EuRho               | Base cream DAC   | 1302009-01   | 1              |
| EuRho               | Base cream DAC   | 130400501    | 1              |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| EuRho                      | Base cream DAC | 1302036-01       | 1       |
| EuRho                      | Base cream DAC | 1301023-01       | 1       |
| EuRho                      | Base cream DAC | 13K29-B32-288245 | 1       |
| EuRho                      | Base cream DAC | 1401026-01       | 2       |
| EuRho                      | Base cream DAC | 1502008-01       | 1       |
| EuRho                      | Base cream DAC | 1502029-01       | 2       |
| EuRho                      | Base cream DAC | 1501050-01       | 1       |
| EuRho                      | Base cream DAC | 1511002-01       | 3       |
| EuRho                      | Base cream DAC | 1606028-01       | 1       |
| EuRho                      | Base cream DAC | 1603028-01       | 1       |
| EuRho                      | Base cream DAC | 44950616         | 1       |
| EuRho                      | Base cream DAC | 72440816         | 1       |
| EuRho                      | Base cream DAC | 45340616         | 1       |
| EuRho                      | Base cream DAC | 2981016          | 2       |
| EuRho                      | Base cream DAC | 55360616         | 1       |
| EuRho                      | Base cream DAC | 39570117         | 1       |
| EuRho                      | Base cream DAC | 3001016          | 1       |
| EuRho                      | Base cream DAC | 27320917         | 1       |
| EuRho                      | Base cream DAC | 3570117          | 1       |
| EuRho                      | Base cream DAC | 14140817         | 1       |
| EuRho                      | Base cream DAC | 86450517         | 1       |
| EuRho                      | Base cream DAC | 51580217         | 1       |
| EuRho                      | Base cream DAC | 27350917         | 1       |
| EuRho                      | Base cream DAC | 80300218         | 1       |
| EuRho                      | Base cream DAC | 1508001-01       | 1       |
| EuRho / 2                  | Base cream DAC | 80390719         | 1       |
| EuRho / 2                  | Base cream DAC | 40170120         | 3       |
| EuRho / GEHE               | Base cream DAC | 80390719         | 1       |
| EuRho / Phoenix            | Base cream DAC | 1506046-01       | 1       |
| EuRho / Phoenix            | Base cream DAC | 55360616         | 1       |
| EuRho / Phoenix            | Base cream DAC | 86470517         | 1       |
| EuRho / Phoenix            | Base cream DAC | 14140817         | 1       |
| EuRho / Phoenix            | Base cream DAC | 27350917         | 1       |
| EuRho / Phoenix            | Base cream DAC | 29550618         | 1       |
| EuRho / Phoenix            | Base cream DAC | 15720518         | 1       |
| EuRho / Phoenix            | Base cream DAC | 76571018         | 1       |
| EuRho Anzag ek:33,16 03... | Base cream DAC | 1111027-01       | 1       |
| Euro OTC                   | Base cream DAC | 1209037-01       | 4       |
| Euro OTC                   | Base cream DAC | 1312038-01       | 6       |
| EuRho/ AHD                 | Base cream DAC | 18081702         | 1       |
| EuRho/ Ebert               | Base cream DAC | 1401026-01       | 1       |
| EuRho/ Noweda 29.10.18     | Base cream DAC | 45940718         | 2       |
| EuRho/Anzag                | Base cream DAC | 98(18081602)     | 1       |
| Eurho/Noweda               | Base cream DAC | 1508001-01       | 1       |
| EuRho/Noweda               | Base cream DAC | 51580217         | 2       |
| EuRho/Noweda               | Base cream DAC | 29550618         | 1       |
| EuRho/Noweda               | Base cream DAC | 19420920         | 3       |
| EuRho/Noweda               | Base cream DAC | 19400920         | 1       |
| EuRho/Noweda               | Base cream DAC | 35401020         | 1       |
| Eurho/Phoenix              | Base cream DAC | 13C05-T03-001756 | 1       |
| EuRho/Phoenix              | Base cream DAC | 1311031-01       | 1       |
| EuRho/Phoenix              | Base cream DAC | 1346019          | 1       |
| EuRho/Phönix               | Base cream DAC | 1312002-01       | 1       |
| EuRho/Phönix               | Base cream DAC | 1312037-01       | 1       |
| EuRho/Phönix               | Base cream DAC | 1502017-01       | 1       |
| EuRhoNoweda 11.3..17       | Base cream DAC | 91350916         | 2       |
| EuRhoNoweda28.06.2017      | Base cream DAC | 39620117         | 2       |
| Eurho-Pharma               | Base cream DAC | 45940718         | 1       |
| Euro                       | Base cream DAC | 1501040-01       | 2       |
| Euro                       | Base cream DAC | 13470119         | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Euro OTC        | Base cream DAC   | 160302801    | 1              |
| Euro OCT        | Base cream DAC   | 1210055-01   | 1              |
| Euro OCT        | Base cream DAC   | 1307047-01   | 1              |
| Euro OTC        | Base cream DAC   | 18166602     | 1              |
| Euro OTC        | Base cream DAC   | 1520202801   | 1              |
| Euro OTC        | Base cream DAC   | 1502016-01   | 4              |
| Euro OTC        | Base cream DAC   | 1501053-01   | 2              |
| Euro OTC        | Base cream DAC   | 1604023-01   | 1              |
| Euro OTC        | Base cream DAC   | 51570217     | 9              |
| Euro OTC        | Base cream DAC   | 6951018      | 1              |
| Euro OTC        | Base cream DAC   | 7578418      | 1              |
| Euro OTC        | Base cream DAC   | 1111028-01   | 1              |
| Euro OTC        | Base cream DAC   | 1111051-01   | 2              |
| Euro OTC        | Base cream DAC   | 1204025-01   | 2              |
| Euro OTC        | Base cream DAC   | 1209038-01   | 2              |
| Euro OTC        | Base cream DAC   | 1210044-01   | 4              |
| Euro OTC        | Base cream DAC   | 1212025-01   | 1              |
| Euro OTC        | Base cream DAC   | 1212028-01   | 2              |
| Euro OTC        | Base cream DAC   | 1301040-01   | 1              |
| Euro OTC        | Base cream DAC   | 1301023-01   | 8              |
| Euro OTC        | Base cream DAC   | 121202801    | 1              |
| Euro OTC        | Base cream DAC   | 1210054-01   | 1              |
| Euro OTC        | Base cream DAC   | 1301042-01   | 1              |
| Euro OTC        | Base cream DAC   | 1304005-01   | 2              |
| Euro OTC        | Base cream DAC   | 1304004-01   | 1              |
| Euro OTC        | Base cream DAC   | 1302036-01   | 1              |
| Euro OTC        | Base cream DAC   | 1306031-01   | 1              |
| Euro OTC        | Base cream DAC   | 1301043-01   | 1              |
| Euro OTC        | Base cream DAC   | 130603001    | 1              |
| Euro OTC        | Base cream DAC   | 1306007-01   | 1              |
| Euro OTC        | Base cream DAC   | 1307035-01   | 1              |
| Euro OTC        | Base cream DAC   | 1307034-01   | 2              |
| Euro OTC        | Base cream DAC   | 1306042-01   | 1              |
| Euro OTC        | Base cream DAC   | 130703601    | 2              |
| Euro OTC        | Base cream DAC   | 1308013-01   | 4              |
| Euro OTC        | Base cream DAC   | 1307046-01   | 1              |
| Euro OTC        | Base cream DAC   | 1307044-01   | 3              |
| Euro OTC        | Base cream DAC   | 13312201     | 1              |
| Euro OTC        | Base cream DAC   | 130704701    | 2              |
| Euro OTC        | Base cream DAC   | 130703101    | 1              |
| Euro OTC        | Base cream DAC   | 1307047-01   | 1              |
| Euro OTC        | Base cream DAC   | 130704801    | 1              |
| Euro OTC        | Base cream DAC   | 1309008-01   | 1              |
| Euro OTC        | Base cream DAC   | 1311008-01   | 2              |
| Euro OTC        | Base cream DAC   | 1311009-01   | 1              |
| Euro OTC        | Base cream DAC   | 1311018-01   | 1              |
| Euro OTC        | Base cream DAC   | 131101601    | 1              |
| Euro OTC        | Base cream DAC   | 1312001-01   | 2              |
| Euro OTC        | Base cream DAC   | 131103101    | 1              |
| Euro OTC        | Base cream DAC   | 1311031-01   | 1              |
| Euro OTC        | Base cream DAC   | 140102001    | 1              |
| Euro OTC        | Base cream DAC   | 5650900      | 1              |
| Euro OTC        | Base cream DAC   | 3011016      | 17             |
| Euro OTC        | Base cream DAC   | 14090801     | 1              |
| Euro OTC        | Base cream DAC   | 14223101     | 1              |
| Euro OTC        | Base cream DAC   | 140705501    | 1              |
| Euro OTC        | Base cream DAC   | 1407022-01   | 2              |
| Euro OTC        | Base cream DAC   | 1407019-01   | 2              |
| Euro OTC        | Base cream DAC   | 1407023-01   | 1              |
| Euro OTC        | Base cream DAC   | 150200701    | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Euro OTC        | Base cream DAC   | 1502028      | 1              |
| Euro OTC        | Base cream DAC   | 1501040-01   | 1              |
| Euro OTC        | Base cream DAC   | 1601025-01   | 1              |
| Euro OTC        | Base cream DAC   | 1603030-01   | 1              |
| Euro OTC        | Base cream DAC   | 44950616     | 19             |
| Euro OTC        | Base cream DAC   | 45380616     | 21             |
| Euro OTC        | Base cream DAC   | 52490616     | 6              |
| Euro OTC        | Base cream DAC   | 72430816     | 2              |
| Euro OTC        | Base cream DAC   | 524490616    | 1              |
| Euro OTC        | Base cream DAC   | 39218516     | 1              |
| Euro OTC        | Base cream DAC   | 91330916     | 2              |
| Euro OTC        | Base cream DAC   | 11821116     | 8              |
| Euro OTC        | Base cream DAC   | 91350916     | 4              |
| Euro OTC        | Base cream DAC   | 11841116     | 6              |
| Euro OTC        | Base cream DAC   | 29870117     | 4              |
| Euro OTC        | Base cream DAC   | 118471116    | 1              |
| Euro OTC        | Base cream DAC   | 3001016      | 16             |
| Euro OTC        | Base cream DAC   | 27300917     | 10             |
| Euro OTC        | Base cream DAC   | 6004859004   | 1              |
| Euro OTC        | Base cream DAC   | 27290917     | 3              |
| Euro OTC        | Base cream DAC   | 4671117      | 1              |
| Euro OTC        | Base cream DAC   | 61391217     | 7              |
| Euro OTC        | Base cream DAC   | 27320917     | 8              |
| Euro OTC        | Base cream DAC   | 46731117     | 9              |
| Euro OTC        | Base cream DAC   | 27320919     | 1              |
| Euro OTC        | Base cream DAC   | 69520118     | 12             |
| Euro OTC        | Base cream DAC   | 17267401     | 1              |
| Euro OTC        | Base cream DAC   | 51850217     | 1              |
| Euro OTC        | Base cream DAC   | 69530118     | 6              |
| Euro OTC        | Base cream DAC   | 8003325004   | 1              |
| Euro OTC        | Base cream DAC   | 1410817      | 1              |
| Euro OTC        | Base cream DAC   | 93760318     | 7              |
| Euro OTC        | Base cream DAC   | 18138101     | 1              |
| Euro OTC        | Base cream DAC   | 29550618     | 25             |
| Euro OTC        | Base cream DAC   | 45950718     | 10             |
| Euro OTC        | Base cream DAC   | 97570413     | 1              |
| Euro OTC        | Base cream DAC   | 3695474      | 1              |
| Euro OTC        | Base cream DAC   | 255700618    | 1              |
| Euro OTC        | Base cream DAC   | 76571018     | 25             |
| Euro OTC        | Base cream DAC   | 62540918     | 3              |
| Euro OTC        | Base cream DAC   | 467311117    | 1              |
| Euro OTC        | Base cream DAC   | 87221118     | 10             |
| Euro OTC        | Base cream DAC   | 44731117     | 1              |
| Euro OTC        | Base cream DAC   | 3271218      | 5              |
| Euro OTC        | Base cream DAC   | 3281218      | 13             |
| Euro OTC        | Base cream DAC   | 3291218      | 6              |
| Euro OTC        | Base cream DAC   | 13500119     | 6              |
| Euro OTC        | Base cream DAC   | 8722118      | 1              |
| Euro OTC        | Base cream DAC   | 23840219     | 4              |
| Euro OTC        | Base cream DAC   | 71970619     | 6              |
| Euro OTC        | Base cream DAC   | 36520319     | 5              |
| Euro OTC        | Base cream DAC   | 36530319     | 7              |
| Euro OTC        | Base cream DAC   | 47920419     | 5              |
| Euro OTC        | Base cream DAC   | 71980619     | 15             |
| Euro OTC        | Base cream DAC   | 80380719     | 3              |
| Euro OTC        | Base cream DAC   | 4240919      | 26             |
| Euro OTC        | Base cream DAC   | 13171119     | 7              |
| Euro OTC        | Base cream DAC   | 40170120     | 7              |
| Euro OTC        | Base cream DAC   | 1501051-01   | 4              |
| Euro OTC        | Base cream DAC   | 1507018-01   | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Euro OTC        | Base cream DAC   | 1601028-01       | 3              |
| Euro OTC        | Base cream DAC   | 11110023-01      | 1              |
| Euro OTC        | Base cream DAC   | 1509021-01       | 16             |
| Euro OTC        | Base cream DAC   | 87211118         | 5              |
| Euro OTC        | Base cream DAC   | 17031701         | 2              |
| Euro OTC        | Base cream DAC   | 238002019        | 1              |
| Euro OTC        | Base cream DAC   | 803907190        | 1              |
| Euro OTC        | Base cream DAC   | 14232001         | 1              |
| Euro OTC        | Base cream DAC   | 1502008-01       | 7              |
| Euro OTC        | Base cream DAC   | 8620717          | 25             |
| Euro OTC        | Base cream DAC   | 1307003-01       | 2              |
| Euro OTC        | Base cream DAC   | 1312003-01       | 1              |
| Euro OTC        | Base cream DAC   | 1412002-01       | 4              |
| Euro OTC        | Base cream DAC   | 160404101        | 1              |
| Euro OTC        | Base cream DAC   | 16Do6-T10-031949 | 1              |
| Euro OTC        | Base cream DAC   | 70580420         | 1              |
| Euro OTC        | Base cream DAC   | 14140871         | 1              |
| Euro OTC        | Base cream DAC   | 38540516         | 13             |
| Euro OTC        | Base cream DAC   | 45970718         | 34             |
| Euro OTC        | Base cream DAC   | 60610519         | 22             |
| Euro OTC        | Base cream DAC   | 606220519        | 1              |
| Euro OTC        | Base cream DAC   | 92080819         | 18             |
| Euro OTC        | Base cream DAC   | 1506028-01       | 3              |
| Euro OTC        | Base cream DAC   | 49650616         | 2              |
| Euro OTC        | Base cream DAC   | 129037-01        | 1              |
| Euro OTC        | Base cream DAC   | 121005401        | 1              |
| Euro OTC        | Base cream DAC   | 1210053-01       | 1              |
| Euro OTC        | Base cream DAC   | 120903701        | 1              |
| Euro OTC        | Base cream DAC   | 13113101         | 1              |
| Euro OTC        | Base cream DAC   | 131200101        | 1              |
| Euro OTC        | Base cream DAC   | 140702201        | 1              |
| Euro OTC        | Base cream DAC   | 1501007-01       | 1              |
| Euro OTC        | Base cream DAC   | 150100801        | 1              |
| Euro OTC        | Base cream DAC   | 1506046-01       | 4              |
| Euro OTC        | Base cream DAC   | 151003001        | 1              |
| Euro OTC        | Base cream DAC   | 15060-46-01      | 1              |
| Euro OTC        | Base cream DAC   | 1509028-01       | 1              |
| Euro OTC        | Base cream DAC   | 1605014-01       | 2              |
| Euro OTC        | Base cream DAC   | 1603039-01       | 1              |
| Euro OTC        | Base cream DAC   | 49660616         | 2              |
| Euro OTC        | Base cream DAC   | 11811116         | 6              |
| Euro OTC        | Base cream DAC   | 2991016          | 24             |
| Euro OTC        | Base cream DAC   | 55840317         | 3              |
| Euro OTC        | Base cream DAC   | 39620117         | 4              |
| Euro OTC        | Base cream DAC   | 3601016          | 1              |
| Euro OTC        | Base cream DAC   | 27350917         | 23             |
| Euro OTC        | Base cream DAC   | 27310917         | 1              |
| Euro OTC        | Base cream DAC   | 93770318         | 6              |
| Euro OTC        | Base cream DAC   | 15720518         | 27             |
| Euro OTC        | Base cream DAC   | 3931218          | 1              |
| Euro OTC        | Base cream DAC   | 1510027-01       | 1              |
| Euro OTC        | Base cream DAC   | 1306030-01       | 1              |
| Euro OTC        | Base cream DAC   | 1301022-01       | 6              |
| Euro OTC        | Base cream DAC   | 1308010-01       | 1              |
| Euro OTC        | Base cream DAC   | 1311004-01       | 2              |
| Euro OTC        | Base cream DAC   | 1308011-01       | 1              |
| Euro OTC        | Base cream DAC   | 80616-8          | 1              |
| Euro OTC        | Base cream DAC   | 1312020-01       | 1              |
| Euro OTC        | Base cream DAC   | 1502016          | 1              |
| Euro OTC        | Base cream DAC   | 1502026-01       | 6              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Euro OTC        | Base cream DAC   | 1601055-01         | 2              |
| Euro OTC        | Base cream DAC   | 1507017-01         | 7              |
| Euro OTC        | Base cream DAC   | 1604040-01         | 2              |
| Euro OTC        | Base cream DAC   | 160301601          | 1              |
| Euro OTC        | Base cream DAC   | 1507017_01         | 1              |
| Euro OTC        | Base cream DAC   | 2981016            | 19             |
| Euro OTC        | Base cream DAC   | 51560217           | 4              |
| Euro OTC        | Base cream DAC   | 2308178            | 1              |
| Euro OTC        | Base cream DAC   | 39580217           | 6              |
| Euro OTC        | Base cream DAC   | 8660717            | 5              |
| Euro OTC        | Base cream DAC   | 93740318           | 9              |
| Euro OTC        | Base cream DAC   | 80320218           | 4              |
| Euro OTC        | Base cream DAC   | 62570918           | 2              |
| Euro OTC        | Base cream DAC   | 1511002-02         | 2              |
| Euro OTC        | Base cream DAC   | 1306020-01         | 6              |
| Euro OTC        | Base cream DAC   | 1309013-01         | 7              |
| Euro OTC        | Base cream DAC   | 1308022-01         | 6              |
| Euro OTC        | Base cream DAC   | 1309015-01         | 3              |
| Euro OTC        | Base cream DAC   | 13080224-01        | 1              |
| Euro OTC        | Base cream DAC   | 15502028-01        | 1              |
| Euro OTC        | Base cream DAC   | 15110011-01        | 1              |
| Euro OTC        | Base cream DAC   | 1603028-01         | 10             |
| Euro OTC        | Base cream DAC   | 1512002-01         | 10             |
| Euro OTC        | Base cream DAC   | 1502025-01         | 1              |
| Euro OTC        | Base cream DAC   | 131203701          | 1              |
| Euro OTC        | Base cream DAC   | 1110037-01         | 2              |
| Euro OTC        | Base cream DAC   | 1509021-21         | 1              |
| Euro OTC        | Base cream DAC   | 45340616           | 11             |
| Euro OTC        | Base cream DAC   | 1506053-01         | 13             |
| Euro OTC        | Base cream DAC   | 701228             | 1              |
| Euro OTC        | Base cream DAC   | 18270001           | 1              |
| Euro OTC        | Base cream DAC   | 44960616           | 2              |
| Euro OTC        | Base cream DAC   | 6004860001         | 1              |
| Euro OTC        | Base cream DAC   | 131100901          | 1              |
| Euro OTC        | Base cream DAC   | 1305013-01         | 1              |
| Euro OTC        | Base cream DAC   | 55740320P-200720-3 | 1              |
| Euro OTC        | Base cream DAC   | 1306002-01         | 1              |
| Euro OTC        | Base cream DAC   | 1603016-01         | 6              |
| Euro OTC        | Base cream DAC   | 80390719           | 19             |
| Euro OTC        | Base cream DAC   | 70540420           | 6              |
| Euro OTC        | Base cream DAC   | 1401024-01         | 6              |
| Euro OTC        | Base cream DAC   | 1509025-01         | 1              |
| Euro OTC        | Base cream DAC   | 23830219           | 1              |
| Euro OTC        | Base cream DAC   | 36540319           | 6              |
| Euro OTC        | Base cream DAC   | 60620519           | 19             |
| Euro OTC        | Base cream DAC   | 71990619           | 11             |
| Euro OTC        | Base cream DAC   | 8004134007         | 1              |
| Euro OTC        | Base cream DAC   | 1210055-01         | 3              |
| Euro OTC        | Base cream DAC   | 1308021-01         | 3              |
| Euro OTC        | Base cream DAC   | 131100801          | 1              |
| Euro OTC        | Base cream DAC   | 1401026-01         | 3              |
| Euro OTC        | Base cream DAC   | 150215-01          | 1              |
| Euro OTC        | Base cream DAC   | 1501055-01         | 1              |
| Euro OTC        | Base cream DAC   | 17A03-T08-040047   | 1              |
| Euro OTC        | Base cream DAC   | 29550619           | 1              |
| Euro OTC        | Base cream DAC   | 135151119          | 1              |
| Euro OTC        | Base cream DAC   | 1204024-01         | 1              |
| Euro OTC        | Base cream DAC   | 1401022-01         | 5              |
| Euro OTC        | Base cream DAC   | 1501050-01         | 3              |
| Euro OTC        | Base cream DAC   | 1401020-01         | 4              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Euro OTC        | Base cream DAC   | 1502015-01        | 5              |
| Euro OTC        | Base cream DAC   | 1111009-01        | 1              |
| Euro OTC        | Base cream DAC   | 1107040-01        | 1              |
| Euro OTC        | Base cream DAC   | 1502017-01        | 7              |
| Euro OTC        | Base cream DAC   | 86479517          | 1              |
| Euro OTC        | Base cream DAC   | 2957068           | 1              |
| Euro OTC        | Base cream DAC   | 13131119          | 3              |
| Euro OTC        | Base cream DAC   | 20002397          | 1              |
| Euro OTC        | Base cream DAC   | 13490119          | 30             |
| Euro OTC        | Base cream DAC   | 23810219          | 3              |
| Euro OTC        | Base cream DAC   | 1301044-01        | 1              |
| Euro OTC        | Base cream DAC   | 130201001         | 1              |
| Euro OTC        | Base cream DAC   | 160123-01         | 1              |
| Euro OTC        | Base cream DAC   | 1205004-01        | 1              |
| Euro OTC        | Base cream DAC   | 46711117          | 3              |
| Euro OTC        | Base cream DAC   | 937770318         | 1              |
| Euro OTC        | Base cream DAC   | 72260417          | 1              |
| Euro OTC        | Base cream DAC   | 69510118          | 9              |
| Euro OTC        | Base cream DAC   | 92090819          | 7              |
| Euro OTC        | Base cream DAC   | 29880117          | 2              |
| Euro OTC        | Base cream DAC   | 91320916          | 1              |
| Euro OTC        | Base cream DAC   | 1311007-01        | 3              |
| Euro OTC        | Base cream DAC   | 1401021-01        | 1              |
| Euro OTC        | Base cream DAC   | 7570418           | 6              |
| Euro OTC        | Base cream DAC   | 1603015-01        | 4              |
| Euro OTC        | Base cream DAC   | 72270417          | 3              |
| Euro OTC        | Base cream DAC   | 1506026-011       | 1              |
| Euro OTC        | Base cream DAC   | B72430816         | 1              |
| Euro OTC        | Base cream DAC   | 80300218          | 28             |
| Euro OTC        | Base cream DAC   | 13190119          | 1              |
| Euro OTC        | Base cream DAC   | 13151119          | 7              |
| Euro OTC        | Base cream DAC   | 3380720           | 1              |
| Euro OTC        | Base cream DAC   | 35401020          | 2              |
| Euro OTC        | Base cream DAC   | 74410221          | 1              |
| Euro OTC        | Base cream DAC   | 140102601         | 1              |
| Euro OTC        | Base cream DAC   | 151100201         | 1              |
| Euro OTC        | Base cream DAC   | 515880217         | 1              |
| Euro OTC        | Base cream DAC   | 18720518          | 1              |
| Euro OTC        | Base cream DAC   | 6610519           | 1              |
| Euro OTC        | Base cream DAC   | 45940718          | 1              |
| Euro OTC        | Base cream DAC   | 47900419          | 1              |
| Euro OTC        | Base cream DAC   | 1306019-01        | 1              |
| Euro OTC        | Base cream DAC   | 1407055-01        | 2              |
| Euro OTC        | Base cream DAC   | 1601030-01        | 1              |
| Euro OTC        | Base cream DAC   | 1601027-01        | 2              |
| Euro OTC        | Base cream DAC   | 1603037-01        | 2              |
| Euro OTC        | Base cream DAC   | 151200201         | 1              |
| Euro OTC        | Base cream DAC   | 29860117          | 5              |
| Euro OTC        | Base cream DAC   | 305711            | 1              |
| Euro OTC        | Base cream DAC   | 16G20-T06-035312  | 1              |
| Euro OTC        | Base cream DAC   | B55850317         | 1              |
| Euro OTC        | Base cream DAC   | 86490517          | 11             |
| Euro OTC        | Base cream DAC   | 170318181         | 2              |
| Euro OTC        | Base cream DAC   | 55850317          | 2              |
| Euro OTC        | Base cream DAC   | 180208BC/86498517 | 1              |
| Euro OTC        | Base cream DAC   | 181113081         | 1              |
| Euro OTC        | Base cream DAC   | 80330218          | 2              |
| Euro OTC        | Base cream DAC   | 7560418           | 9              |
| Euro OTC        | Base cream DAC   | 70560420          | 5              |
| Euro OTC        | Base cream DAC   | 19420920          | 3              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Euro OTC                  | Base cream DAC   | 19400920     | 1              |
| Euro OTC                  | Base cream DAC   | 1409056-01   | 1              |
| Euro OTC                  | Base cream DAC   | 72440816     | 4              |
| Euro OTC                  | Base cream DAC   | 29910169     | 1              |
| Euro OTC                  | Base cream DAC   | 1501052-01   | 1              |
| Euro OTC                  | Base cream DAC   | 15420101     | 1              |
| Euro OTC                  | Base cream DAC   | 1501054-01   | 1              |
| Euro OTC                  | Base cream DAC   | 91310616     | 1              |
| Euro OTC                  | Base cream DAC   | 1205018-01   | 3              |
| Euro OTC                  | Base cream DAC   | 1205019-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1205040-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1205041-01   | 1              |
| Euro OTC                  | Base cream DAC   | 11033-01     | 1              |
| Euro OTC                  | Base cream DAC   | 121209-01    | 1              |
| Euro OTC                  | Base cream DAC   | 13201101     | 1              |
| Euro OTC                  | Base cream DAC   | 1302037-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1306044-01   | 2              |
| Euro OTC                  | Base cream DAC   | 1307031-01   | 3              |
| Euro OTC                  | Base cream DAC   | 1311005-01   | 5              |
| Euro OTC                  | Base cream DAC   | 131007-01    | 1              |
| Euro OTC                  | Base cream DAC   | 1312021-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1407020-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1407054-01   | 3              |
| Euro OTC                  | Base cream DAC   | 1411031-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1501020-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1501019-01   | 1              |
| Euro OTC                  | Base cream DAC   | 11831116     | 3              |
| Euro OTC                  | Base cream DAC   | 36920117     | 1              |
| Euro OTC                  | Base cream DAC   | 46701117     | 4              |
| Euro OTC                  | Base cream DAC   | 15710518     | 1              |
| Euro OTC                  | Base cream DAC   | 46721117     | 2              |
| Euro OTC                  | Base cream DAC   | 29570618     | 4              |
| Euro OTC                  | Base cream DAC   | 62568918     | 1              |
| Euro OTC                  | Base cream DAC   | 23800219     | 16             |
| Euro OTC                  | Base cream DAC   | 13480119     | 7              |
| Euro OTC                  | Base cream DAC   | 47930419     | 4              |
| Euro OTC                  | Base cream DAC   | 4210919      | 1              |
| Euro OTC                  | Base cream DAC   | 4251019      | 6              |
| Euro OTC                  | Base cream DAC   | 12339301     | 1              |
| Euro OTC                  | Base cream DAC   | 35411020     | 1              |
| Euro OTC                  | Base cream DAC   | 76591018     | 10             |
| Euro OTC                  | Base cream DAC   | 32811218     | 1              |
| Euro OTC                  | Base cream DAC   | 1204004-01   | 3              |
| Euro OTC                  | Base cream DAC   | 27340917     | 12             |
| Euro OTC                  | Base cream DAC   | 27346917     | 1              |
| Euro OTC                  | Base cream DAC   | 47898419     | 2              |
| Euro OTG                  | Base cream DAC   | 1309008-01   | 2              |
| Euro OTG/ Euro OTG Pharma | Base cream DAC   | 1501041-01   | 1              |
| Euro/ Phönix              | Base cream DAC   | 91310916     | 1              |
| Euro/ Phönix              | Base cream DAC   | 1117Q-01309  | 1              |
| Euro/ Phönix              | Base cream DAC   | 4317E-01309  | 1              |
| Euro/ Phönix              | Base cream DAC   | 27290917     | 1              |
| Euro/ Phönix              | Base cream DAC   | 15700518     | 1              |
| Euro/Gehe                 | Base cream DAC   | 1312002-01   | 1              |
| Euro/Phönix               | Base cream DAC   | 29550618     | 1              |
| Euro/Phönix               | Base cream DAC   | 76571018     | 1              |
| Euro OTC                  | Base cream DAC   | 1111042-01   | 1              |
| Euro OTC                  | Base cream DAC   | 1506053      | 1              |
| Euro OTC                  | Base cream DAC   | 55360616     | 12             |
| Euro OTC                  | Base cream DAC   | 553600616    | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Euro OTC        | Base cream DAC   | 39600117     | 1              |
| Euro OTC        | Base cream DAC   | 39570177     | 1              |
| Euro OTC        | Base cream DAC   | 300116       | 1              |
| Euro OTC        | Base cream DAC   | 298116       | 1              |
| Euro OTC        | Base cream DAC   | 35980217     | 1              |
| Euro OTC        | Base cream DAC   | 395802017    | 1              |
| Euro OTC        | Base cream DAC   | 86480517     | 4              |
| Euro OTC        | Base cream DAC   | 69500118     | 14             |
| Euro OTC        | Base cream DAC   | 18137201     | 1              |
| Euro OTC        | Base cream DAC   | 79000916     | 1              |
| Euro OTC        | Base cream DAC   | 62530918     | 13             |
| Euro OTC        | Base cream DAC   | 47908419     | 1              |
| Euro OTC        | Base cream DAC   | 1603029-01   | 8              |
| Euro OTC        | Base cream DAC   | 45330616     | 18             |
| Euro OTC        | Base cream DAC   | 87251118     | 10             |
| Euro OTC        | Base cream DAC   | 80370719     | 2              |
| Euro OTC        | Base cream DAC   | 93730318     | 4              |
| Euro OTC        | Base cream DAC   | 1401025-01   | 8              |
| Euro OTC        | Base cream DAC   | 1502007-01   | 5              |
| Euro OTC        | Base cream DAC   | 1502028-01   | 4              |
| Euro OTC        | Base cream DAC   | 91310916     | 4              |
| Euro OTC        | Base cream DAC   | 14140817     | 18             |
| Euro OTC        | Base cream DAC   | 1506045-01   | 9              |
| Euro OTC        | Base cream DAC   | 1306009-01   | 2              |
| Euro OTC        | Base cream DAC   | 1510030-01   | 15             |
| Euro OTC        | Base cream DAC   | 70560426     | 1              |
| Euro OTC        | Base cream DAC   | 47890419     | 19             |
| Euro OTC        | Base cream DAC   | 1308023-01   | 3              |
| Euro OTC        | Base cream DAC   | 1309007-01   | 8              |
| Euro OTC        | Base cream DAC   | 1312035-01   | 6              |
| Euro OTC        | Base cream DAC   | 1312036-01   | 1              |
| Euro OTC        | Base cream DAC   | 1312004-01   | 1              |
| Euro OTC        | Base cream DAC   | 76581018     | 8              |
| Euro OTC        | Base cream DAC   | 1509026-01   | 2              |
| Euro OTC        | Base cream DAC   | 86460517     | 1              |
| Euro OTC        | Base cream DAC   | 4230919      | 4              |
| Euro OTC        | Base cream DAC   | 3360720      | 1              |
| Euro OTC        | Base cream DAC   | 16721117     | 1              |
| Euro OTC        | Base cream DAC   | 150150-01    | 1              |
| Euro OTC        | Base cream DAC   | 1309005-01   | 3              |
| Euro OTC        | Base cream DAC   | 1309006-01   | 1              |
| Euro OTC        | Base cream DAC   | 1312037-01   | 1              |
| Euro OTC        | Base cream DAC   | 1312039-01   | 6              |
| Euro OTC        | Base cream DAC   | 1401023-01   | 6              |
| Euro OTC        | Base cream DAC   | 1506047-01   | 4              |
| Euro OTC        | Base cream DAC   | 39570117     | 12             |
| Euro OTC        | Base cream DAC   | 86450517     | 10             |
| Euro OTC        | Base cream DAC   | 93750318     | 1              |
| Euro OTC        | Base cream DAC   | 23820219     | 1              |
| Euro OTC        | Base cream DAC   | 47910419     | 1              |
| Euro OTC        | Base cream DAC   | 60600519     | 2              |
| Euro OTC        | Base cream DAC   | 92070819     | 5              |
| Euro OTC        | Base cream DAC   | 55790320     | 1              |
| Euro OTC        | Base cream DAC   | 1511001-01   | 7              |
| Euro OTC        | Base cream DAC   | 1306001-01   | 6              |
| Euro OTC        | Base cream DAC   | 1603038-01   | 2              |
| Euro OTC        | Base cream DAC   | 1604042-01   | 3              |
| Euro OTC        | Base cream DAC   | 15690518     | 11             |
| Euro OTC        | Base cream DAC   | 19000942     | 1              |
| Euro OTC        | Base cream DAC   | 1506026-01   | 1              |

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| <b>Supplier</b>          | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|--------------------------|------------------|------------------|----------------|
| Euro OTC                 | Base cream DAC   | 1512013-01       | 1              |
| Euro OTC                 | Base cream DAC   | 91340916         | 18             |
| Euro OTC                 | Base cream DAC   | 93740319         | 1              |
| Euro OTC                 | Base cream DAC   | 1501009-01       | 1              |
| Euro OTC                 | Base cream DAC   | 1508001-01       | 12             |
| Euro OTC                 | Base cream DAC   | 45960718         | 3              |
| Euro OTC                 | Base cream DAC   | 40130120         | 6              |
| Europ Ots Pharma         | Base cream DAC   | 1501040-01       | 1              |
| EuroPharm                | Base cream DAC   | 1501008-01       | 2              |
| Europharm/Otto           | Base cream DAC   | 1111028-01       | 2              |
| Europharm/Otto           | Base cream DAC   | 1411030-01       | 1              |
| F.Eimermacher GmbH       | Base cream DAC   | 79000916         | 2              |
| F.Eimermacher GmbH&Co.KG | Base cream DAC   | 79000916         | 3              |
| F.Eimermacher/Ph         | Base cream DAC   | 47880419         | 1              |
| Caelo                    | Base cream DAC   | 8004134006       | 1              |
| Fag                      | Base cream DAC   | 18G13-T11-058079 | 1              |
| Fagorn/Alliance          | Base cream DAC   | 16G20-T05-035308 | 2              |
| Fagron                   | Base cream DAC   | 13311701         | 1              |
| Fagron                   | Base cream DAC   | 16B15-T04-03028  | 1              |
| Fagron                   | Base cream DAC   | 18C19-T21-053965 | 4              |
| Fagron                   | Base cream DAC   | 18c19-t22-053971 | 1              |
| Fagron                   | Base cream DAC   | 11297301         | 1              |
| Fagron                   | Base cream DAC   | 1130-T01         | 1              |
| Fagron                   | Base cream DAC   | 12C02-T08        | 5              |
| Fagron                   | Base cream DAC   | 12C26-T08        | 2              |
| Fagron                   | Base cream DAC   | 12G25-T12        | 2              |
| Fagron                   | Base cream DAC   | 12G25-T03        | 1              |
| Fagron                   | Base cream DAC   | 5321100          | 1              |
| Fagron                   | Base cream DAC   | 12C02-T09        | 1              |
| Fagron                   | Base cream DAC   | 12G25-T06        | 2              |
| Fagron                   | Base cream DAC   | 13A08-T06-000034 | 1              |
| Fagron                   | Base cream DAC   | 13A09-T10-000232 | 3              |
| Fagron                   | Base cream DAC   | 13A09-T19-001952 | 1              |
| Fagron                   | Base cream DAC   | 13A09-T12-000238 | 1              |
| Fagron                   | Base cream DAC   | 13C05-T03-00175  | 1              |
| Fagron                   | Base cream DAC   | 13C05-T09-001778 | 3              |
| Fagron                   | Base cream DAC   | 13C05-T03-001756 | 7              |
| Fagron                   | Base cream DAC   | 13111101         | 1              |
| Fagron                   | Base cream DAC   | 13A09-T19-00194  | 1              |
| Fagron                   | Base cream DAC   | 13E21-T08-003906 | 11             |
| Fagron                   | Base cream DAC   | 13A09-T14-000244 | 1              |
| Fagron                   | Base cream DAC   | 13A09-T19-001949 | 1              |
| Fagron                   | Base cream DAC   | 13C05T10003301   | 1              |
| Fagron                   | Base cream DAC   | 13C05T03001756   | 1              |
| Fagron                   | Base cream DAC   | 13E20-T01-003865 | 1              |
| Fagron                   | Base cream DAC   | 13C05-T10-003301 | 2              |
| Fagron                   | Base cream DAC   | 3613E-01309      | 1              |
| Fagron                   | Base cream DAC   | 13E21-T04-003893 | 1              |
| Fagron                   | Base cream DAC   | 13E22-T05-003978 | 1              |
| Fagron                   | Base cream DAC   | 13249901         | 1              |
| Fagron                   | Base cream DAC   | 13E23-T08-004015 | 1              |
| Fagron                   | Base cream DAC   | 13E21-T07-003903 | 3              |
| Fagron                   | Base cream DAC   | 13E21-T06-003900 | 1              |
| Fagron                   | Base cream DAC   | 13E22-T07-003984 | 1              |
| Fagron                   | Base cream DAC   | 13h14_t02_006207 | 1              |
| Fagron                   | Base cream DAC   | 13H14T02006207   | 1              |
| Fagron                   | Base cream DAC   | 13H14-T10-007314 | 1              |
| Fagron                   | Base cream DAC   | 13A09-T14-000244 | 1              |
| Fagron                   | Base cream DAC   | 13380901         | 1              |
| Fagron                   | Base cream DAC   | 13H14-T01-006203 | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Base cream DAC   | 13H14T01006203    | 1              |
| Fagron          | Base cream DAC   | 283915            | 1              |
| Fagron          | Base cream DAC   | 14A13-T02-009280  | 1              |
| Fagron          | Base cream DAC   | 13H14-T03-006212  | 1              |
| Fagron          | Base cream DAC   | 286157            | 1              |
| Fagron          | Base cream DAC   | 14A13T05009289    | 1              |
| Fagron          | Base cream DAC   | 13K12-T08-008063  | 1              |
| Fagron          | Base cream DAC   | 14D08-T-03-011689 | 1              |
| Fagron          | Base cream DAC   | 14D-08-T01-011683 | 1              |
| Fagron          | Base cream DAC   | 14D08-T06-011702  | 1              |
| Fagron          | Base cream DAC   | 14d08t02011686    | 1              |
| Fagron          | Base cream DAC   | 14D08-T03-01168   | 1              |
| Fagron          | Base cream DAC   | 14A13-T04009286   | 1              |
| Fagron          | Base cream DAC   | 14D085T045011692  | 1              |
| Fagron          | Base cream DAC   | 14F05-T08-012969  | 1              |
| Fagron          | Base cream DAC   | 16C14T03-031205   | 1              |
| Fagron          | Base cream DAC   | 287197            | 1              |
| Fagron          | Base cream DAC   | 13H14-T06-006224  | 1              |
| Fagron          | Base cream DAC   | 14223201          | 1              |
| Fagron          | Base cream DAC   | 14D08-T10-011716  | 2              |
| Fagron          | Base cream DAC   | 1586              | 1              |
| Fagron          | Base cream DAC   | 14d08-t04-011632  | 1              |
| Fagron          | Base cream DAC   | 14F05-T07         | 1              |
| Fagron          | Base cream DAC   | 14F05-T06-012961  | 6              |
| Fagron          | Base cream DAC   | 14J07-T14-015986  | 1              |
| Fagron          | Base cream DAC   | 14F05T08          | 2              |
| Fagron          | Base cream DAC   | 289803            | 1              |
| Fagron          | Base cream DAC   | 14F05-T07-012965  | 4              |
| Fagron          | Base cream DAC   | 14J07-T07         | 1              |
| Fagron          | Base cream DAC   | 14322301          | 1              |
| Fagron          | Base cream DAC   | 14J07-T12-015978  | 1              |
| Fagron          | Base cream DAC   | 14J07-T09         | 1              |
| Fagron          | Base cream DAC   | 14J07-T07-015961  | 2              |
| Fagron          | Base cream DAC   | 14K05-T08-016808  | 1              |
| Fagron          | Base cream DAC   | 14K05-T07-016800  | 8              |
| Fagron          | Base cream DAC   | 14J07-T10-015971  | 2              |
| Fagron          | Base cream DAC   | 14j07-T07-015961  | 1              |
| Fagron          | Base cream DAC   | 14J07-T13-015981  | 3              |
| Fagron          | Base cream DAC   | 14K05_T07         | 1              |
| Fagron          | Base cream DAC   | 14k05-t06-016796  | 1              |
| Fagron          | Base cream DAC   | 14k05t07016800    | 1              |
| Fagron          | Base cream DAC   | 14A10-T05-009253  | 1              |
| Fagron          | Base cream DAC   | 15B19-T13-019450  | 1              |
| Fagron          | Base cream DAC   | 15C11T13020416    | 1              |
| Fagron          | Base cream DAC   | 15C11-T07         | 2              |
| Fagron          | Base cream DAC   | 15C11-T14-020420  | 2              |
| Fagron          | Base cream DAC   | 15H04-T06-024978  | 9              |
| Fagron          | Base cream DAC   | 15H04-T09-024991  | 2              |
| Fagron          | Base cream DAC   | 15H04-T06         | 1              |
| Fagron          | Base cream DAC   | 15H04T06024978    | 2              |
| Fagron          | Base cream DAC   | 15J13-T03-026895  | 7              |
| Fagron          | Base cream DAC   | 15L17-T06-028791  | 1              |
| Fagron          | Base cream DAC   | 15I13-T03-026895  | 1              |
| Fagron          | Base cream DAC   | 15h3-T03-026895   | 1              |
| Fagron          | Base cream DAC   | 15L17-T03-028775  | 8              |
| Fagron          | Base cream DAC   | 15J13-T03-26895   | 1              |
| Fagron          | Base cream DAC   | 15H04-T11-024997  | 4              |
| Fagron          | Base cream DAC   | 16C14-T02-031202  | 3              |
| Fagron          | Base cream DAC   | 16815-T04-030282  | 1              |
| Fagron          | Base cream DAC   | 16B15-T04-030281  | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Fagron          | Base cream DAC   | 16C14-T03            | 1              |
| Fagron          | Base cream DAC   | 16b15-T01-030274     | 1              |
| Fagron          | Base cream DAC   | 16C24-T05-031490     | 10             |
| Fagron          | Base cream DAC   | 15H04T11024997       | 1              |
| Fagron          | Base cream DAC   | 16C14-T02            | 1              |
| Fagron          | Base cream DAC   | 16c14t02-031202      | 1              |
| Fagron          | Base cream DAC   | 16C24-T06-031494     | 9              |
| Fagron          | Base cream DAC   | 16D06-T05-031923     | 5              |
| Fagron          | Base cream DAC   | 16C14-T01-031199     | 3              |
| Fagron          | Base cream DAC   | 16D06-T09-031941     | 6              |
| Fagron          | Base cream DAC   | 16D06-T08-031938     | 5              |
| Fagron          | Base cream DAC   | 16F01-T10-033893     | 2              |
| Fagron          | Base cream DAC   | 16D06-T06-031926     | 2              |
| Fagron          | Base cream DAC   | 16A25-T02-029645     | 1              |
| Fagron          | Base cream DAC   | 16G20-T08-035321     | 4              |
| Fagron          | Base cream DAC   | 16C-T06-031494       | 1              |
| Fagron          | Base cream DAC   | 39210516             | 2              |
| Fagron          | Base cream DAC   | 16G20/T10/035327     | 1              |
| Fagron          | Base cream DAC   | 16C24-T05031490      | 1              |
| Fagron          | Base cream DAC   | 16G20-T10-035327     | 3              |
| Fagron          | Base cream DAC   | 16D06-T07-031930     | 1              |
| Fagron          | Base cream DAC   | 701228-0017          | 1              |
| Fagron          | Base cream DAC   | 16D06-T04-0311914    | 1              |
| Fagron          | Base cream DAC   | 16J11-T01-037607     | 4              |
| Fagron          | Base cream DAC   | 16J11-T05-037623     | 1              |
| Fagron          | Base cream DAC   | 16G20-T05-035308     | 16             |
| Fagron          | Base cream DAC   | 16g20-t08-035321     | 1              |
| Fagron          | Base cream DAC   | 17A03-T13-040067     | 6              |
| Fagron          | Base cream DAC   | 26F30T14034792       | 1              |
| Fagron          | Base cream DAC   | 16J11-T03-037614     | 2              |
| Fagron          | Base cream DAC   | 16J11-T05-037624     | 1              |
| Fagron          | Base cream DAC   | 16g20-t06-035312     | 1              |
| Fagron          | Base cream DAC   | 17A03-T10-040056     | 5              |
| Fagron          | Base cream DAC   | 16J11-T03-037615     | 1              |
| Fagron          | Base cream DAC   | 51570217             | 1              |
| Fagron          | Base cream DAC   | 17A03T11040060       | 1              |
| Fagron          | Base cream DAC   | 16G20t06035312       | 1              |
| Fagron          | Base cream DAC   | 17a03_t08_040047     | 1              |
| Fagron          | Base cream DAC   | 17E11-T07-044186     | 9              |
| Fagron          | Base cream DAC   | 17C16-T06-042610     | 2              |
| Fagron          | Base cream DAC   | 17F08-T02-045262     | 27             |
| Fagron          | Base cream DAC   | 17E11-T10            | 1              |
| Fagron          | Base cream DAC   | 17C16-T06-042611     | 1              |
| Fagron          | Base cream DAC   | 17E11t08044210       | 1              |
| Fagron          | Base cream DAC   | 17F08-T06-045279     | 7              |
| Fagron          | Base cream DAC   | 17ET10-044241        | 1              |
| Fagron          | Base cream DAC   | 17C16-T09-042624     | 1              |
| Fagron          | Base cream DAC   | 17F08-T02-045262     | 1              |
| Fagron          | Base cream DAC   | 17H25-T08            | 2              |
| Fagron          | Base cream DAC   | 17H25-T08-047745     | 6              |
| Fagron          | Base cream DAC   | 17Fo8-T03-045267     | 1              |
| Fagron          | Base cream DAC   | 17H25-T06-0477360687 | 1              |
| Fagron          | Base cream DAC   | 17243301             | 1              |
| Fagron          | Base cream DAC   | 17H25-T07-047741     | 11             |
| Fagron          | Base cream DAC   | 17F08T02045262       | 1              |
| Fagron          | Base cream DAC   | 17K24-T03-050489     | 7              |
| Fagron          | Base cream DAC   | 17H25-T07-04774      | 1              |
| Fagron          | Base cream DAC   | 17K24-T07-050508     | 4              |
| Fagron          | Base cream DAC   | 17H25-T9-047748      | 1              |
| Fagron          | Base cream DAC   | 17K24-T05            | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Base cream DAC   | 17K24-T06-050503  | 3              |
| Fagron          | Base cream DAC   | 18C19-T22-053971  | 7              |
| Fagron          | Base cream DAC   | 18C19-T18-053952  | 17             |
| Fagron          | Base cream DAC   | 18C19-T23-053974  | 5              |
| Fagron          | Base cream DAC   | 18C19-T17-053948  | 22             |
| Fagron          | Base cream DAC   | 18C19T20-053962   | 1              |
| Fagron          | Base cream DAC   | 18C19-T24         | 2              |
| Fagron          | Base cream DAC   | 18C19-T23         | 2              |
| Fagron          | Base cream DAC   | 18C19-T19-053948  | 1              |
| Fagron          | Base cream DAC   | 18C19-T22-0536970 | 1              |
| Fagron          | Base cream DAC   | 18E23-T15-056314  | 17             |
| Fagron          | Base cream DAC   | 18C19-T20-053962  | 6              |
| Fagron          | Base cream DAC   | 18E23-T22-056352  | 7              |
| Fagron          | Base cream DAC   | 56314             | 1              |
| Fagron          | Base cream DAC   | 18C19-T20         | 1              |
| Fagron          | Base cream DAC   | 18E23-T16-056321  | 9              |
| Fagron          | Base cream DAC   | 18e23-t15-056314  | 1              |
| Fagron          | Base cream DAC   | 18E23-T17-056325  | 4              |
| Fagron          | Base cream DAC   | 18E23-T18-056338  | 3              |
| Fagron          | Base cream DAC   | 18E23-T15         | 1              |
| Fagron          | Base cream DAC   | 18E23-T20-056346  | 2              |
| Fagron          | Base cream DAC   | 53945             | 1              |
| Fagron          | Base cream DAC   | 18E23-T20         | 3              |
| Fagron          | Base cream DAC   | 18G13-T11-058079  | 22             |
| Fagron          | Base cream DAC   | 18G13-T16-058096  | 3              |
| Fagron          | Base cream DAC   | 58079             | 1              |
| Fagron          | Base cream DAC   | 18E23-T22-o56352  | 1              |
| Fagron          | Base cream DAC   | 18E23T15056314    | 1              |
| Fagron          | Base cream DAC   | 18E23-T23-056356  | 1              |
| Fagron          | Base cream DAC   | 18H20-T16-059356  | 3              |
| Fagron          | Base cream DAC   | 18G13-T15-058093  | 4              |
| Fagron          | Base cream DAC   | 18L20-T11-062930  | 12             |
| Fagron          | Base cream DAC   | 19C21-T05-065270  | 3              |
| Fagron          | Base cream DAC   | 1719Q-01309       | 1              |
| Fagron          | Base cream DAC   | 18G13-T6-058096   | 1              |
| Fagron          | Base cream DAC   | 19C21-T05         | 2              |
| Fagron          | Base cream DAC   | 18L20-T13-062940  | 2              |
| Fagron          | Base cream DAC   | 18L20-T17-062947  | 2              |
| Fagron          | Base cream DAC   | 19C21-T04-065267  | 2              |
| Fagron          | Base cream DAC   | 19B28-T09-064734  | 2              |
| Fagron          | Base cream DAC   | 19B28-T07         | 1              |
| Fagron          | Base cream DAC   | 18L20-T17-062948  | 4              |
| Fagron          | Base cream DAC   | 19B28T06064721    | 1              |
| Fagron          | Base cream DAC   | 19B28-T06-064721  | 4              |
| Fagron          | Base cream DAC   | 18L20T17062947    | 1              |
| Fagron          | Base cream DAC   | 18L20-T14-062943  | 1              |
| Fagron          | Base cream DAC   | 18L20-T21-062957  | 1              |
| Fagron          | Base cream DAC   | 19B28-T06-064722  | 1              |
| Fagron          | Base cream DAC   | 19D01-T14-065578  | 16             |
| Fagron          | Base cream DAC   | 19D01-T15-065582  | 2              |
| Fagron          | Base cream DAC   | 19G08-T11-069172  | 6              |
| Fagron          | Base cream DAC   | 19G08-T07         | 1              |
| Fagron          | Base cream DAC   | 19G08-T09-069166  | 4              |
| Fagron          | Base cream DAC   | 19L20-T19-06295   | 1              |
| Fagron          | Base cream DAC   | 19Go8-T12-o69175  | 1              |
| Fagron          | Base cream DAC   | 19B28-T06-065722  | 2              |
| Fagron          | Base cream DAC   | 19G08-T13-069179  | 5              |
| Fagron          | Base cream DAC   | 19G08-T14-069183  | 1              |
| Fagron          | Base cream DAC   | 19G8-T04-069148   | 1              |
| Fagron          | Base cream DAC   | 19d01t14065578    | 1              |

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| Supplier | Substance      | Batch             | Spectra |
|----------|----------------|-------------------|---------|
| Fagron   | Base cream DAC | 19H19-T15-071001  | 5       |
| Fagron   | Base cream DAC | T04-0691408       | 2       |
| Fagron   | Base cream DAC | 19113-t03-074060  | 1       |
| Fagron   | Base cream DAC | 19269701          | 1       |
| Fagron   | Base cream DAC | 20B10-T13-075420  | 3       |
| Fagron   | Base cream DAC | 19D01-T14065578   | 1       |
| Fagron   | Base cream DAC | 20B10-T15-075437  | 4       |
| Fagron   | Base cream DAC | T10-0709805       | 1       |
| Fagron   | Base cream DAC | 20B10-T14-075424  | 1       |
| Fagron   | Base cream DAC | 20D23-T01-079518  | 4       |
| Fagron   | Base cream DAC | 19H19-T12-0709902 | 1       |
| Fagron   | Base cream DAC | 20C06-T01-076945  | 2       |
| Fagron   | Base cream DAC | 20C02-T03-076757  | 1       |
| Fagron   | Base cream DAC | 19G08_T03_069142  | 1       |
| Fagron   | Base cream DAC | 20C17-T21-077637  | 6       |
| Fagron   | Base cream DAC | 20C17-T25-077653  | 4       |
| Fagron   | Base cream DAC | 19H19-T14-07098   | 1       |
| Fagron   | Base cream DAC | 20C17-T26-077656  | 4       |
| Fagron   | Base cream DAC | T26-0776506       | 1       |
| Fagron   | Base cream DAC | 20c17-T21-077637  | 1       |
| Fagron   | Base cream DAC | 20F18-T03-081206  | 4       |
| Fagron   | Base cream DAC | 20c17-T21-077640  | 1       |
| Fagron   | Base cream DAC | 20F18-T04-081209  | 3       |
| Fagron   | Base cream DAC | 20C17-T28-077662  | 2       |
| Fagron   | Base cream DAC | 20C17-T27-077659  | 1       |
| Fagron   | Base cream DAC | 20F18-T11-081234  | 3       |
| Fagron   | Base cream DAC | 15C11-T10-020408  | 2       |
| Fagron   | Base cream DAC | 15E27-T02-022881  | 6       |
| Fagron   | Base cream DAC | 14k05-t07016800   | 1       |
| Fagron   | Base cream DAC | 14K05-T05-061793  | 1       |
| Fagron   | Base cream DAC | 15C11-T06-020392  | 2       |
| Fagron   | Base cream DAC | 15H04-T08-024987  | 2       |
| Fagron   | Base cream DAC | 15c11t07020396    | 1       |
| Fagron   | Base cream DAC | 15H04-T08         | 1       |
| Fagron   | Base cream DAC | 15H04-T07         | 1       |
| Fagron   | Base cream DAC | 15H04-T12-025000  | 2       |
| Fagron   | Base cream DAC | 15L17-T04         | 1       |
| Fagron   | Base cream DAC | 16B15-T02-030277  | 10      |
| Fagron   | Base cream DAC | 15H04-T13-025003  | 2       |
| Fagron   | Base cream DAC | 17A03_T13_040067  | 1       |
| Fagron   | Base cream DAC | 16B15-T05-030285  | 1       |
| Fagron   | Base cream DAC | 16D06-T07-031931  | 1       |
| Fagron   | Base cream DAC | 16D06-T10-031950  | 1       |
| Fagron   | Base cream DAC | 18G13-To9-o58o73  | 1       |
| Fagron   | Base cream DAC | 18119-t15-062894  | 1       |
| Fagron   | Base cream DAC | 19D01-T13-067064  | 1       |
| Fagron   | Base cream DAC | 17A03-T07-040044  | 10      |
| Fagron   | Base cream DAC | 15G09-T19-024414  | 1       |
| Fagron   | Base cream DAC | 13E23T10004023    | 1       |
| Fagron   | Base cream DAC | 15C11-T05-020388  | 8       |
| Fagron   | Base cream DAC | 20C02-T04-076763  | 1       |
| Fagron   | Base cream DAC | 11B11-T05         | 4       |
| Fagron   | Base cream DAC | 12G25-T04         | 2       |
| Fagron   | Base cream DAC | 13E21-T05-003897  | 6       |
| Fagron   | Base cream DAC | 13E23-T09         | 3       |
| Fagron   | Base cream DAC | 13K12-T02-008039  | 5       |
| Fagron   | Base cream DAC | 14D08-T05-011697  | 5       |
| Fagron   | Base cream DAC | 14D08-T04-011692  | 8       |
| Fagron   | Base cream DAC | T05-0691502       | 1       |
| Fagron   | Base cream DAC | 19G08-T05-0691502 | 1       |

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| Supplier | Substance      | Batch             | Spectra |
|----------|----------------|-------------------|---------|
| Fagron   | Base cream DAC | 20C17-T22-0776400 | 1       |
| Fagron   | Base cream DAC | 19G18-T05-0691502 | 1       |
| Fagron   | Base cream DAC | 14K05-T06-016796  | 4       |
| Fagron   | Base cream DAC | 14K05-016793      | 1       |
| Fagron   | Base cream DAC | 12C26-T14         | 1       |
| Fagron   | Base cream DAC | 13A09-T12-236     | 1       |
| Fagron   | Base cream DAC | 16F30-T14-034792  | 15      |
| Fagron   | Base cream DAC | 13E21-T09-003910  | 1       |
| Fagron   | Base cream DAC | 15L17-T05-028785  | 2       |
| Fagron   | Base cream DAC | 13C05-T03-001755  | 1       |
| Fagron   | Base cream DAC | 13H14-T01-006202  | 1       |
| Fagron   | Base cream DAC | 15173601          | 1       |
| Fagron   | Base cream DAC | 17K24-T05-050498  | 4       |
| Fagron   | Base cream DAC | 19B28-T08-064729  | 4       |
| Fagron   | Base cream DAC | 19H19-T11-070989  | 3       |
| Fagron   | Base cream DAC | T14-072756        | 1       |
| Fagron   | Base cream DAC | T24-0776408       | 1       |
| Fagron   | Base cream DAC | 19G08-T03-069142  | 14      |
| Fagron   | Base cream DAC | T14-0754204       | 2       |
| Fagron   | Base cream DAC | T13-0754200       | 2       |
| Fagron   | Base cream DAC | 19G08-T04-069148  | 12      |
| Fagron   | Base cream DAC | 20F18-T05-081213  | 1       |
| Fagron   | Base cream DAC | 14D08-T01-011683  | 4       |
| Fagron   | Base cream DAC | 15L17-T04-028778  | 2       |
| Fagron   | Base cream DAC | 18E23-T16-056322  | 1       |
| Fagron   | Base cream DAC | 20B10-T09-075386  | 1       |
| Fagron   | Base cream DAC | 18-E23-T15-056414 | 1       |
| Fagron   | Base cream DAC | 45340616          | 1       |
| Fagron   | Base cream DAC | 19G08-T06-069157  | 2       |
| Fagron   | Base cream DAC | 19G08-T04-069148  | 1       |
| Fagron   | Base cream DAC | 16G20-T07-035317  | 2       |
| Fagron   | Base cream DAC | 17F08-T07-045282  | 4       |
| Fagron   | Base cream DAC | 18L20-T12-062936  | 3       |
| Fagron   | Base cream DAC | 16145601          | 1       |
| Fagron   | Base cream DAC | 13H14-T09         | 1       |
| Fagron   | Base cream DAC | 16D06H07-031930   | 1       |
| Fagron   | Base cream DAC | 13A09-T18-000259  | 2       |
| Fagron   | Base cream DAC | 13E23-T12         | 1       |
| Fagron   | Base cream DAC | 15C11T05020388    | 1       |
| Fagron   | Base cream DAC | 15G09-T19-024416  | 2       |
| Fagron   | Base cream DAC | 123456789         | 1       |
| Fagron   | Base cream DAC | 8004996004        | 1       |
| Fagron   | Base cream DAC | 16c24-t06-031494  | 2       |
| Fagron   | Base cream DAC | 16920-t05-035308  | 1       |
| Fagron   | Base cream DAC | T08-015887        | 1       |
| Fagron   | Base cream DAC | 18c19-t18-053952  | 3       |
| Fagron   | Base cream DAC | 15E27-T02-22881   | 1       |
| Fagron   | Base cream DAC | 18G13-T09_058073  | 1       |
| Fagron   | Base cream DAC | 20B10-T10-075389  | 2       |
| Fagron   | Base cream DAC | 17C16-T08-042619  | 2       |
| Fagron   | Base cream DAC | 13C05-T-003297    | 1       |
| Fagron   | Base cream DAC | 13E23-T06-004008  | 3       |
| Fagron   | Base cream DAC | 13E23-T10-004023  | 1       |
| Fagron   | Base cream DAC | 17A03-T09-040052  | 1       |
| Fagron   | Base cream DAC | 17E11-T08         | 1       |
| Fagron   | Base cream DAC | 17F08-T05-045274  | 4       |
| Fagron   | Base cream DAC | 8003325007        | 1       |
| Fagron   | Base cream DAC | 18G13-T16-058086  | 1       |
| Fagron   | Base cream DAC | 19G08-T05-0699152 | 1       |
| Fagron   | Base cream DAC | 15011-T04-020384  | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Base cream DAC   | 17F08-T03-045267  | 10             |
| Fagron          | Base cream DAC   | 20C17-T21-77637   | 1              |
| Fagron          | Base cream DAC   | 14J07-T09-015967  | 3              |
| Fagron          | Base cream DAC   | 16J11-T02-037610  | 1              |
| Fagron          | Base cream DAC   | 16G20-T09-035324  | 1              |
| Fagron          | Base cream DAC   | 17C16-T10-042627  | 1              |
| Fagron          | Base cream DAC   | 20B10-T16-075441  | 3              |
| Fagron          | Base cream DAC   | 13A09T10000232    | 1              |
| Fagron          | Base cream DAC   | 16F30-T15-034796  | 3              |
| Fagron          | Base cream DAC   | 17F08-T04-045271  | 5              |
| Fagron          | Base cream DAC   | 17K24-T02-050485  | 4              |
| Fagron          | Base cream DAC   | 19B28-T07-064725  | 4              |
| Fagron          | Base cream DAC   | 19G08-T07-069160  | 1              |
| Fagron          | Base cream DAC   | 20C17T21-077637   | 1              |
| Fagron          | Base cream DAC   | 19B28-T09-064735  | 1              |
| Fagron          | Base cream DAC   | 12G25-T10         | 1              |
| Fagron          | Base cream DAC   | 13C05-T10-003297  | 1              |
| Fagron          | Base cream DAC   | 13E23-T16-004035  | 2              |
| Fagron          | Base cream DAC   | 13H14T080         | 1              |
| Fagron          | Base cream DAC   | 14A13-T04-009286  | 1              |
| Fagron          | Base cream DAC   | 1408-T08-011710   | 1              |
| Fagron          | Base cream DAC   | 14A13-T06         | 1              |
| Fagron          | Base cream DAC   | 14F06-T05-013014  | 1              |
| Fagron          | Base cream DAC   | 14J23-T04-016463  | 2              |
| Fagron          | Base cream DAC   | 14J07-T12         | 1              |
| Fagron          | Base cream DAC   | 14K05-T05-016793  | 2              |
| Fagron          | Base cream DAC   | 14J07-T08-015964  | 4              |
| Fagron          | Base cream DAC   | 14F06-T04         | 1              |
| Fagron          | Base cream DAC   | 15C11-T09         | 1              |
| Fagron          | Base cream DAC   | 15H04-T10-024994  | 2              |
| Fagron          | Base cream DAC   | 16f30-T14-034792  | 1              |
| Fagron          | Base cream DAC   | 16F30-T15-034797  | 6              |
| Fagron          | Base cream DAC   | 18G13-T12-058084  | 7              |
| Fagron          | Base cream DAC   | 18E23-T21-056349  | 1              |
| Fagron          | Base cream DAC   | 18G13-T09-058073  | 17             |
| Fagron          | Base cream DAC   | 18E-23T19-056343  | 1              |
| Fagron          | Base cream DAC   | 18L20T13-062940   | 1              |
| Fagron          | Base cream DAC   | 19G08-T08-069163  | 2              |
| Fagron          | Base cream DAC   | 15H04-T14-025007  | 4              |
| Fagron          | Base cream DAC   | 13E23-T07-004011  | 3              |
| Fagron          | Base cream DAC   | 13E23-004023      | 1              |
| Fagron          | Base cream DAC   | 14D08-T02-011686  | 4              |
| Fagron          | Base cream DAC   | 14D08-T08-011710  | 4              |
| Fagron          | Base cream DAC   | 14J07-T11-015975  | 2              |
| Fagron          | Base cream DAC   | 14F06-T04-013010  | 1              |
| Fagron          | Base cream DAC   | 15117-T01_028772  | 1              |
| Fagron          | Base cream DAC   | 15117-T03-028775  | 4              |
| Fagron          | Base cream DAC   | 16B15-T01-030274  | 9              |
| Fagron          | Base cream DAC   | 299324            | 1              |
| Fagron          | Base cream DAC   | 16D06-T04-031914  | 8              |
| Fagron          | Base cream DAC   | 16F30-T13-034789  | 15             |
| Fagron          | Base cream DAC   | 16J11-T04-037619  | 4              |
| Fagron          | Base cream DAC   | 17A03-T08-040047  | 23             |
| Fagron          | Base cream DAC   | 17A03-T15-040074  | 8              |
| Fagron          | Base cream DAC   | 17A03-T-08-040047 | 1              |
| Fagron          | Base cream DAC   | 17A03t10040056    | 1              |
| Fagron          | Base cream DAC   | 17A03-To8-040047  | 1              |
| Fagron          | Base cream DAC   | 17E11-T10-044214  | 4              |
| Fagron          | Base cream DAC   | 17F08T04-045271   | 1              |
| Fagron          | Base cream DAC   | 17H25-T06-047736  | 30             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Base cream DAC   | 17H25-T09-047748  | 4              |
| Fagron          | Base cream DAC   | 17H25-T10-047753  | 8              |
| Fagron          | Base cream DAC   | 17H25-T12-047760  | 4              |
| Fagron          | Base cream DAC   | 17K24-T04-050495  | 3              |
| Fagron          | Base cream DAC   | 18C19-T19-053957  | 1              |
| Fagron          | Base cream DAC   | 18C19T20053962    | 1              |
| Fagron          | Base cream DAC   | 18G-T14-058090    | 1              |
| Fagron          | Base cream DAC   | 18G13-T14-058090  | 3              |
| Fagron          | Base cream DAC   | 18L20-T21         | 1              |
| Fagron          | Base cream DAC   | 19C12-T05-065270  | 1              |
| Fagron          | Base cream DAC   | 19H19-T14-070998  | 6              |
| Fagron          | Base cream DAC   | 19H19-T09-070981  | 2              |
| Fagron          | Base cream DAC   | 19G08-T05_069152  | 1              |
| Fagron          | Base cream DAC   | 15H04-T07-024983  | 2              |
| Fagron          | Base cream DAC   | 18L20-T19-062951  | 7              |
| Fagron          | Base cream DAC   | 15H04-T05-024975  | 15             |
| Fagron          | Base cream DAC   | 15C11-T04-020384  | 4              |
| Fagron          | Base cream DAC   | 14J07-T06-015957  | 5              |
| Fagron          | Base cream DAC   | 13E22t06003981    | 1              |
| Fagron          | Base cream DAC   | 19L23-T04-074063  | 1              |
| Fagron          | Base cream DAC   | 18137201          | 1              |
| Fagron          | Base cream DAC   | 20B10-T11-075393  | 1              |
| Fagron          | Base cream DAC   | 14A10-T06-009259  | 6              |
| Fagron          | Base cream DAC   | 701228-0002       | 1              |
| Fagron          | Base cream DAC   | 19D01-T13-065575  | 1              |
| Fagron          | Base cream DAC   | 5069152           | 3              |
| Fagron          | Base cream DAC   | 13C05-T06-001767  | 1              |
| Fagron          | Base cream DAC   | 13H14-T04-006218  | 3              |
| Fagron          | Base cream DAC   | 14B28T04010673    | 1              |
| Fagron          | Base cream DAC   | 14F06-T04-013010  | 1              |
| Fagron          | Base cream DAC   | 14Do8-T04-011692  | 1              |
| Fagron          | Base cream DAC   | 14J06-T08-015886  | 9              |
| Fagron          | Base cream DAC   | 14F05-T24         | 1              |
| Fagron          | Base cream DAC   | 14F05T06012961    | 1              |
| Fagron          | Base cream DAC   | 15C11-T05020388   | 1              |
| Fagron          | Base cream DAC   | 15J13-T04-026901  | 1              |
| Fagron          | Base cream DAC   | 16091901          | 1              |
| Fagron          | Base cream DAC   | 16b15t02-030277   | 1              |
| Fagron          | Base cream DAC   | 15G09-19-024414   | 1              |
| Fagron          | Base cream DAC   | 16c24-t05-031490  | 1              |
| Fagron          | Base cream DAC   | 15C11-T04-020383  | 1              |
| Fagron          | Base cream DAC   | 16b15-f04-030281  | 1              |
| Fagron          | Base cream DAC   | 16c24-t05031490   | 1              |
| Fagron          | Base cream DAC   | 16f30-t13-034789  | 2              |
| Fagron          | Base cream DAC   | 16220401          | 1              |
| Fagron          | Base cream DAC   | 117U-01309        | 1              |
| Fagron          | Base cream DAC   | 16D06-T07-0319930 | 1              |
| Fagron          | Base cream DAC   | 17A13-T09-040052  | 1              |
| Fagron          | Base cream DAC   | 17E11-T0744186    | 1              |
| Fagron          | Base cream DAC   | 17H25_T06_047736  | 1              |
| Fagron          | Base cream DAC   | 17F08-T02_045262  | 1              |
| Fagron          | Base cream DAC   | 17k24-t03-050489  | 2              |
| Fagron          | Base cream DAC   | 17h25-t06-047736  | 1              |
| Fagron          | Base cream DAC   | 17f08-t02-045262  | 1              |
| Fagron          | Base cream DAC   | 18165701          | 2              |
| Fagron          | Base cream DAC   | 18G13-T11_058079  | 1              |
| Fagron          | Base cream DAC   | 185473-1          | 1              |
| Fagron          | Base cream DAC   | 18G13-T10-058076  | 24             |
| Fagron          | Base cream DAC   | 18W23-T15-056314  | 1              |
| Fagron          | Base cream DAC   | 19G08T03069142    | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Base cream DAC   | 19Do1-T14-065578  | 1              |
| Fagron          | Base cream DAC   | 20B10-T14-075454  | 1              |
| Fagron          | Base cream DAC   | 19Go8-T04-069148  | 1              |
| Fagron          | Base cream DAC   | 93/20             | 1              |
| Fagron          | Base cream DAC   | 15G09-T19-024415  | 2              |
| Fagron          | Base cream DAC   | 12C26-T04         | 1              |
| Fagron          | Base cream DAC   | 13E22T09003991    | 1              |
| Fagron          | Base cream DAC   | 14A10-T06         | 1              |
| Fagron          | Base cream DAC   | 13K12-T04008048   | 1              |
| Fagron          | Base cream DAC   | 18L20-T17         | 1              |
| Fagron          | Base cream DAC   | 19H19-T14         | 2              |
| Fagron          | Base cream DAC   | 19H9-T09-070981   | 1              |
| Fagron          | Base cream DAC   | 19H19-T15         | 1              |
| Fagron          | Base cream DAC   | 16G20-T06-035312  | 10             |
| Fagron          | Base cream DAC   | 16b15-t01-030274  | 1              |
| Fagron          | Base cream DAC   | 17K24-T04-050494  | 5              |
| Fagron          | Base cream DAC   | 17F08T04045271    | 1              |
| Fagron          | Base cream DAC   | 18C19T21-053965   | 1              |
| Fagron          | Base cream DAC   | 20F18-T04-0812009 | 1              |
| Fagron          | Base cream DAC   | 18C-T17-053948    | 1              |
| Fagron          | Base cream DAC   | 15J15-T01-027034  | 1              |
| Fagron          | Base cream DAC   | 13E22-T08-003987  | 2              |
| Fagron          | Base cream DAC   | 13378001          | 1              |
| Fagron          | Base cream DAC   | 412/2             | 2              |
| Fagron          | Base cream DAC   | 14F05-T07-012966  | 1              |
| Fagron          | Base cream DAC   | 16B15-T01-0300274 | 1              |
| Fagron          | Base cream DAC   | 16261501          | 1              |
| Fagron          | Base cream DAC   | 16B15_T01_030274  | 1              |
| Fagron          | Base cream DAC   | 17229901          | 1              |
| Fagron          | Base cream DAC   | 17A03-T13-040070  | 1              |
| Fagron          | Base cream DAC   | 17F08-T03-05267   | 1              |
| Fagron          | Base cream DAC   | 17K24T05050498    | 1              |
| Fagron          | Base cream DAC   | 18E23-T15-156314  | 1              |
| Fagron          | Base cream DAC   | 18C19-T24-053978  | 1              |
| Fagron          | Base cream DAC   | 18C19-T16-053945  | 5              |
| Fagron          | Base cream DAC   | 18G13-T13-058087  | 5              |
| Fagron          | Base cream DAC   | 1BG13-T16-058096  | 1              |
| Fagron          | Base cream DAC   | 18E23-T19-056343  | 1              |
| Fagron          | Base cream DAC   | 76571018          | 2              |
| Fagron          | Base cream DAC   | 19C19-T22-065192  | 1              |
| Fagron          | Base cream DAC   | 19D01-T14-065578  | 1              |
| Fagron          | Base cream DAC   | 19B28-08-064729   | 1              |
| Fagron          | Base cream DAC   | 16B28-T06-064721  | 1              |
| Fagron          | Base cream DAC   | 19G08-T12-069175  | 1              |
| Fagron          | Base cream DAC   | 19H19-T10-070985  | 1              |
| Fagron          | Base cream DAC   | T06-0832501       | 1              |
| Fagron          | Base cream DAC   | T05-0812103       | 1              |
| Fagron          | Base cream DAC   | 13C05-T04-001760  | 1              |
| Fagron          | Base cream DAC   | 13E22-T04-003975  | 1              |
| Fagron          | Base cream DAC   | 13E21-T04-003894  | 4              |
| Fagron          | Base cream DAC   | 13H14-T02-006207  | 1              |
| Fagron          | Base cream DAC   | 14D08-T03-011689  | 7              |
| Fagron          | Base cream DAC   | 14A10-T05-009254  | 1              |
| Fagron          | Base cream DAC   | 14151501          | 1              |
| Fagron          | Base cream DAC   | 15241801          | 1              |
| Fagron          | Base cream DAC   | 14D08-T05-011698  | 1              |
| Fagron          | Base cream DAC   | 15C11-T07-020396  | 5              |
| Fagron          | Base cream DAC   | 295898            | 1              |
| Fagron          | Base cream DAC   | 15L17-T01-028772  | 3              |
| Fagron          | Base cream DAC   | 1614-T02-031202   | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|------------------|-------------------|----------------|
| Fagron                     | Base cream DAC   | 16C14-T03-031205  | 2              |
| Fagron                     | Base cream DAC   | 16F30-T16-034800  | 3              |
| Fagron                     | Base cream DAC   | 17A03-T11-040060  | 1              |
| Fagron                     | Base cream DAC   | 17240001          | 1              |
| Fagron                     | Base cream DAC   | 17269301          | 1              |
| Fagron                     | Base cream DAC   | 18KL20-T12-062935 | 1              |
| Fagron                     | Base cream DAC   | 19G08-T10-069169  | 7              |
| Fagron                     | Base cream DAC   | 19G08-T05-069152  | 13             |
| Fagron                     | Base cream DAC   | 20C17-T22-077640  | 7              |
| Fagron                     | Base cream DAC   | 17A03-T12-040064  | 2              |
| Fagron                     | Base cream DAC   | 17023401          | 1              |
| Fargon                     | Base cream DAC   | 13E20-T01-003865  | 1              |
| Fargon                     | Base cream DAC   | 17A03-T07-040044  | 4              |
| Fargon                     | Base cream DAC   | 17H25-T07-047741  | 2              |
| Fargon                     | Base cream DAC   | 19g08-T03-06942   | 1              |
| Fargon                     | Base cream DAC   | 19g08-T04-069148  | 1              |
| Fargon                     | Base cream DAC   | 20C02-T05-076760  | 1              |
| Fargon GmbH & Co.KG        | Base cream DAC   | 16C24-T05-031490  | 1              |
| Fargon/ Phönix             | Base cream DAC   | 14K05T06016796    | 1              |
| Fargon/AHD                 | Base cream DAC   | T04-0812009       | 1              |
| Fargon/Anzag               | Base cream DAC   | 13H14-T01-006203  | 1              |
| Fargon/Gehe                | Base cream DAC   | 27348917          | 1              |
| Fargon/Anzag               | Base cream DAC   | T03-0812006       | 1              |
| Fer. Eimermacher GmbH &... | Base cream DAC   | 47880419          | 3              |
| Ferd. Eimermacher          | Base cream DAC   | 36510319          | 3              |
| Ferd. Eimermacher          | Base cream DAC   | 3311218           | 1              |
| Ferd. Eimermacher GmbH     | Base cream DAC   | 44960616          | 1              |
| Ferd. Eimermacher GmbH     | Base cream DAC   | 72240417          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 6671116           | 4              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 47870419          | 3              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 71950619          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 60640519          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 14120715          | 4              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 51590217          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 63340317          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 14130817          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 14110817          | 2              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 61371217          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 72250417          | 1              |
| Ferd. Eimermacher GmbH ... | Base cream DAC   | 29220416          | 3              |
| Ferd. Eimermacher/Sanac... | Base cream DAC   | 47880419          | 2              |
| Ferd.Eimermacher GmbH/ ... | Base cream DAC   | 14120715          | 3              |
| Ferdi                      | Base cream DAC   | 21220113          | 1              |
| Ferdinand Eimermacher      | Base cream DAC   | 56590714          | 1              |
| Ferdinand Eimermacher      | Base cream DAC   | 57090315          | 3              |
| Ferdinand Eimermacher      | Base cream DAC   | 61361217          | 4              |
| Ferdinand Eimermacher      | Base cream DAC   | 80340218          | 6              |
| Ferdinand Eimermacher      | Base cream DAC   | 95980718          | 3              |
| Ferdinand Eimermacher      | Base cream DAC   | 3311218           | 2              |
| Ferdinand Eimermacher      | Base cream DAC   | 47880419          | 3              |
| Ferdinand Eimermacher      | Base cream DAC   | 80400719          | 1              |
| Ferdinand Eimermacher/ ... | Base cream DAC   | 36510319          | 2              |
| Fiebig                     | Base cream DAC   | 16135001          | 1              |
| Fiebig                     | Base cream DAC   | 6002237010        | 1              |
| Fiebig                     | Base cream DAC   | 17003201          | 1              |
| Fiebig                     | Base cream DAC   | 55360616          | 1              |
| Fiebig                     | Base cream DAC   | 17014401          | 1              |
| Fiebig                     | Base cream DAC   | 17029101          | 1              |
| Fiebig                     | Base cream DAC   | 17019501          | 1              |
| Fiebig                     | Base cream DAC   | 17010001          | 1              |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-------------------|------------------|------------------|----------------|
| Fiebig            | Base cream DAC   | 17121501         | 1              |
| Fiebig            | Base cream DAC   | 17240301         | 1              |
| Fiebig            | Base cream DAC   | 14140817         | 2              |
| Fiebig            | Base cream DAC   | 17267701         | 1              |
| Fiebig            | Base cream DAC   | 18091102         | 1              |
| Fiebig            | Base cream DAC   | 18166401         | 1              |
| Fiebig            | Base cream DAC   | 18270101         | 1              |
| Fiebig            | Base cream DAC   | 18269501         | 1              |
| Fiebig            | Base cream DAC   | 18270901         | 1              |
| Fiebig            | Base cream DAC   | 18G13-T10-058076 | 1              |
| Fiebig            | Base cream DAC   | 92080819         | 1              |
| Fiebig            | Base cream DAC   | 19240401         | 1              |
| Fiebig            | Base cream DAC   | 19270201         | 1              |
| Fiebig            | Base cream DAC   | 20003191001      | 2              |
| Caelo             | Base cream DAC   | 16F30-T034792    | 1              |
| Caelo             | Base cream DAC   | 19240601         | 10             |
| Caelo             | Base cream DAC   | 19240701         | 21             |
| Fagron            | Base cream DAC   | 16D06-T05-031922 | 1              |
| Finteler Apotheke | Base cream DAC   | 16325801         | 1              |
| Finze             | Base cream DAC   | 12174901         | 1              |
| Fischar           | Base cream DAC   | 17K24-To3-050489 | 1              |
| Frago/Gehe        | Base cream DAC   | 16J11-T01-037607 | 1              |
| Frago/Gehe        | Base cream DAC   | 17A03-T11-040060 | 1              |
| Frago/Gehe        | Base cream DAC   | 17K24-T04-050495 | 2              |
| Fragon            | Base cream DAC   | 13E23-T15-005569 | 1              |
| Fragon/Phoenix    | Base cream DAC   | 18G13-T15-058093 | 1              |
| Fragon/Phoenix    | Base cream DAC   | 18G13-T14-058090 | 1              |
| Fragon/Sanacorp   | Base cream DAC   | 18G13-T12-058084 | 1              |
| Fragon/Sanacorp   | Base cream DAC   | 18L20-T12-062936 | 1              |
| Fragon/Sanacorp   | Base cream DAC   | 19D01-T15-065582 | 3              |
| Frau Brinn-Holtz  | Base cream DAC   | 16005401         | 1              |
| Gatt-Koller       | Base cream DAC   | 1802206          | 1              |
| gehe              | Base cream DAC   | 16005501         | 1              |
| gehe              | Base cream DAC   | 17230001         | 1              |
| gehe              | Base cream DAC   | 8004996004       | 1              |
| gehe              | Base cream DAC   | 19174001         | 1              |
| Gehe              | Base cream DAC   | 207/2            | 1              |
| Gehe              | Base cream DAC   | 207/1            | 4              |
| Gehe              | Base cream DAC   | 219/1            | 3              |
| Gehe              | Base cream DAC   | 12005301         | 1              |
| Gehe              | Base cream DAC   | 219/2            | 3              |
| Gehe              | Base cream DAC   | 229/2            | 4              |
| Gehe              | Base cream DAC   | 234/1            | 1              |
| Gehe              | Base cream DAC   | 234/2            | 4              |
| Gehe              | Base cream DAC   | 1230113          | 1              |
| Gehe              | Base cream DAC   | 275277           | 1              |
| Gehe              | Base cream DAC   | 12262901         | 1              |
| Gehe              | Base cream DAC   | 12347301         | 1              |
| Gehe              | Base cream DAC   | 111105101        | 1              |
| Gehe              | Base cream DAC   | 275590           | 1              |
| Gehe              | Base cream DAC   | 13012501         | 2              |
| Gehe              | Base cream DAC   | 319/1            | 2              |
| Gehe              | Base cream DAC   | 279961           | 1              |
| Gehe              | Base cream DAC   | 329/1            | 3              |
| Gehe              | Base cream DAC   | 13E22T05003978   | 1              |
| Gehe              | Base cream DAC   | 329/2            | 1              |
| Gehe              | Base cream DAC   | 1306044-01       | 1              |
| Gehe              | Base cream DAC   | 340/1            | 2              |
| Gehe              | Base cream DAC   | 280082           | 1              |
| Gehe              | Base cream DAC   | 13310901         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Gehe            | Base cream DAC   | 282769           | 1              |
| Gehe            | Base cream DAC   | 13199101         | 1              |
| Gehe            | Base cream DAC   | cdbgsdgb         | 1              |
| Gehe            | Base cream DAC   | 1302036-01       | 1              |
| Gehe            | Base cream DAC   | 13198501         | 1              |
| Gehe            | Base cream DAC   | 283974           | 1              |
| Gehe            | Base cream DAC   | 283975           | 1              |
| Gehe            | Base cream DAC   | 286088           | 1              |
| Gehe            | Base cream DAC   | 287941           | 1              |
| Gehe            | Base cream DAC   | 287947           | 1              |
| Gehe            | Base cream DAC   | 291025           | 1              |
| Gehe            | Base cream DAC   | 15040801         | 1              |
| Gehe            | Base cream DAC   | 1502008-01       | 1              |
| Gehe            | Base cream DAC   | 14374201         | 1              |
| Gehe            | Base cream DAC   | 15064401         | 1              |
| Gehe            | Base cream DAC   | 15040901         | 1              |
| Gehe            | Base cream DAC   | 15164601         | 1              |
| Gehe            | Base cream DAC   | 15167001         | 1              |
| Gehe            | Base cream DAC   | 15191001         | 1              |
| Gehe            | Base cream DAC   | 1502026-01       | 1              |
| Gehe            | Base cream DAC   | 294834           | 1              |
| Gehe            | Base cream DAC   | 15173301         | 1              |
| Gehe            | Base cream DAC   | 15315401         | 1              |
| Gehe            | Base cream DAC   | 1508001-01       | 1              |
| Gehe            | Base cream DAC   | 15357701         | 2              |
| Gehe            | Base cream DAC   | 15391201         | 1              |
| Gehe            | Base cream DAC   | 15391001         | 1              |
| Gehe            | Base cream DAC   | 15420001         | 1              |
| Gehe            | Base cream DAC   | 16055901         | 2              |
| Gehe            | Base cream DAC   | 16103901         | 2              |
| Gehe            | Base cream DAC   | 16055601         | 1              |
| Gehe            | Base cream DAC   | 16132001         | 1              |
| Gehe            | Base cream DAC   | 1603029-01       | 1              |
| Gehe            | Base cream DAC   | 16205501         | 1              |
| Gehe            | Base cream DAC   | 16136101         | 1              |
| Gehe            | Base cream DAC   | 16232301         | 1              |
| Gehe            | Base cream DAC   | 45330616         | 1              |
| Gehe            | Base cream DAC   | 16231901         | 1              |
| Gehe            | Base cream DAC   | 16232201         | 1              |
| Gehe            | Base cream DAC   | 16240301         | 2              |
| Gehe            | Base cream DAC   | 16260801         | 2              |
| Gehe            | Base cream DAC   | 16261101         | 2              |
| Gehe            | Base cream DAC   | 16326101         | 7              |
| Gehe            | Base cream DAC   | 16238201         | 1              |
| Gehe            | Base cream DAC   | 17010201         | 1              |
| Gehe            | Base cream DAC   | 305731           | 1              |
| Gehe            | Base cream DAC   | 17003501         | 1              |
| Gehe            | Base cream DAC   | 17023301         | 2              |
| Gehe            | Base cream DAC   | 17097401         | 1              |
| Gehe            | Base cream DAC   | 16326001         | 1              |
| Gehe            | Base cream DAC   | 17090601         | 1              |
| Gehe            | Base cream DAC   | 306620           | 1              |
| Gehe            | Base cream DAC   | 29870117         | 1              |
| Gehe            | Base cream DAC   | 17124001         | 1              |
| Gehe            | Base cream DAC   | 17A03-T08-040047 | 1              |
| Gehe            | Base cream DAC   | 16G20-T05-035308 | 1              |
| Gehe            | Base cream DAC   | 17224901         | 1              |
| Gehe            | Base cream DAC   | 6004859005       | 2              |
| Gehe            | Base cream DAC   | 17229901         | 1              |
| Gehe            | Base cream DAC   | 17225501         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Gehe            | Base cream DAC   | 17243401          | 1              |
| Gehe            | Base cream DAC   | 17251601          | 1              |
| Gehe            | Base cream DAC   | 17267301          | 1              |
| Gehe            | Base cream DAC   | 17000917          | 1              |
| Gehe            | Base cream DAC   | 17266601          | 1              |
| Gehe            | Base cream DAC   | 17266901          | 1              |
| Gehe            | Base cream DAC   | 17000922          | 1              |
| Gehe            | Base cream DAC   | 17267501          | 3              |
| Gehe            | Base cream DAC   | 17349601          | 1              |
| Gehe            | Base cream DAC   | 18000497          | 1              |
| Gehe            | Base cream DAC   | 27340917          | 1              |
| Gehe            | Base cream DAC   | 8003325004        | 3              |
| Gehe            | Base cream DAC   | 17K24-T07-050507  | 1              |
| Gehe            | Base cream DAC   | 18016701          | 1              |
| Gehe            | Base cream DAC   | 18000964          | 1              |
| Gehe            | Base cream DAC   | 18085202          | 1              |
| Gehe            | Base cream DAC   | 18015301          | 1              |
| Gehe            | Base cream DAC   | 18138201          | 1              |
| Gehe            | Base cream DAC   | 18000955          | 1              |
| Gehe            | Base cream DAC   | 17243501          | 1              |
| Gehe            | Base cream DAC   | 18138001          | 1              |
| Gehe            | Base cream DAC   | 18138301          | 1              |
| Gehe            | Base cream DAC   | 8003325003        | 1              |
| Gehe            | Base cream DAC   | 18166401          | 1              |
| Gehe            | Base cream DAC   | 18138401          | 1              |
| Gehe            | Base cream DAC   | 18193101          | 4              |
| Gehe            | Base cream DAC   | 8004134006        | 1              |
| Gehe            | Base cream DAC   | 18232401          | 1              |
| Gehe            | Base cream DAC   | 18232501          | 1              |
| Gehe            | Base cream DAC   | 18005751          | 1              |
| Gehe            | Base cream DAC   | 18193301          | 1              |
| Gehe            | Base cream DAC   | 8004134007        | 1              |
| Gehe            | Base cream DAC   | 18269001          | 1              |
| Gehe            | Base cream DAC   | 18269401          | 1              |
| Gehe            | Base cream DAC   | 18232601          | 1              |
| Gehe            | Base cream DAC   | 18269501          | 1              |
| Gehe            | Base cream DAC   | 8004134004        | 1              |
| Gehe            | Base cream DAC   | 18270501          | 2              |
| Gehe            | Base cream DAC   | 8004996001        | 3              |
| Gehe            | Base cream DAC   | 19000946          | 2              |
| Gehe            | Base cream DAC   | 19003601          | 1              |
| Gehe            | Base cream DAC   | 19052801          | 1              |
| Gehe            | Base cream DAC   | 19117401          | 3              |
| Gehe            | Base cream DAC   | 8003325007        | 1              |
| Gehe            | Base cream DAC   | 19002691          | 1              |
| Gehe            | Base cream DAC   | 8004134008        | 1              |
| Gehe            | Base cream DAC   | 8004996002        | 1              |
| Gehe            | Base cream DAC   | 8004996004        | 2              |
| Gehe            | Base cream DAC   | 19174001          | 1              |
| Gehe            | Base cream DAC   | 19174301          | 4              |
| Gehe            | Base cream DAC   | 8004996005        | 2              |
| Gehe            | Base cream DAC   | 19Go08-To9-o69166 | 1              |
| Gehe            | Base cream DAC   | 19270401          | 2              |
| Gehe            | Base cream DAC   | 19270101          | 1              |
| Gehe            | Base cream DAC   | 8005713013        | 1              |
| Gehe            | Base cream DAC   | 20000580001       | 1              |
| Gehe            | Base cream DAC   | 15250701          | 1              |
| Gehe            | Base cream DAC   | 15250501          | 1              |
| Gehe            | Base cream DAC   | 15250101          | 1              |
| Gehe            | Base cream DAC   | 15272301          | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|---------------------------|------------------|------------------|----------------|
| Gehe                      | Base cream DAC   | 15357601         | 1              |
| Gehe                      | Base cream DAC   | 15390401         | 1              |
| GEHE                      | Base cream DAC   | 12174801         | 1              |
| GEHE                      | Base cream DAC   | 305712           | 1              |
| GEHE                      | Base cream DAC   | 304359           | 1              |
| GEHE                      | Base cream DAC   | 306621           | 1              |
| GEHE                      | Base cream DAC   | 305713           | 1              |
| GEHE                      | Base cream DAC   | 307965           | 1              |
| GEHE                      | Base cream DAC   | 307964           | 1              |
| GEHE                      | Base cream DAC   | 310723           | 1              |
| GEHE                      | Base cream DAC   | 310722           | 1              |
| GEHE                      | Base cream DAC   | 17000071         | 1              |
| GEHE                      | Base cream DAC   | 18000964         | 1              |
| GEHE                      | Base cream DAC   | 18081701         | 1              |
| GEHE                      | Base cream DAC   | 18105101         | 1              |
| GEHE                      | Base cream DAC   | 18137901         | 1              |
| GEHE                      | Base cream DAC   | 45940718         | 1              |
| GEHE                      | Base cream DAC   | 18166801         | 1              |
| GEHE                      | Base cream DAC   | 18193001         | 1              |
| GEHE                      | Base cream DAC   | 18270401         | 1              |
| GEHE                      | Base cream DAC   | 8004134005       | 2              |
| GEHE                      | Base cream DAC   | 19003201         | 1              |
| GEHE                      | Base cream DAC   | 19116901         | 1              |
| Caelo                     | Base cream DAC   | 14053501         | 1              |
| Bombastus                 | Base cream DAC   | 19004723         | 1              |
| Caelo                     | Base cream DAC   | 16G20-T04-035305 | 1              |
| Caelo                     | Base cream DAC   | 19000751003      | 5              |
| Caelo                     | Base cream DAC   | 20002875001      | 1              |
| Euro OTC                  | Base cream DAC   | 16B15-T04-030281 | 1              |
| Gehe / Spinnrad           | Base cream DAC   | 16325801         | 1              |
| Fagron                    | Base cream DAC   | 3987             | 2              |
| Caelo                     | Base cream DAC   | 20002873001      | 4              |
| Caelo                     | Base cream DAC   | 16B15-T02-030277 | 2              |
| Caelo                     | Base cream DAC   | 16B15-T04-030281 | 4              |
| Fagron                    | Base cream DAC   | 15h04-t06-024978 | 2              |
| Gehe 07.12.18             | Base cream DAC   | 18167001         | 1              |
| Gehe 13.10.2017 und 19... | Base cream DAC   | 72240417         | 1              |
| GEHE 15.05.2014           | Base cream DAC   | 14053701         | 1              |
| Gehe 21-01-2019           | Base cream DAC   | 18192601         | 1              |
| GEHE 24.06.2014           | Base cream DAC   | 14091601         | 1              |
| Gehe 25.02.15             | Base cream DAC   | 14325401         | 1              |
| Gehe 28.05.2014           | Base cream DAC   | 14090601         | 1              |
| gehe 28.11.13             | Base cream DAC   | 340/2            | 1              |
| Gehe 28.5.18              | Base cream DAC   | 80330218         | 1              |
| Gehe am 08.04.2014        | Base cream DAC   | 412/1            | 2              |
| Gehe amax                 | Base cream DAC   | 8003325006       | 1              |
| Gehe amax                 | Base cream DAC   | 8004134007       | 1              |
| Gehe amax                 | Base cream DAC   | 8004996002       | 1              |
| Gehe amax                 | Base cream DAC   | 8004996005       | 1              |
| Gehe,27.0415              | Base cream DAC   | 14F27-T03-013614 | 1              |
| Bombastus                 | Base cream DAC   | 6862441          | 4              |
| Caelo                     | Base cream DAC   | 1912001          | 1              |
| Gehe/Beyvers              | Base cream DAC   | 440/2            | 1              |
| Bombastus                 | Base cream DAC   | 299945           | 1              |
| Bombastus                 | Base cream DAC   | 308805           | 2              |
| Bombastus                 | Base cream DAC   | 308800           | 3              |
| Bombastus                 | Base cream DAC   | 307966           | 1              |
| Bombastus                 | Base cream DAC   | 310756           | 4              |
| Bombastus                 | Base cream DAC   | 17000926         | 9              |
| Bombastus                 | Base cream DAC   | 1700905          | 1              |

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| Supplier         | Substance      | Batch                 | Spectra |
|------------------|----------------|-----------------------|---------|
| Bombastus        | Base cream DAC | 18003933              | 2       |
| Bombastus        | Base cream DAC | 19000943              | 9       |
| Bombastus        | Base cream DAC | 287115                | 2       |
| Bombastus        | Base cream DAC | 263429                | 1       |
| Bombastus        | Base cream DAC | 286160                | 3       |
| Bombastus        | Base cream DAC | 287116                | 1       |
| Bombastus        | Base cream DAC | 270000                | 2       |
| Bombastus        | Base cream DAC | 266749                | 1       |
| Bombastus        | Base cream DAC | 269996                | 1       |
| Bombastus        | Base cream DAC | 283975                | 1       |
| Caelo            | Base cream DAC | 1331502               | 1       |
| Caelo            | Base cream DAC | 140409                | 1       |
| Caelo            | Base cream DAC | 14177601              | 1       |
| Caelo            | Base cream DAC | 14D08-T05-011698      | 1       |
| Caelo            | Base cream DAC | 14151701              | 1       |
| Caelo            | Base cream DAC | 14325101              | 2       |
| Caelo            | Base cream DAC | 14374301              | 2       |
| Caelo            | Base cream DAC | 14j07T06015957        | 1       |
| Caelo            | Base cream DAC | 15166701              | 4       |
| Caelo            | Base cream DAC | 1541901               | 1       |
| Caelo            | Base cream DAC | 1291116               | 1       |
| Caelo            | Base cream DAC | 16319501              | 2       |
| Caelo            | Base cream DAC | 16261101/1170117      | 1       |
| Caelo            | Base cream DAC | 1040417               | 1       |
| Caelo            | Base cream DAC | 17129901              | 17      |
| Caelo            | Base cream DAC | 17136601              | 3       |
| Caelo            | Base cream DAC | 1040917/17147401      | 1       |
| Caelo            | Base cream DAC | 1081117/17229201      | 1       |
| Caelo            | Base cream DAC | 17240801              | 7       |
| Caelo            | Base cream DAC | 18085202/1300518      | 1       |
| Caelo            | Base cream DAC | Chargennummer18193301 | 1       |
| Caelo            | Base cream DAC | 29550618              | 1       |
| Caelo            | Base cream DAC | 19020201              | 15      |
| Caelo            | Base cream DAC | 18L20-T11-062930      | 1       |
| Caelo            | Base cream DAC | 19119401              | 1       |
| Caelo            | Base cream DAC | 19003278              | 1       |
| Caelo            | Base cream DAC | 16F30-T14-034792      | 3       |
| Caelo            | Base cream DAC | 15F30-T14-034792      | 1       |
| Gehe/Ensbona     | Base cream DAC | 47870419              | 1       |
| Gehe/Ensbona     | Base cream DAC | 40140120              | 2       |
| Gehe/EuRho       | Base cream DAC | 1512002-01            | 1       |
| Gehe/EuRho       | Base cream DAC | 91340916              | 1       |
| Gehe/EuRho       | Base cream DAC | 93740318              | 1       |
| Gehe/EuRho       | Base cream DAC | 76571018              | 1       |
| Gehe/EuRho       | Base cream DAC | 80390719              | 1       |
| Gehe/EuRho       | Base cream DAC | 4240919               | 2       |
| Euro OTC         | Base cream DAC | 130102301             | 1       |
| Euro OTC         | Base cream DAC | 1307045-01            | 1       |
| Euro OTC         | Base cream DAC | 1501008-01            | 1       |
| Euro OTC         | Base cream DAC | 3854056               | 1       |
| Fagron           | Base cream DAC | 17k24-T03-050489      | 2       |
| Fagron           | Base cream DAC | 20B10-T12-075397      | 1       |
| Fagron           | Base cream DAC | 16G20-T04-035305      | 12      |
| Gehe/GMP         | Base cream DAC | 18G13-T15-058093      | 1       |
| Gehe/GMP         | Base cream DAC | 19G08-T09-069166      | 1       |
| Gehe/GMP         | Base cream DAC | 18L20-T13-062940      | 1       |
| Gehe/P.W.Beyvers | Base cream DAC | 731/1                 | 1       |
| Gehe/P.W.Beyvers | Base cream DAC | 731/2                 | 1       |
| Gehe/P.W.Beyvers | Base cream DAC | 731/3                 | 3       |
| Gehe/Pharmachem  | Base cream DAC | 17267301              | 1       |

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| <b>Supplier</b>     | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|---------------------|------------------|----------------------|----------------|
| Caelo               | Base cream DAC   | 151564501            | 1              |
| Caelo               | Base cream DAC   | 15184401             | 16             |
| Caelo               | Base cream DAC   | 15318901             | 8              |
| Caelo               | Base cream DAC   | 17240301-20171127Ma8 | 1              |
| Euro OTC            | Base cream DAC   | 150202601            | 1              |
| Caelo               | Base cream DAC   | 19117801             | 15             |
| Fagron              | Base cream DAC   | 18126301             | 2              |
| Geibo/Noweda        | Base cream DAC   | 176267801            | 1              |
| Geibo/Noweda        | Base cream DAC   | 17349801             | 2              |
| Caelo               | Base cream DAC   | 19170401             | 7              |
| Caelo               | Base cream DAC   | 16325101             | 4              |
| Caelo               | Base cream DAC   | 17035801             | 6              |
| GMP/Noweda          | Base cream DAC   | 18G13-T16-058096     | 1              |
| Gutenberg-Apotheke  | Base cream DAC   | 13378201             | 1              |
| Gutenberg-Apotheke  | Base cream DAC   | 14035801             | 1              |
| H. Lamotte          | Base cream DAC   | 8004134007           | 1              |
| H.Lamotte Oils/AHD  | Base cream DAC   | 6003682012           | 2              |
| Hedinger            | Base cream DAC   | 1309006-01           | 3              |
| Hedinger            | Base cream DAC   | 281718               | 1              |
| HEDINGER            | Base cream DAC   | 18269501             | 1              |
| Hedinger / Noweda   | Base cream DAC   | 17079201             | 2              |
| Hedinger/AHD        | Base cream DAC   | 800414005            | 1              |
| Hedinger/Phoenix    | Base cream DAC   | 7580418              | 2              |
| Henry La Motte/AHD  | Base cream DAC   | 80005713014          | 1              |
| Henry La Motte/AHD  | Base cream DAC   | 8007236001           | 1              |
| Henry La Motte/Sana | Base cream DAC   | 8004996005           | 1              |
| henry lamotte       | Base cream DAC   | 6002237003           | 1              |
| henry lamotte       | Base cream DAC   | 6003682013           | 2              |
| henry lamotte       | Base cream DAC   | 6004859001           | 2              |
| henry lamotte       | Base cream DAC   | 8003325003           | 2              |
| henry lamotte       | Base cream DAC   | 6004859005           | 1              |
| henry lamotte       | Base cream DAC   | 8003325006           | 1              |
| henry lamotte       | Base cream DAC   | 8005713009           | 1              |
| Henry Lamotte       | Base cream DAC   | 5163400              | 1              |
| Henry Lamotte       | Base cream DAC   | 5100000              | 1              |
| Henry Lamotte       | Base cream DAC   | 5215400              | 1              |
| Henry Lamotte       | Base cream DAC   | 5289000              | 1              |
| Henry Lamotte       | Base cream DAC   | 5321000              | 1              |
| Henry Lamotte       | Base cream DAC   | 5322300              | 3              |
| Henry Lamotte       | Base cream DAC   | 5407700              | 1              |
| Henry Lamotte       | Base cream DAC   | 5408100              | 1              |
| Henry Lamotte       | Base cream DAC   | 5408000              | 1              |
| Henry Lamotte       | Base cream DAC   | 5489800              | 1              |
| Henry Lamotte       | Base cream DAC   | 5321100              | 1              |
| Henry Lamotte       | Base cream DAC   | 5489900              | 2              |
| Henry Lamotte       | Base cream DAC   | 5408300              | 1              |
| Henry Lamotte       | Base cream DAC   | 5490100              | 1              |
| Henry Lamotte       | Base cream DAC   | 5537100              | 2              |
| Henry Lamotte       | Base cream DAC   | 5909300              | 1              |
| Henry Lamotte       | Base cream DAC   | 6002237003           | 3              |
| Henry Lamotte       | Base cream DAC   | 5788200              | 1              |
| Henry Lamotte       | Base cream DAC   | 5909500              | 1              |
| Henry Lamotte       | Base cream DAC   | 6002237002           | 3              |
| Henry Lamotte       | Base cream DAC   | 6002237001           | 2              |
| Henry Lamotte       | Base cream DAC   | 6003682004           | 2              |
| Henry Lamotte       | Base cream DAC   | 6003682013           | 2              |
| Henry Lamotte       | Base cream DAC   | 6003682012           | 1              |
| Henry Lamotte       | Base cream DAC   | 6003682016           | 2              |
| Henry Lamotte       | Base cream DAC   | 6004859001           | 1              |
| Henry Lamotte       | Base cream DAC   | 6004859003           | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Henry Lamotte              | Base cream DAC   | 6004859005   | 2              |
| Henry Lamotte              | Base cream DAC   | 6004859006   | 3              |
| Henry Lamotte              | Base cream DAC   | 8003325005   | 6              |
| Henry Lamotte              | Base cream DAC   | 8003325010   | 1              |
| Henry Lamotte              | Base cream DAC   | 8003325007   | 1              |
| Henry Lamotte              | Base cream DAC   | 8004134006   | 2              |
| Henry Lamotte              | Base cream DAC   | 8004134007   | 4              |
| Henry Lamotte              | Base cream DAC   | 8003325003   | 1              |
| Henry Lamotte              | Base cream DAC   | 8004134005   | 5              |
| Henry Lamotte              | Base cream DAC   | 8004996001   | 3              |
| Henry Lamotte              | Base cream DAC   | 8004996005   | 5              |
| Henry Lamotte              | Base cream DAC   | 8005713009   | 3              |
| Henry Lamotte              | Base cream DAC   | 8005713005   | 1              |
| Henry Lamotte              | Base cream DAC   | 8005713013   | 1              |
| Henry Lamotte              | Base cream DAC   | 5909600      | 2              |
| HENRY LAMOTTE              | Base cream DAC   | 8005713004   | 2              |
| Henry Lamotte / Kehr / ... | Base cream DAC   | 8004996005   | 1              |
| henry Lamotte / Noweda     | Base cream DAC   | 5408000      | 1              |
| Henry Lamotte / Noweda     | Base cream DAC   | 5909200      | 1              |
| Henry Lamotte / Noweda     | Base cream DAC   | 8005713004   | 2              |
| Henry Lamotte / Noweda     | Base cream DAC   | 8005713013   | 1              |
| Henry Lamotte / Phoenix    | Base cream DAC   | 8005713009   | 1              |
| Henry Lamotte /AHD         | Base cream DAC   | 5910000      | 1              |
| Henry Lamotte /AHD         | Base cream DAC   | 6003682017   | 1              |
| Henry Lamotte /Noveda      | Base cream DAC   | 5909600      | 1              |
| Henry Lamotte GmbH/ Now... | Base cream DAC   | 8004996005   | 1              |
| Henry Lamotte GMBH/AHD     | Base cream DAC   | 8005713012   | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 5215600      | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 5321200      | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 5322400      | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 5407900      | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 60260        | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 6002237006   | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 6002237005   | 2              |
| Henry Lamotte Oils         | Base cream DAC   | 8003325010   | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 8004996004   | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 8004996005   | 1              |
| Henry Lamotte Oils         | Base cream DAC   | 6018791001   | 1              |
| henry lamotte oils / Al... | Base cream DAC   | 8004996004   | 1              |
| henry lamotte oils / Al... | Base cream DAC   | 8005713004   | 1              |
| Henry Lamotte Oils / Gehe  | Base cream DAC   | 5407700      | 1              |
| Henry Lamotte Oils / No... | Base cream DAC   | 5788200      | 1              |
| Henry Lamotte Oils / No... | Base cream DAC   | 5909500      | 1              |
| Henry Lamotte Oils / No... | Base cream DAC   | 6002237005   | 1              |
| Henry Lamotte Oils / Ph... | Base cream DAC   | 5537000      | 1              |
| henry lamotte oils gmbh    | Base cream DAC   | 5537000      | 1              |
| henry lamotte oils gmbh    | Base cream DAC   | 5650900      | 1              |
| henry lamotte oils gmbh    | Base cream DAC   | 6004859002   | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 5490100      | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 5650600      | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 5650900      | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 5651100      | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 5787800      | 2              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 6004859004   | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 6004859005   | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 8004134004   | 1              |
| Henry Lamotte oils GmbH    | Base cream DAC   | 8004996003   | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 6002237004   | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5215500      | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5151700      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|----------------------------|------------------|---------------------|----------------|
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5215300             | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5321000             | 4              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5407700             | 5              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5537000             | 12             |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5909400             | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5909600             | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 5909700             | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 6002237002          | 5              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 6002237003          | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 6003682004          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 600382004           | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 6003682015          | 3              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8003325007          | 3              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 80003325007         | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004134006          | 3              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004134007          | 4              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004134008          | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004134005          | 5              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004134004          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004996001          | 3              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004996003          | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004996005          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8005713009          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8004996004          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8005713013          | 2              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8007236001          | 1              |
| Henry Lamotte Oils GmbH    | Base cream DAC   | 8007236002          | 1              |
| Henry Lamotte Oils GMBH    | Base cream DAC   | 170124BC/6003682013 | 1              |
| HENRY LAMOTTE OILS GmbH    | Base cream DAC   | 6004859004          | 1              |
| henry lamotte Oils GmbH... | Base cream DAC   | 8003325005          | 5              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8003325006          | 1              |
| Henry Lamotte Oils GMBH... | Base cream DAC   | 170612BC/6004859002 | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 6003682015          | 2              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 6004859003          | 2              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 6004859004          | 2              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 6004859006          | 2              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004134006          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004134008          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004134005          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004996003          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004996004          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8005713009          | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 5489900             | 1              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 8004134007          | 2              |
| Henry Lamotte Oils GmbH... | Base cream DAC   | 6004859002          | 1              |
| Henry Lamotte Oils/ Gehe   | Base cream DAC   | 5321000             | 2              |
| Henry Lamotte Oils/ San... | Base cream DAC   | 5909700             | 1              |
| Henry Lamotte Oils/Phönix  | Base cream DAC   | 5788700             | 2              |
| Henry Lamotte Oils/Sana... | Base cream DAC   | 5650600             | 1              |
| Henry Lamotte Olis GmbH    | Base cream DAC   | 5651100             | 1              |
| Henry Lamotte Sanacorp     | Base cream DAC   | 6004859001          | 1              |
| Henry Lamotte Sanacorp     | Base cream DAC   | 8003325004          | 2              |
| Henry Lamotte Sanacorp     | Base cream DAC   | 8004996003          | 1              |
| Henry Lamotte/ Phönix      | Base cream DAC   | 8004134005          | 2              |
| Henry Lamotte/ AHDE 02...  | Base cream DAC   | 5537000             | 1              |
| Henry Lamotte/ Alliance    | Base cream DAC   | 6004859002          | 1              |
| Henry Lamotte/ Alliance    | Base cream DAC   | 8004996002          | 1              |
| Henry Lamotte/ Alliance    | Base cream DAC   | 8005713009          | 1              |
| Henry Lamotte/ Gehe        | Base cream DAC   | 8003325004          | 1              |
| Henry Lamotte/ Gehe        | Base cream DAC   | 8004134005          | 1              |

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| <b>Supplier</b>         | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-------------------------|------------------|--------------|----------------|
| Henry Lamotte/ Gehe     | Base cream DAC   | 8004996002   | 1              |
| Henry Lamotte/ Gehe     | Base cream DAC   | 8004996005   | 1              |
| Henry Lamotte/ Gehe     | Base cream DAC   | 8005713013   | 2              |
| Henry Lamotte/ Kehr     | Base cream DAC   | 8004134008   | 1              |
| Henry Lamotte/ Kehr     | Base cream DAC   | 8004134005   | 2              |
| Henry Lamotte/ Kehr     | Base cream DAC   | 8005713014   | 2              |
| Henry Lamotte/ Krieger  | Base cream DAC   | 6003682004   | 1              |
| Henry Lamotte/ Krieger  | Base cream DAC   | 6003682013   | 2              |
| Henry Lamotte/ Noweda   | Base cream DAC   | 532220       | 1              |
| Henry Lamotte/ Noweda   | Base cream DAC   | 5537300      | 4              |
| Henry Lamotte/ Noweda   | Base cream DAC   | 5537000      | 2              |
| Henry Lamotte/ Noweda   | Base cream DAC   | 5909300      | 1              |
| Henry Lamotte/ Phönix   | Base cream DAC   | 8003325003   | 1              |
| Henry Lamotte/ VDL      | Base cream DAC   | 9003682014   | 1              |
| Henry lamotte/AHD       | Base cream DAC   | 8004134011   | 1              |
| Henry lamotte/AHD       | Base cream DAC   | 8003325011   | 1              |
| Henry Lamotte/AHD       | Base cream DAC   | 5909700      | 2              |
| Henry Lamotte/AHD       | Base cream DAC   | 5909900      | 1              |
| Henry Lamotte/AHD       | Base cream DAC   | 6004859003   | 2              |
| Henry Lamotte/AHD       | Base cream DAC   | 8003325006   | 1              |
| Henry Lamotte/AHD       | Base cream DAC   | 8003325007   | 2              |
| Henry Lamotte/AHD       | Base cream DAC   | 8004996004   | 2              |
| Henry Lamotte/AHD       | Base cream DAC   | 8005713008   | 3              |
| Henry Lamotte/AHD       | Base cream DAC   | 8005713014   | 3              |
| Henry Lamotte/AHD       | Base cream DAC   | 8005713011   | 1              |
| Henry Lamotte/AHD       | Base cream DAC   | 6018791005   | 2              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5289200      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5408300      | 2              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5537600      | 2              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5651100      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5651200      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5788600      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5788700      | 3              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5909800      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 5909500      | 1              |
| Henry Lamotte/Anzag     | Base cream DAC   | 6002237009   | 2              |
| Henry Lamotte/Gehe      | Base cream DAC   | 8004996005   | 1              |
| Henry Lamotte/Gehe      | Base cream DAC   | 8005713009   | 1              |
| Henry Lamotte/Gehe      | Base cream DAC   | 8005713013   | 1              |
| Henry Lamotte/Gehe      | Base cream DAC   | 6018791002   | 1              |
| Henry Lamotte/Noewda    | Base cream DAC   | 6004859001   | 1              |
| Henry Lamotte/OG        | Base cream DAC   | 6002237002   | 1              |
| Henry Lamotte/OG        | Base cream DAC   | 6003682013   | 1              |
| Henry Lamotte/Phönix    | Base cream DAC   | 6004860002   | 1              |
| Henry Lamotte/Sanacorp  | Base cream DAC   | 13140001     | 1              |
| Henry/Noweda            | Base cream DAC   | 6002237004   | 1              |
| Henry/Noweda            | Base cream DAC   | 6002237006   | 1              |
| Henry/Sanacorp          | Base cream DAC   | 600223705    | 1              |
| Henry/Sanacorp          | Base cream DAC   | 81/AKD16     | 1              |
| HENRYLAMOTTE/Gehe       | Base cream DAC   | 5408000      | 1              |
| HenryLamotteGmbH/Noweda | Base cream DAC   | 5650800      | 1              |
| Hepart                  | Base cream DAC   | 18165801     | 2              |
| Herstellung             | Base cream DAC   | 13173601     | 1              |
| Hirsch                  | Base cream DAC   | 1210054-01   | 1              |
| Holdermann              | Base cream DAC   | 280078       | 1              |
| Ichthyol                | Base cream DAC   | 6004860002   | 1              |
| Ichthyol                | Base cream DAC   | 18165401     | 1              |
| Ichthyol / Gehe         | Base cream DAC   | 14A10-T06    | 1              |
| Ichthyol-Gesellschaft   | Base cream DAC   | 16238001     | 1              |
| Ichthyol-Gesellschaft   | Base cream DAC   | 16232001     | 1              |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| Ichthyol-Gesellschaft C... | Base cream DAC | 15040701         | 1       |
| ichthyol                   | Base cream DAC | 17266801         | 1       |
| Ichthyol                   | Base cream DAC | 5407700          | 1       |
| Infecto/Phönix             | Base cream DAC | 12191901         | 1       |
| Infectopharm/Phönix        | Base cream DAC | 18192901         | 1       |
| Jenne                      | Base cream DAC | 17267701         | 1       |
| Jenne                      | Base cream DAC | 18085202         | 1       |
| Jenne                      | Base cream DAC | 18126301         | 1       |
| Jenne                      | Base cream DAC | 18138101         | 1       |
| Jenne                      | Base cream DAC | 18166301         | 1       |
| Jenne                      | Base cream DAC | 18232501         | 2       |
| Jenne                      | Base cream DAC | 18G13-Tro-058076 | 1       |
| Caelo                      | Base cream DAC | 1809             | 1       |
| Caelo                      | Base cream DAC | 19053001         | 5       |
| Caelo                      | Base cream DAC | 19003701         | 29      |
| Kehr                       | Base cream DAC | 307958           | 1       |
| Kehr                       | Base cream DAC | 17000200         | 1       |
| Kehr                       | Base cream DAC | 17000897         | 1       |
| Kehr                       | Base cream DAC | 45950718         | 1       |
| Kehr                       | Base cream DAC | 6500218          | 1       |
| KEHR / Beyvers GmbH        | Base cream DAC | 71112PML01       | 1       |
| Euro OTC                   | Base cream DAC | 80610520         | 2       |
| Kehr 04.09.2020            | Base cream DAC | 800571314        | 1       |
| Bombastus                  | Base cream DAC | 291069           | 1       |
| Caelo                      | Base cream DAC | 4918A-01309      | 1       |
| Caelo                      | Base cream DAC | 18269601         | 26      |
| Caelo                      | Base cream DAC | 19117001         | 5       |
| Caelo                      | Base cream DAC | 8005713009       | 1       |
| Klenk                      | Base cream DAC | 1205004-01       | 1       |
| Klosterring                | Base cream DAC | 17229201         | 1       |
| Klosterring                | Base cream DAC | 17225901         | 1       |
| Klosterring                | Base cream DAC | 18269001         | 1       |
| kögl                       | Base cream DAC | 1900812          | 1       |
| Kögl                       | Base cream DAC | 329110160517     | 1       |
| Kögl                       | Base cream DAC | 35402171317      | 1       |
| Kögl                       | Base cream DAC | 35402171017      | 1       |
| Kögl                       | Base cream DAC | 329110164116     | 1       |
| Kögl                       | Base cream DAC | 1800403          | 2       |
| Kögl                       | Base cream DAC | 1801872          | 2       |
| KOKO GmbH                  | Base cream DAC | 18269401         | 1       |
| Krieger                    | Base cream DAC | 12339301         | 1       |
| Krieger                    | Base cream DAC | 86470517         | 3       |
| Caelo                      | Base cream DAC | 18269301         | 28      |
| Krieger/ Henry Lamotte     | Base cream DAC | 6003682016       | 1       |
| Krieger/ Henry Lamotte     | Base cream DAC | 6004859003       | 1       |
| Krieger/ Henry Lamotte     | Base cream DAC | 6004859006       | 1       |
| Krieger/ Henry Lamotte     | Base cream DAC | 8003325005       | 2       |
| Krieger/ Henry Lamotte     | Base cream DAC | 8003325006       | 2       |
| Krieger/ Henry Lamotte     | Base cream DAC | 8004134006       | 1       |
| Krieger/Hedinger           | Base cream DAC | 18272301         | 1       |
| L10                        | Base cream DAC | 18269201         | 3       |
| L12                        | Base cream DAC | 16350301         | 1       |
| L12                        | Base cream DAC | 17006701         | 1       |
| L12                        | Base cream DAC | 17100501         | 1       |
| L12                        | Base cream DAC | 17155601         | 1       |
| L12                        | Base cream DAC | 18126301         | 2       |
| Caelo                      | Base cream DAC | 16155501         | 8       |
| Caelo                      | Base cream DAC | 17123901         | 9       |
| Caelo                      | Base cream DAC | 19052901         | 9       |
| lamotte                    | Base cream DAC | 6018791002       | 1       |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-------------------|------------------|-------------------|----------------|
| Lamotte           | Base cream DAC   | 5099700           | 1              |
| Lamotte           | Base cream DAC   | 5099800           | 1              |
| Lamotte           | Base cream DAC   | 5163400           | 1              |
| Lamotte           | Base cream DAC   | 5321200           | 1              |
| Lamotte           | Base cream DAC   | 5322300           | 1              |
| Lamotte           | Base cream DAC   | 5322200           | 1              |
| Lamotte           | Base cream DAC   | 5408000           | 1              |
| Lamotte           | Base cream DAC   | 5489900           | 1              |
| Lamotte           | Base cream DAC   | 5537000           | 1              |
| Lamotte           | Base cream DAC   | 5537300           | 4              |
| Lamotte           | Base cream DAC   | 5650700           | 3              |
| Lamotte           | Base cream DAC   | 5651000           | 1              |
| Lamotte           | Base cream DAC   | 5787800           | 1              |
| Lamotte           | Base cream DAC   | 5787900           | 2              |
| Lamotte           | Base cream DAC   | 5788000           | 1              |
| Lamotte           | Base cream DAC   | 5788200           | 2              |
| Lamotte           | Base cream DAC   | 5785800           | 1              |
| Lamotte           | Base cream DAC   | 5909300           | 3              |
| Lamotte           | Base cream DAC   | 60260             | 1              |
| Lamotte           | Base cream DAC   | 5909600           | 2              |
| Lamotte           | Base cream DAC   | 59096006002237002 | 1              |
| Lamotte           | Base cream DAC   | 6002237002        | 1              |
| Lamotte           | Base cream DAC   | 6002237005        | 1              |
| Lamotte           | Base cream DAC   | 5651100           | 1              |
| Lamotte           | Base cream DAC   | 16132001          | 1              |
| Lamotte           | Base cream DAC   | 6003682018        | 1              |
| Lamotte           | Base cream DAC   | 60004860001       | 1              |
| Lamotte           | Base cream DAC   | 6004860001        | 1              |
| Lamotte           | Base cream DAC   | 6004859002        | 2              |
| Lamotte           | Base cream DAC   | 8002875008        | 1              |
| Lamotte           | Base cream DAC   | 6004859003        | 1              |
| Lamotte           | Base cream DAC   | 6004859006        | 1              |
| Lamotte           | Base cream DAC   | 8003325005        | 1              |
| Lamotte           | Base cream DAC   | 8003325006        | 2              |
| Lamotte           | Base cream DAC   | 8004134006        | 1              |
| Lamotte           | Base cream DAC   | 8004134008        | 2              |
| Lamotte           | Base cream DAC   | 2x8004996004      | 1              |
| Lamotte           | Base cream DAC   | 8005713004        | 1              |
| Lamotte           | Base cream DAC   | 8005713014        | 1              |
| Lamotte           | Base cream DAC   | 590990            | 1              |
| Lamotte / AHC     | Base cream DAC   | 6004859004        | 1              |
| Lamotte / AHC     | Base cream DAC   | 8003325007        | 1              |
| Lamotte / AHC     | Base cream DAC   | 8004134008        | 1              |
| Lamotte / AHD     | Base cream DAC   | 6002237001        | 1              |
| Lamotte / Anzag   | Base cream DAC   | 5408000           | 1              |
| Lamotte / Anzag   | Base cream DAC   | 5408100           | 1              |
| Lamotte / Anzag   | Base cream DAC   | 5408200           | 1              |
| Lamotte / Noweda  | Base cream DAC   | 6004859002        | 1              |
| Lamotte / Noweda  | Base cream DAC   | 6004859003        | 1              |
| Lamotte / Noweda  | Base cream DAC   | 6004859004        | 1              |
| Lamotte / Noweda  | Base cream DAC   | 6004859006        | 1              |
| Lamotte / Noweda  | Base cream DAC   | 8003325003        | 1              |
| Lamotte / Noweda  | Base cream DAC   | 8003325004        | 2              |
| Lamotte / Noweda  | Base cream DAC   | 8003325007        | 1              |
| Lamotte / Phoenix | Base cream DAC   | 8004134005        | 1              |
| Lamotte / Phoenix | Base cream DAC   | 8004996001        | 1              |
| Lamotte / Phoenix | Base cream DAC   | 8004134007        | 1              |
| Lamotte / Phoenix | Base cream DAC   | 8004996003        | 1              |
| Lamotte / Phoenix | Base cream DAC   | 8004996004        | 2              |
| Lamotte / Noweda  | Base cream DAC   | 6002237002        | 1              |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-------------------|------------------|--------------|----------------|
| Lamotte /Sanacorp | Base cream DAC   | 18193101     | 1              |
| Lamotte 001       | Base cream DAC   | 5321000      | 1              |
| Lamotte 001       | Base cream DAC   | 5322400      | 1              |
| Lamotte/ AHDE     | Base cream DAC   | 5407700      | 1              |
| Lamotte/ Anzag    | Base cream DAC   | 6003682005   | 1              |
| Lamotte/ Noweda   | Base cream DAC   | 5407900      | 1              |
| Lamotte/ Noweda   | Base cream DAC   | 5537300      | 1              |
| Lamotte/ Noweda   | Base cream DAC   | 8003325004   | 1              |
| Lamotte//AHD      | Base cream DAC   | 5787900      | 1              |
| Lamotte//AHD      | Base cream DAC   | 6002237004   | 1              |
| Lamotte/ADG       | Base cream DAC   | 8004996006   | 3              |
| Lamotte/AHD       | Base cream DAC   | 5407900      | 1              |
| Lamotte/AHD       | Base cream DAC   | 589900       | 1              |
| Lamotte/AHD       | Base cream DAC   | 5651300      | 1              |
| Lamotte/AHD       | Base cream DAC   | 5909600      | 1              |
| Lamotte/AHD       | Base cream DAC   | 6002237009   | 1              |
| Lamotte/AHD       | Base cream DAC   | 600237004    | 1              |
| Lamotte/AHD       | Base cream DAC   | 6002237006   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6003682005   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6003682013   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6003682016   | 2              |
| Lamotte/AHD       | Base cream DAC   | 6003682012   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6004859003   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6004860003   | 1              |
| Lamotte/AHD       | Base cream DAC   | 6004859004   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8003325008   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004134008   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004134005   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004996002   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004996006   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004996007   | 1              |
| Lamotte/AHD       | Base cream DAC   | 8004996008   | 2              |
| Lamotte/AHD       | Base cream DAC   | 8004996004   | 1              |
| Lamotte/AHD       | Base cream DAC   | 80057        | 1              |
| Lamotte/AHD       | Base cream DAC   | 5909900      | 1              |
| Lamotte/Alliance  | Base cream DAC   | 5537600      | 1              |
| Lamotte/Alliance  | Base cream DAC   | 5651300      | 1              |
| Lamotte/Alliance  | Base cream DAC   | 5651200      | 1              |
| Lamotte/Alliance  | Base cream DAC   | 8004134008   | 1              |
| Lamotte/Alliance  | Base cream DAC   | 8004996001   | 1              |
| Lamotte/Anzag     | Base cream DAC   | 5408100      | 1              |
| Lamotte/Anzag     | Base cream DAC   | 5651100      | 1              |
| Lamotte/Anzag     | Base cream DAC   | 6003682004   | 1              |
| Lamotte/ANZAG     | Base cream DAC   | 6002237008   | 1              |
| Lamotte/Gehe      | Base cream DAC   | 6002237002   | 1              |
| Lamotte/Gehe      | Base cream DAC   | 8004996005   | 1              |
| Lamotte/Gehe      | Base cream DAC   | 8005713014   | 1              |
| Lamotte/Gehe      | Base cream DAC   | 6018791004   | 1              |
| Lamotte/Gehe      | Base cream DAC   | 8007236002   | 2              |
| lamotte/Kehr      | Base cream DAC   | 8004134008   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 5909600      | 1              |
| Lamotte/Noweda    | Base cream DAC   | 6002237001   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 6003682016   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004134006   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8003325007   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004134007   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004134008   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004134004   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004996001   | 1              |
| Lamotte/Noweda    | Base cream DAC   | 8004996005   | 2              |

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| <b>Supplier</b>     | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------|------------------|--------------|----------------|
| Lamotte/Noweda      | Base cream DAC   | 8005713004   | 1              |
| Lamotte/Noweda      | Base cream DAC   | 8005713009   | 2              |
| Lamotte/Otto        | Base cream DAC   | 5215800      | 2              |
| Lamotte/Otto        | Base cream DAC   | 5321000      | 1              |
| Lamotte/P           | Base cream DAC   | 8003325003   | 1              |
| Lamotte/Phoenix     | Base cream DAC   | 5322200      | 1              |
| Lamotte/Phoenix     | Base cream DAC   | 8003325005   | 1              |
| Lamotte/Phönix      | Base cream DAC   | 5909600      | 1              |
| Lamotte/Phönix      | Base cream DAC   | 6003682016   | 1              |
| lamotte/sanacorb    | Base cream DAC   | 5651000      | 2              |
| lamotte/sanacorb    | Base cream DAC   | 5787800      | 1              |
| Lamotte/Sanacorp    | Base cream DAC   | 5788700      | 2              |
| Lamotte/Sanacorp    | Base cream DAC   | 6003682005   | 1              |
| Lamotte/Sanacorp    | Base cream DAC   | 6002237010   | 1              |
| Lamotte/Sanacorp    | Base cream DAC   | 6002237009   | 1              |
| Lamotte-oils/Noweda | Base cream DAC   | 8003325004   | 1              |
| Leyh Pharma Gmbh    | Base cream DAC   | 27290917     | 3              |
| medphano            | Base cream DAC   | 6500115      | 5              |
| Medphano Phönix     | Base cream DAC   | 6500117      | 1              |
| medphano/Sanacorp   | Base cream DAC   | 6500118      | 2              |
| medphano/Sanacorp   | Base cream DAC   | 6500218      | 4              |
| medphano/Sanacorp   | Base cream DAC   | 6500119      | 3              |
| mephano             | Base cream DAC   | 6500115      | 1              |
| Midas               | Base cream DAC   | 16261501     | 1              |
| Midas               | Base cream DAC   | 17029201     | 1              |
| Midas               | Base cream DAC   | 306623       | 2              |
| Midas               | Base cream DAC   | 17090901     | 1              |
| Midas               | Base cream DAC   | 17129901     | 1              |
| Midas               | Base cream DAC   | 17147301     | 1              |
| Midas               | Base cream DAC   | 310722       | 1              |
| Midas               | Base cream DAC   | 17225201     | 1              |
| Midas               | Base cream DAC   | 17225002     | 1              |
| Midas               | Base cream DAC   | 310755       | 2              |
| Midas               | Base cream DAC   | 17240401     | 1              |
| Midas               | Base cream DAC   | 17267001     | 1              |
| Midas               | Base cream DAC   | 17000905     | 1              |
| Midas               | Base cream DAC   | 17266401     | 1              |
| Midas               | Base cream DAC   | 18000966     | 1              |
| Midas               | Base cream DAC   | 17351901     | 2              |
| Midas               | Base cream DAC   | 18091102     | 1              |
| Midas               | Base cream DAC   | 18129301     | 1              |
| Midas               | Base cream DAC   | 18137801     | 1              |
| Midas               | Base cream DAC   | 18001972     | 1              |
| Midas               | Base cream DAC   | 18166401     | 1              |
| Midas               | Base cream DAC   | 18003935     | 3              |
| Midas               | Base cream DAC   | 18005746     | 1              |
| Midas               | Base cream DAC   | 18269401     | 1              |
| Midas               | Base cream DAC   | 18006777     | 1              |
| Midas               | Base cream DAC   | 19000939     | 3              |
| Midas Phönix        | Base cream DAC   | 308803       | 1              |
| Nachprüfung         | Base cream DAC   | 1118H-01309  | 1              |
| Nachprüfung         | Base cream DAC   | 123456       | 1              |
| Nibelungen apotheke | Base cream DAC   | 200201302    | 1              |
| Nokun               | Base cream DAC   | 18105402     | 1              |
| noweda              | Base cream DAC   | 13347101     | 1              |
| Noweda              | Base cream DAC   | 5100000      | 1              |
| Noweda              | Base cream DAC   | 5163300      | 1              |
| Noweda              | Base cream DAC   | 12005601     | 1              |
| Noweda              | Base cream DAC   | 12263501     | 1              |
| Noweda              | Base cream DAC   | 12305001     | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Noweda          | Base cream DAC   | 12339201         | 1              |
| Noweda          | Base cream DAC   | 131250001        | 1              |
| Noweda          | Base cream DAC   | 13139901         | 1              |
| Noweda          | Base cream DAC   | 13139702         | 1              |
| Noweda          | Base cream DAC   | 13198601         | 2              |
| Noweda          | Base cream DAC   | 13347201         | 1              |
| Noweda          | Base cream DAC   | 14144101         | 1              |
| Noweda          | Base cream DAC   | 1311004-01       | 1              |
| Noweda          | Base cream DAC   | 1312037-01       | 1              |
| Noweda          | Base cream DAC   | 1502028-01       | 2              |
| Noweda          | Base cream DAC   | 14D08-T08-011709 | 2              |
| Noweda          | Base cream DAC   | 14F05-T06-012961 | 2              |
| Noweda          | Base cream DAC   | KeineAngabe      | 1              |
| Noweda          | Base cream DAC   | 1511001-01       | 1              |
| Noweda          | Base cream DAC   | 16350201         | 1              |
| Noweda          | Base cream DAC   | 17097401         | 4              |
| Noweda          | Base cream DAC   | 16D06-T07-031930 | 1              |
| Noweda          | Base cream DAC   | 91340916         | 1              |
| Noweda          | Base cream DAC   | 6004859002       | 1              |
| Noweda          | Base cream DAC   | 305715           | 1              |
| Noweda          | Base cream DAC   | 17028801         | 1              |
| Noweda          | Base cream DAC   | 6004859003       | 1              |
| Noweda          | Base cream DAC   | 3011016          | 2              |
| Noweda          | Base cream DAC   | 17136601         | 2              |
| Noweda          | Base cream DAC   | 2981016          | 1              |
| Noweda          | Base cream DAC   | 6004859004       | 1              |
| Noweda          | Base cream DAC   | 17240201         | 1              |
| Noweda          | Base cream DAC   | 51580217         | 2              |
| Noweda          | Base cream DAC   | 731/3            | 2              |
| Noweda          | Base cream DAC   | 17267801         | 1              |
| Noweda          | Base cream DAC   | 17349901         | 1              |
| Noweda          | Base cream DAC   | 731/4            | 2              |
| Noweda          | Base cream DAC   | 18081702         | 2              |
| Noweda          | Base cream DAC   | 18137801         | 1              |
| Noweda          | Base cream DAC   | 18001            | 2              |
| Noweda          | Base cream DAC   | 15720518         | 3              |
| Noweda          | Base cream DAC   | 18137601         | 1              |
| Noweda          | Base cream DAC   | 18002            | 3              |
| Noweda          | Base cream DAC   | 18269001         | 1              |
| Noweda          | Base cream DAC   | 87231118         | 3              |
| Noweda          | Base cream DAC   | 18232701         | 3              |
| Noweda          | Base cream DAC   | 13510119         | 1              |
| Noweda          | Base cream DAC   | 76571018         | 1              |
| Noweda          | Base cream DAC   | 19003601         | 3              |
| Noweda          | Base cream DAC   | 18126301         | 1              |
| Noweda          | Base cream DAC   | 19003901         | 1              |
| Noweda          | Base cream DAC   | 47880419         | 4              |
| Noweda          | Base cream DAC   | 13490119         | 1              |
| Noweda          | Base cream DAC   | 19117501         | 1              |
| Noweda          | Base cream DAC   | 19147801         | 6              |
| Noweda          | Base cream DAC   | 4788419          | 1              |
| Noweda          | Base cream DAC   | 19001            | 1              |
| Noweda          | Base cream DAC   | 19148001         | 1              |
| Noweda          | Base cream DAC   | 19116901         | 1              |
| Noweda          | Base cream DAC   | 60620519         | 2              |
| Noweda          | Base cream DAC   | 36510319         | 1              |
| Noweda          | Base cream DAC   | 19174301         | 1              |
| Noweda          | Base cream DAC   | 47890419         | 1              |
| Noweda          | Base cream DAC   | 71940619         | 1              |
| Noweda          | Base cream DAC   | 19170901         | 2              |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| Noweda                     | Base cream DAC | 19004715         | 1       |
| Noweda                     | Base cream DAC | 19D01-T14-065578 | 1       |
| Noweda                     | Base cream DAC | 80390719         | 1       |
| Noweda                     | Base cream DAC | 80400719         | 3       |
| Noweda                     | Base cream DAC | 92080819         | 1       |
| Noweda                     | Base cream DAC | 19005675         | 1       |
| Noweda                     | Base cream DAC | 20000042001      | 1       |
| Noweda                     | Base cream DAC | 19301701         | 1       |
| Noweda                     | Base cream DAC | 20000055001      | 1       |
| Noweda                     | Base cream DAC | 13161119         | 2       |
| Noweda                     | Base cream DAC | 19116801         | 4       |
| Noweda                     | Base cream DAC | 20000690001      | 1       |
| Noweda                     | Base cream DAC | 70570420         | 2       |
| Noweda                     | Base cream DAC | 20002395         | 1       |
| Noweda                     | Base cream DAC | 20002866001      | 2       |
| Noweda                     | Base cream DAC | 7058042C         | 1       |
| Noweda                     | Base cream DAC | 16058801         | 1       |
| Noweda / Beyvers           | Base cream DAC | 412/2            | 1       |
| Caelo                      | Base cream DAC | 12339401         | 6       |
| Caelo                      | Base cream DAC | 14178101         | 4       |
| Caelo                      | Base cream DAC | 200000055001     | 1       |
| Caelo                      | Base cream DAC | 20001685001      | 6       |
| Noweda 17.10.2014          | Base cream DAC | 1346001          | 1       |
| Caelo                      | Base cream DAC | 170100001        | 1       |
| Euro OTC                   | Base cream DAC | 55740320         | 7       |
| Euro OTC                   | Base cream DAC | 80580520         | 3       |
| Euro OTC                   | Base cream DAC | 13460119         | 3       |
| Euro OTC                   | Base cream DAC | 60590519         | 1       |
| Noweda/ Caesar & Loretz... | Base cream DAC | Caelo            | 1       |
| Noweda/ Eimermacher        | Base cream DAC | 50211015         | 1       |
| Noweda/ Eimermacher        | Base cream DAC | 55350716         | 2       |
| Fagron                     | Base cream DAC | 16G20-T04-035304 | 3       |
| Fagron                     | Base cream DAC | 11831116         | 1       |
| Noweda/ Lamotte            | Base cream DAC | 60036820015      | 1       |
| Noweda/ Lamotte            | Base cream DAC | 6004859001       | 2       |
| Noweda/Beyvers             | Base cream DAC | 412/3            | 1       |
| Caelo                      | Base cream DAC | 12339101         | 1       |
| Caelo                      | Base cream DAC | 13158701         | 1       |
| Caelo                      | Base cream DAC | 14238101         | 3       |
| Caelo                      | Base cream DAC | 15164401         | 4       |
| Caelo                      | Base cream DAC | 14222901         | 1       |
| Caelo                      | Base cream DAC | 16103801         | 14      |
| Caelo                      | Base cream DAC | 44950616         | 2       |
| Caelo                      | Base cream DAC | 17124301         | 1       |
| Caelo                      | Base cream DAC | 17155201         | 16      |
| Caelo                      | Base cream DAC | 17268601         | 5       |
| Caelo                      | Base cream DAC | 171535501        | 1       |
| Caelo                      | Base cream DAC | 18137601         | 41      |
| Caelo                      | Base cream DAC | 18003933         | 1       |
| Caelo                      | Base cream DAC | 19118401         | 25      |
| Caelo                      | Base cream DAC | 19270401         | 22      |
| Caelo                      | Base cream DAC | 20000055001      | 10      |
| Caelo                      | Base cream DAC | 2000168600       | 1       |
| Caelo                      | Base cream DAC | 20001868001      | 3       |
| Caelo                      | Base cream DAC | 15272601         | 2       |
| Caelo                      | Base cream DAC | 19117701         | 17      |
| Noweda/Eimermacher         | Base cream DAC | 80340218         | 1       |
| Noweda/Eimermacher         | Base cream DAC | 47870419         | 1       |
| Noweda/Ensbona             | Base cream DAC | 24180414         | 4       |
| Noweda/Ensbona             | Base cream DAC | 8821114          | 5       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Noweda/Ensbona             | Base cream DAC   | 56590714         | 5              |
| Noweda/Ensbona             | Base cream DAC   | 57090315         | 1              |
| Noweda/Ensbona             | Base cream DAC   | 222512           | 1              |
| Noweda/EuRho 21.12.2020... | Base cream DAC   | 80610520         | 2              |
| Euro OTC                   | Base cream DAC   | 71960619         | 2              |
| Euro OTC                   | Base cream DAC   | 15728518         | 1              |
| Fagron                     | Base cream DAC   | 13K12-T06-0004   | 1              |
| Fagron                     | Base cream DAC   | 13K12-T07-008057 | 1              |
| Fagron                     | Base cream DAC   | 14A13-T07-009298 | 1              |
| Fagron                     | Base cream DAC   | 14F05-T24-012983 | 7              |
| Fagron                     | Base cream DAC   | 6879559          | 1              |
| Fagron                     | Base cream DAC   | 14J07-T10-015972 | 2              |
| Fagron                     | Base cream DAC   | 15C11-T09-020405 | 1              |
| Fagron                     | Base cream DAC   | 18C19-T20-05362  | 1              |
| Fagron                     | Base cream DAC   | 19H19-T10-070986 | 1              |
| Fagron                     | Base cream DAC   | 15C11-To4-020384 | 1              |
| Noweda/Lamotte             | Base cream DAC   | 6004859006       | 1              |
| Noweda/Lamotte             | Base cream DAC   | 8003325007       | 1              |
| Euro OTC                   | Base cream DAC   | 4570718          | 1              |
| Euro OTC                   | Base cream DAC   | 19020201         | 2              |
| Euro OTC                   | Base cream DAC   | 1305012-01       | 1              |
| Euro OTC                   | Base cream DAC   | 150200801        | 1              |
| Euro OTC                   | Base cream DAC   | 13470119         | 5              |
| Euro OTC                   | Base cream DAC   | 1210011-01       | 3              |
| Euro OTC                   | Base cream DAC   | 150604601        | 1              |
| Euro OTC                   | Base cream DAC   | 1502027-01       | 8              |
| Euro OTC                   | Base cream DAC   | 52500616         | 1              |
| Euro OTC                   | Base cream DAC   | 1308024-01       | 8              |
| Euro OTC                   | Base cream DAC   | 1111041-01       | 1              |
| Euro OTC                   | Base cream DAC   | 1204023-01       | 1              |
| Euro OTC                   | Base cream DAC   | 20291016         | 1              |
| Euro OTC                   | Base cream DAC   | 16249801         | 2              |
| Euro OTC                   | Base cream DAC   | 62991016         | 1              |
| p w Beyvers                | Base cream DAC   | 640/3            | 1              |
| P&M Cosmetics GmbH & Co... | Base cream DAC   | 150317           | 1              |
| P. W. Beyvers              | Base cream DAC   | 319/1            | 1              |
| P. W. Beyvers GmbH         | Base cream DAC   | 329/2            | 3              |
| P. W. Beyvers GmbH         | Base cream DAC   | 515/2            | 1              |
| P. W. Beyvers GmbH         | Base cream DAC   | 640/1            | 2              |
| P. W. Beyvers GmbH         | Base cream DAC   | 640/3            | 1              |
| P. W. Beyvers GmbH         | Base cream DAC   | 731/1            | 2              |
| P. W. Beyvers GmbH         | Base cream DAC   | 731/2            | 1              |
| P. W. Beyvers GmbH         | Base cream DAC   | 731/3            | 1              |
| P. W. Beyvers GmbH         | Base cream DAC   | 731/4            | 2              |
| P. W. Beyvers GmbH         | Base cream DAC   | 18001            | 1              |
| P. W. Beyvers GmbH / No... | Base cream DAC   | 18002            | 1              |
| P. W. Beyvers GmbH/Noweda  | Base cream DAC   | 18002            | 1              |
| P.W Beyver/Noweda          | Base cream DAC   | 731/1            | 1              |
| P.W Beyvers / Gehe         | Base cream DAC   | 19002            | 1              |
| P.W Beyvers GmbH/Anzag     | Base cream DAC   | 19004            | 1              |
| P.W. Beyvers               | Base cream DAC   | 329/2            | 4              |
| P.W. Beyvers               | Base cream DAC   | 329/1            | 1              |
| P.W. Beyvers               | Base cream DAC   | 319/2            | 1              |
| P.W. Beyvers               | Base cream DAC   | 440/3            | 1              |
| P.W. Beyvers               | Base cream DAC   | 640-1            | 2              |
| P.W. Beyvers               | Base cream DAC   | 640/2            | 1              |
| P.W. Beyvers               | Base cream DAC   | 731-2            | 1              |
| P.W. Beyvers               | Base cream DAC   | 731/2            | 1              |
| P.W. Beyvers               | Base cream DAC   | 19002            | 3              |
| P.W. Beyvers / Anzag       | Base cream DAC   | 340/2            | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| P.W. Beyvers / Noweda      | Base cream DAC   | 731/3        | 8              |
| P.W. Beyvers / Noweda      | Base cream DAC   | 731/4        | 2              |
| P.W. Beyvers / Noweda      | Base cream DAC   | 19001        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 515/3        | 2              |
| P.W. Beyvers GmbH          | Base cream DAC   | 538/1        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 640/1        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 731/1        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 731/3        | 2              |
| P.W. Beyvers GmbH          | Base cream DAC   | 731/4        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 19001        | 1              |
| P.W. Beyvers GmbH          | Base cream DAC   | 19005        | 2              |
| P.W. Beyvers GmbH / AHD    | Base cream DAC   | 19002        | 1              |
| P.W. Beyvers GmbH / Now... | Base cream DAC   | 18002        | 1              |
| P.W. Beyvers GmbH / Phö... | Base cream DAC   | 538/1        | 2              |
| P.W. Beyvers GmbH/Gehe     | Base cream DAC   | 640/2        | 1              |
| P.W. Beyvers/ Noweda       | Base cream DAC   | 19001        | 1              |
| P.W. Beyvers/Gehe          | Base cream DAC   | 731/2        | 1              |
| P.W. Beyvers/Gehe          | Base cream DAC   | 731/3        | 1              |
| P.W. Beyvers/Krieger       | Base cream DAC   | 731/4        | 3              |
| P.W. Beyvers/Noweda        | Base cream DAC   | 18001        | 3              |
| P.W. Beyvers/Noweda        | Base cream DAC   | 538/1        | 1              |
| P.W. Beyvers/Phönix        | Base cream DAC   | 19005        | 2              |
| P.W.Bayvers GmbH           | Base cream DAC   | 234-2        | 1              |
| p.w.beyvers                | Base cream DAC   | 515/2        | 1              |
| P.W.Beyvers                | Base cream DAC   | 229/1        | 2              |
| P.W.Beyvers                | Base cream DAC   | 234/1        | 1              |
| P.W.Beyvers                | Base cream DAC   | 229/2        | 1              |
| P.W.Beyvers                | Base cream DAC   | 340/2        | 3              |
| P.W.Beyvers                | Base cream DAC   | 340/1        | 1              |
| P.W.Beyvers                | Base cream DAC   | 412/1        | 2              |
| P.W.Beyvers                | Base cream DAC   | 412/3        | 1              |
| P.W.Beyvers                | Base cream DAC   | 440/1        | 1              |
| P.W.Beyvers                | Base cream DAC   | 440/2        | 1              |
| P.W.Beyvers                | Base cream DAC   | 515/3        | 1              |
| P.W.Beyvers                | Base cream DAC   | 538/1        | 2              |
| P.W.Beyvers                | Base cream DAC   | 640/1        | 2              |
| P.W.Beyvers                | Base cream DAC   | 640/2        | 3              |
| P.W.Beyvers                | Base cream DAC   | 640/3        | 1              |
| P.W.Beyvers                | Base cream DAC   | 731/1        | 3              |
| P.W.Beyvers                | Base cream DAC   | 731-1        | 1              |
| P.W.Beyvers                | Base cream DAC   | 731/3        | 3              |
| P.W.Beyvers                | Base cream DAC   | 731/2        | 1              |
| P.W.Beyvers                | Base cream DAC   | 731/4        | 3              |
| P.W.Beyvers                | Base cream DAC   | 18001        | 1              |
| P.W.Beyvers                | Base cream DAC   | 18002        | 2              |
| P.W.Beyvers                | Base cream DAC   | 19002        | 2              |
| P.W.Beyvers                | Base cream DAC   | 229/1        | 1              |
| P.W.Beyvers GmbH           | Base cream DAC   | 234/3        | 4              |
| P.W.Beyvers GmbH           | Base cream DAC   | 440/2        | 1              |
| P.W.Beyvers GmbH           | Base cream DAC   | 440/3        | 1              |
| P.W.Beyvers GmbH           | Base cream DAC   | 640/2        | 4              |
| P.W.Beyvers GmbH           | Base cream DAC   | 640/3        | 3              |
| P.W.Beyvers GmbH           | Base cream DAC   | 731/1        | 3              |
| P.W.Beyvers GmbH           | Base cream DAC   | 18002        | 2              |
| P.W.Beyvers GmbH           | Base cream DAC   | 18001        | 1              |
| P.W.Beyvers GmbH           | Base cream DAC   | 19003        | 2              |
| P.W.Beyvers GmbH           | Base cream DAC   | 20000036001  | 1              |
| P.W.Beyvers GmbH / Noweda  | Base cream DAC   | 515/3        | 1              |
| P.W.Beyvers GmbH,Phönix    | Base cream DAC   | 207/2        | 1              |
| P.W.Beyvers GmbH,Phönix    | Base cream DAC   | 234/3        | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| P.W.Beyvers Gmbh,Phönix    | Base cream DAC   | 329/1            | 1              |
| P.W.Beyvers Gmbh,Phönix    | Base cream DAC   | 440/1            | 2              |
| P.W.Beyvers Gmbh,Phönix    | Base cream DAC   | 440/2            | 1              |
| P.W.Beyvers GmbH/ Sanac... | Base cream DAC   | 515/2            | 1              |
| P.W.Beyvers GmbH/Anzag     | Base cream DAC   | 340/2            | 1              |
| P.W.Beyvers GmbH/Anzag     | Base cream DAC   | 412/2            | 1              |
| P.W.Beyvers GmbH/Noweda    | Base cream DAC   | 19001            | 2              |
| P.W.Beyvers GmbH/Noweda    | Base cream DAC   | 19002            | 1              |
| P.W.Beyvers GmbH/Phönix    | Base cream DAC   | 340/2            | 1              |
| P.W.Beyvers GmbH/Sanacorp  | Base cream DAC   | 19001            | 3              |
| P.W.Beyvers/Jenne 18.12... | Base cream DAC   | 340/2            | 1              |
| P.W.Peyvers/ Sanacorp      | Base cream DAC   | 18001            | 2              |
| P.W.Weyers GmbH            | Base cream DAC   | 340/1            | 1              |
| P.W: Beyvers GmbH          | Base cream DAC   | 18001            | 1              |
| pharmachem                 | Base cream DAC   | 640/2            | 2              |
| Pharmachem GmbH / Phönix   | Base cream DAC   | 62560918         | 1              |
| phoenix                    | Base cream DAC   | 18137201         | 1              |
| phoenix                    | Base cream DAC   | 19171801         | 1              |
| Phoenix                    | Base cream DAC   | 272091           | 1              |
| Phoenix                    | Base cream DAC   | 272219           | 2              |
| Phoenix                    | Base cream DAC   | 5289100          | 1              |
| Phoenix                    | Base cream DAC   | 275591           | 1              |
| Phoenix                    | Base cream DAC   | 14036001         | 1              |
| Phoenix                    | Base cream DAC   | 5651300          | 2              |
| Phoenix                    | Base cream DAC   | 1306002-01       | 1              |
| Phoenix                    | Base cream DAC   | 16059101         | 1              |
| Phoenix                    | Base cream DAC   | 16041301         | 1              |
| Phoenix                    | Base cream DAC   | 16205601         | 1              |
| Phoenix                    | Base cream DAC   | 72440816         | 1              |
| Phoenix                    | Base cream DAC   | 16349502         | 1              |
| Phoenix                    | Base cream DAC   | 17031501         | 2              |
| Phoenix                    | Base cream DAC   | 55360616         | 2              |
| Phoenix                    | Base cream DAC   | 17121501         | 1              |
| Phoenix                    | Base cream DAC   | 17136301         | 1              |
| Phoenix                    | Base cream DAC   | 1736301          | 1              |
| Phoenix                    | Base cream DAC   | 3026             | 1              |
| Phoenix                    | Base cream DAC   | 3037             | 1              |
| Phoenix                    | Base cream DAC   | 16102017-BH-A    | 1              |
| Phoenix                    | Base cream DAC   | 3049             | 1              |
| Phoenix                    | Base cream DAC   | 17229201         | 1              |
| Phoenix                    | Base cream DAC   | 3060             | 1              |
| Phoenix                    | Base cream DAC   | 39600117         | 1              |
| Phoenix                    | Base cream DAC   | 3082             | 1              |
| Phoenix                    | Base cream DAC   | 3083             | 1              |
| Phoenix                    | Base cream DAC   | 17243501         | 1              |
| Phoenix                    | Base cream DAC   | 3098             | 1              |
| Phoenix                    | Base cream DAC   | 51580217         | 2              |
| Phoenix                    | Base cream DAC   | 3123             | 1              |
| Phoenix                    | Base cream DAC   | 17000923         | 1              |
| Phoenix                    | Base cream DAC   | 46711117         | 2              |
| Phoenix                    | Base cream DAC   | 27350917         | 1              |
| Phoenix                    | Base cream DAC   | 3197             | 1              |
| Phoenix                    | Base cream DAC   | 3200             | 1              |
| Phoenix                    | Base cream DAC   | 17268301         | 1              |
| Phoenix                    | Base cream DAC   | 15710518         | 1              |
| Phoenix                    | Base cream DAC   | 3232             | 1              |
| Phoenix                    | Base cream DAC   | 18105402         | 1              |
| Phoenix                    | Base cream DAC   | 18167001         | 1              |
| Phoenix                    | Base cream DAC   | 18E23-T16-056321 | 1              |
| Phoenix                    | Base cream DAC   | 18E23-T17-056325 | 2              |

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| Supplier                    | Substance      | Batch             | Spectra |
|-----------------------------|----------------|-------------------|---------|
| Phoenix                     | Base cream DAC | 62560918          | 4       |
| Phoenix                     | Base cream DAC | 18232601          | 1       |
| Phoenix                     | Base cream DAC | 18211701          | 2       |
| Phoenix                     | Base cream DAC | 18005744          | 1       |
| Phoenix                     | Base cream DAC | 18192601          | 1       |
| Phoenix                     | Base cream DAC | 45970718          | 1       |
| Phoenix                     | Base cream DAC | 18269401          | 2       |
| Phoenix                     | Base cream DAC | 18269801          | 1       |
| Phoenix                     | Base cream DAC | 87241118          | 9       |
| Phoenix                     | Base cream DAC | 19003502          | 6       |
| Phoenix                     | Base cream DAC | 18006776          | 1       |
| Phoenix                     | Base cream DAC | 3372              | 1       |
| Phoenix                     | Base cream DAC | 19000952          | 1       |
| Phoenix                     | Base cream DAC | 19002690          | 1       |
| Phoenix                     | Base cream DAC | 23800219          | 8       |
| Phoenix                     | Base cream DAC | 3376              | 1       |
| Phoenix                     | Base cream DAC | 19052601          | 1       |
| Phoenix                     | Base cream DAC | 19117801          | 4       |
| Phoenix                     | Base cream DAC | 3389              | 1       |
| Phoenix                     | Base cream DAC | 19148001          | 1       |
| Phoenix                     | Base cream DAC | 60610519          | 9       |
| Phoenix                     | Base cream DAC | 191352811         | 1       |
| Phoenix                     | Base cream DAC | 200521206         | 1       |
| Phoenix                     | Base cream DAC | 200783107         | 1       |
| Phoenix                     | Base cream DAC | 201083010         | 1       |
| Caelo                       | Base cream DAC | 12245001          | 2       |
| Phoenix 01.04.2019 12,77EUR | Base cream DAC | 18005236          | 1       |
| phoenix 01.10.14            | Base cream DAC | 14178001          | 1       |
| PHOENIX 03.03.2014          | Base cream DAC | 5537200           | 2       |
| Phoenix 11.02.2019          | Base cream DAC | 18C19-T17-053948  | 1       |
| Phoenix 13.11.14            | Base cream DAC | 14143801          | 1       |
| Phoenix 13.12.2017          | Base cream DAC | 310753            | 1       |
| Phoenix 20.02.15            | Base cream DAC | 291032            | 1       |
| Phoenix 20.06.2014          | Base cream DAC | 14090601          | 1       |
| Caelo                       | Base cream DAC | 13480119          | 1       |
| Phoenix Cottbus 27.06.17    | Base cream DAC | 17123901          | 1       |
| Phoenix Goettin             | Base cream DAC | 14289601          | 1       |
| Bombastus                   | Base cream DAC | 272221            | 1       |
| Bombastus                   | Base cream DAC | 278396            | 2       |
| Caelo                       | Base cream DAC | 5321200           | 2       |
| Caelo                       | Base cream DAC | 13312101          | 2       |
| Caelo                       | Base cream DAC | 17269001          | 10      |
| Caelo                       | Base cream DAC | 23800219          | 1       |
| Caelo                       | Base cream DAC | 2000197001        | 1       |
| Phoenix/Ensbona             | Base cream DAC | 40150120          | 1       |
| Euro OTC                    | Base cream DAC | 80640520          | 2       |
| Fagron                      | Base cream DAC | 17K24-T07-050507  | 11      |
| Phonix                      | Base cream DAC | 29570618          | 1       |
| phönix                      | Base cream DAC | 13007101          | 1       |
| phönix                      | Base cream DAC | 5408200           | 1       |
| phönix                      | Base cream DAC | 15j13-t03-026895  | 1       |
| phönix                      | Base cream DAC | 16C24-T06-031494  | 1       |
| phönix                      | Base cream DAC | 16b15-t01-030274  | 1       |
| phönix                      | Base cream DAC | 16c24t06031494    | 1       |
| phönix                      | Base cream DAC | 16D06-T06-0311926 | 1       |
| phönix                      | Base cream DAC | 16c14-t01-031199  | 1       |
| phönix                      | Base cream DAC | 16F30-T15-034797  | 1       |
| phönix                      | Base cream DAC | 16j11t02037610    | 1       |
| phönix                      | Base cream DAC | 16J11-T03-037614  | 1       |
| phönix                      | Base cream DAC | 19172501          | 2       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Phönix          | Base cream DAC   | 1111029-01       | 1              |
| Phönix          | Base cream DAC   | 13000601         | 1              |
| Phönix          | Base cream DAC   | 13007101         | 1              |
| Phönix          | Base cream DAC   | 13000701         | 1              |
| Phönix          | Base cream DAC   | 13111401         | 1              |
| Phönix          | Base cream DAC   | 278475           | 1              |
| Phönix          | Base cream DAC   | 13E21-T05-003897 | 1              |
| Phönix          | Base cream DAC   | 13311801         | 1              |
| Phönix          | Base cream DAC   | 14035801         | 1              |
| Phönix          | Base cream DAC   | 14053501         | 1              |
| Phönix          | Base cream DAC   | 6207             | 1              |
| Phönix          | Base cream DAC   | 14D08-T02-0002   | 1              |
| Phönix          | Base cream DAC   | 14052901         | 4              |
| Phönix          | Base cream DAC   | 14303901         | 1              |
| Phönix          | Base cream DAC   | 16260801         | 1              |
| Phönix          | Base cream DAC   | 304357           | 1              |
| Phönix          | Base cream DAC   | 55360616         | 2              |
| Phönix          | Base cream DAC   | 17014501         | 1              |
| Phönix          | Base cream DAC   | 307963           | 1              |
| Phönix          | Base cream DAC   | 17121501         | 1              |
| Phönix          | Base cream DAC   | 17225201         | 1              |
| Phönix          | Base cream DAC   | 17240801         | 1              |
| Phönix          | Base cream DAC   | 17f08-t04-045271 | 1              |
| Phönix          | Base cream DAC   | 17000200         | 3              |
| Phönix          | Base cream DAC   | 79000916         | 1              |
| Phönix          | Base cream DAC   | 86470517         | 1              |
| Phönix          | Base cream DAC   | 17266401         | 1              |
| Phönix          | Base cream DAC   | 17E11-To7-044186 | 1              |
| Phönix          | Base cream DAC   | 3142             | 1              |
| Phönix          | Base cream DAC   | 3151             | 1              |
| Phönix          | Base cream DAC   | 8003325003       | 1              |
| Phönix          | Base cream DAC   | 17267601         | 1              |
| Phönix          | Base cream DAC   | 27340917         | 1              |
| Phönix          | Base cream DAC   | 3155             | 1              |
| Phönix          | Base cream DAC   | 18000490         | 1              |
| Phönix          | Base cream DAC   | 3170             | 1              |
| Phönix          | Base cream DAC   | 18000966         | 1              |
| Phönix          | Base cream DAC   | 18129301         | 1              |
| Phönix          | Base cream DAC   | 18001973         | 1              |
| Phönix          | Base cream DAC   | 27350917         | 1              |
| Phönix          | Base cream DAC   | 7550418          | 1              |
| Phönix          | Base cream DAC   | 18015101         | 1              |
| Phönix          | Base cream DAC   | 18003102         | 1              |
| Phönix          | Base cream DAC   | 18001965         | 1              |
| Phönix          | Base cream DAC   | 18166602         | 1              |
| Phönix          | Base cream DAC   | 125580           | 1              |
| Phönix          | Base cream DAC   | 18166801         | 1              |
| Phönix          | Base cream DAC   | 18232401         | 1              |
| Phönix          | Base cream DAC   | 18232901         | 1              |
| Phönix          | Base cream DAC   | 18192601         | 1              |
| Phönix          | Base cream DAC   | 18G13-T09-058073 | 1              |
| Phönix          | Base cream DAC   | 62560918         | 1              |
| Phönix          | Base cream DAC   | 18005740         | 2              |
| Phönix          | Base cream DAC   | 18269501         | 1              |
| Phönix          | Base cream DAC   | 18269401         | 1              |
| Phönix          | Base cream DAC   | 18272201         | 1              |
| Phönix          | Base cream DAC   | 19003801         | 1              |
| Phönix          | Base cream DAC   | 19000952         | 1              |
| Phönix          | Base cream DAC   | 47890419         | 1              |
| Phönix          | Base cream DAC   | 29550618         | 1              |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| Phönix                     | Base cream DAC | 19d01-t14-065578 | 1       |
| Phönix                     | Base cream DAC | 19170901         | 2       |
| Phönix                     | Base cream DAC | 19174201         | 1       |
| Phönix                     | Base cream DAC | 19240501         | 1       |
| Phönix                     | Base cream DAC | 19270501         | 1       |
| Phönix                     | Base cream DAC | 20001680001      | 1       |
| Phönix                     | Base cream DAC | 8005713014       | 1       |
| PHÖNIX                     | Base cream DAC | 16261002         | 1       |
| PHÖNIX                     | Base cream DAC | 17230101         | 1       |
| PHÖNIX                     | Base cream DAC | 17269201         | 1       |
| PHÖNIX                     | Base cream DAC | 18137001         | 1       |
| PHÖNIX                     | Base cream DAC | 18105402         | 1       |
| PHÖNIX                     | Base cream DAC | 18L20-T12-062936 | 1       |
| Bombastus                  | Base cream DAC | 19005671         | 4       |
| Caelo                      | Base cream DAC | 36530319         | 1       |
| Euro OTC                   | Base cream DAC | 3661016          | 1       |
| Euro OTC                   | Base cream DAC | 39630217         | 19      |
| Euro OTC                   | Base cream DAC | 33807720         | 1       |
| Phönix 22.11.12            | Base cream DAC | 272218           | 1       |
| Phönix 23.01.15            | Base cream DAC | 14290001         | 1       |
| Bombastus                  | Base cream DAC | 19004710         | 1       |
| Phönix Gotha               | Base cream DAC | 5215600          | 2       |
| Phönix Gotha               | Base cream DAC | 5215800          | 1       |
| Phönix Gotha               | Base cream DAC | 5321000          | 1       |
| Phönix Gotha               | Base cream DAC | 5322100          | 1       |
| Phönix Gotha               | Base cream DAC | 5489800          | 1       |
| Phönix Gotha               | Base cream DAC | 5537100          | 1       |
| Phönix Gotha               | Base cream DAC | 5537300          | 1       |
| Phönix Gotha               | Base cream DAC | 5650600          | 1       |
| Phönix Gotha               | Base cream DAC | 5650900          | 1       |
| Phönix Gotha               | Base cream DAC | 5787900          | 1       |
| Phönix Gotha               | Base cream DAC | 5788000          | 1       |
| Phönix Gotha               | Base cream DAC | 515/1            | 1       |
| Phönix Gotha               | Base cream DAC | 1502025-01       | 1       |
| Phönix Gotha               | Base cream DAC | 515/3            | 1       |
| Phönix Gotha               | Base cream DAC | 18002            | 2       |
| Phönix Gotha               | Base cream DAC | 538/1            | 1       |
| Phönix Mvda 3.7.2019       | Base cream DAC | 19052801         | 1       |
| Phönix, 28.10.2013         | Base cream DAC | 279961           | 1       |
| Phönix, Caesar&Loretz G... | Base cream DAC | 19172901         | 1       |
| Phönix, Caesar&Loretz G... | Base cream DAC | 20000585001      | 1       |
| Bombastus                  | Base cream DAC | 18006776         | 1       |
| Bombastus                  | Base cream DAC | 19000946         | 2       |
| Caelo                      | Base cream DAC | 14A10-T06-009259 | 1       |
| Bombastus                  | Base cream DAC | 18003937         | 3       |
| Caelo                      | Base cream DAC | 12191701         | 3       |
| Caelo                      | Base cream DAC | 12241201         | 1       |
| Caelo                      | Base cream DAC | 12262601         | 3       |
| Caelo                      | Base cream DAC | 13007101         | 5       |
| Caelo                      | Base cream DAC | 5537400          | 1       |
| Caelo                      | Base cream DAC | 14227601         | 3       |
| Caelo                      | Base cream DAC | 14244501         | 5       |
| Caelo                      | Base cream DAC | 15041101         | 9       |
| Phönix/Eimermacher         | Base cream DAC | 13510119         | 1       |
| Euro OTC                   | Base cream DAC | 35840516         | 1       |
| Euro OTC                   | Base cream DAC | 86470517         | 8       |
| Euro OTC                   | Base cream DAC | 7550418          | 19      |
| Euro OTC                   | Base cream DAC | 51580217         | 25      |
| Euro OTC                   | Base cream DAC | 17023401         | 1       |

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| <b>Supplier</b>              | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|------------------------------|------------------|------------------|----------------|
| Phönix/Fagon                 | Base cream DAC   | 16231901         | 1              |
| Fagron                       | Base cream DAC   | 18c19-T18-053952 | 1              |
| Fagron                       | Base cream DAC   | 19D01-T13-065575 | 14             |
| Fagron                       | Base cream DAC   | 19L13-T04-074063 | 2              |
| Fagron                       | Base cream DAC   | 20J14-T0803251   | 1              |
| Phönix_02.04.2019            | Base cream DAC   | 18269701         | 1              |
| Phytocomm                    | Base cream DAC   | 16058801         | 1              |
| PKH GmbH                     | Base cream DAC   | 34567890         | 1              |
| Pöckneck Pharma / Gehe       | Base cream DAC   | 16261101         | 1              |
| PW Beyves Alliance           | Base cream DAC   | 412/3            | 1              |
| Raben-Apotheke Mildenau      | Base cream DAC   | 14143901         | 1              |
| Raben-Apotheke Mildenau      | Base cream DAC   | 14090601         | 1              |
| Römerapo.                    | Base cream DAC   | 14/07-T09-015967 | 1              |
| Salderman GmbH+Co.KG         | Base cream DAC   | 161207           | 1              |
| Sana                         | Base cream DAC   | 18270901         | 1              |
| Sana 03.12.16 EK 8,04EUR     | Base cream DAC   | 16253101         | 1              |
| Sana 11.02.15 EK 8,05        | Base cream DAC   | 14303801         | 1              |
| Sana 17.11.14 EK 7,89        | Base cream DAC   | 14232301         | 1              |
| Sana 19.09.14 EK 7,89        | Base cream DAC   | 14227801         | 1              |
| Sana 23.03.16 Ek 8,09        | Base cream DAC   | 16055801         | 1              |
| Sana/Henry Lamotte           | Base cream DAC   | 6002237003       | 1              |
| Sanacop WE:10.11.17 1kg. ... | Base cream DAC   | 17225801         | 1              |
| Caelo                        | Base cream DAC   | 5788100          | 1              |
| sanacoro                     | Base cream DAC   | 15357601         | 1              |
| Sanacoro W.E:01.03.18 ...    | Base cream DAC   | 17266901         | 1              |
| sanacorp                     | Base cream DAC   | 548900           | 1              |
| sanacorp                     | Base cream DAC   | 19240701         | 1              |
| Sanacorp                     | Base cream DAC   | 12191801         | 1              |
| Sanacorp                     | Base cream DAC   | 12262801         | 1              |
| Sanacorp                     | Base cream DAC   | 12262402         | 1              |
| Sanacorp                     | Base cream DAC   | 12263001         | 1              |
| Sanacorp                     | Base cream DAC   | 12262901         | 1              |
| Sanacorp                     | Base cream DAC   | 12289701         | 1              |
| Sanacorp                     | Base cream DAC   | 12304701         | 1              |
| Sanacorp                     | Base cream DAC   | 12339001         | 1              |
| Sanacorp                     | Base cream DAC   | 1202001          | 3              |
| Sanacorp                     | Base cream DAC   | 12304901         | 2              |
| Sanacorp                     | Base cream DAC   | 12304801         | 1              |
| Sanacorp                     | Base cream DAC   | 13000901         | 1              |
| Sanacorp                     | Base cream DAC   | 13007201         | 1              |
| Sanacorp                     | Base cream DAC   | 13007301         | 1              |
| Sanacorp                     | Base cream DAC   | 13082101         | 1              |
| Sanacorp                     | Base cream DAC   | 13082203         | 1              |
| Sanacorp                     | Base cream DAC   | 13139801         | 1              |
| Sanacorp                     | Base cream DAC   | 13158401         | 2              |
| Sanacorp                     | Base cream DAC   | 13173701         | 1              |
| Sanacorp                     | Base cream DAC   | 1317301          | 1              |
| Sanacorp                     | Base cream DAC   | 13173601         | 1              |
| Sanacorp                     | Base cream DAC   | 13187901         | 1              |
| Sanacorp                     | Base cream DAC   | 13188701         | 1              |
| Sanacorp                     | Base cream DAC   | 13188801         | 1              |
| Sanacorp                     | Base cream DAC   | 13250001         | 1              |
| Sanacorp                     | Base cream DAC   | 13199101         | 3              |
| Sanacorp                     | Base cream DAC   | 13310901         | 1              |
| Sanacorp                     | Base cream DAC   | 13312001         | 1              |
| Sanacorp                     | Base cream DAC   | 13311301         | 2              |
| Sanacorp                     | Base cream DAC   | 13347201         | 1              |
| Sanacorp                     | Base cream DAC   | 282772           | 1              |
| Sanacorp                     | Base cream DAC   | 13312301         | 1              |
| Sanacorp                     | Base cream DAC   | 13381101         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Sanacorp        | Base cream DAC   | 13377201     | 1              |
| Sanacorp        | Base cream DAC   | 13381001     | 1              |
| Sanacorp        | Base cream DAC   | 283972       | 2              |
| Sanacorp        | Base cream DAC   | 13380901     | 1              |
| Sanacorp        | Base cream DAC   | 13311801     | 1              |
| Sanacorp        | Base cream DAC   | 5537000      | 2              |
| Sanacorp        | Base cream DAC   | 14091501     | 2              |
| Sanacorp        | Base cream DAC   | 72/AKD2      | 1              |
| Sanacorp        | Base cream DAC   | 14090401     | 1              |
| Sanacorp        | Base cream DAC   | 14091701     | 1              |
| Sanacorp        | Base cream DAC   | 14144001     | 1              |
| Sanacorp        | Base cream DAC   | 287942       | 1              |
| Sanacorp        | Base cream DAC   | 14144101     | 1              |
| Sanacorp        | Base cream DAC   | 14227901     | 1              |
| Sanacorp        | Base cream DAC   | 14244501     | 1              |
| Sanacorp        | Base cream DAC   | 14289801     | 1              |
| Sanacorp        | Base cream DAC   | 14327501     | 1              |
| Sanacorp        | Base cream DAC   | 15070101     | 1              |
| Sanacorp        | Base cream DAC   | 15000701     | 1              |
| Sanacorp        | Base cream DAC   | 75/AKD4      | 1              |
| Sanacorp        | Base cream DAC   | 15164601     | 2              |
| Sanacorp        | Base cream DAC   | 75/AKD6      | 1              |
| Sanacorp        | Base cream DAC   | 15250001     | 1              |
| Sanacorp        | Base cream DAC   | 15315301     | 1              |
| Sanacorp        | Base cream DAC   | 15387101     | 1              |
| Sanacorp        | Base cream DAC   | 15390801     | 2              |
| Sanacorp        | Base cream DAC   | 16055801     | 1              |
| Sanacorp        | Base cream DAC   | 16146001     | 1              |
| Sanacorp        | Base cream DAC   | 16145701     | 1              |
| Sanacorp        | Base cream DAC   | 16261401     | 1              |
| Sanacorp        | Base cream DAC   | 16261301     | 1              |
| Sanacorp        | Base cream DAC   | 17014401     | 1              |
| Sanacorp        | Base cream DAC   | 17100201     | 1              |
| Sanacorp        | Base cream DAC   | 17154801     | 1              |
| Sanacorp        | Base cream DAC   | 17225002     | 1              |
| Sanacorp        | Base cream DAC   | 17229301     | 1              |
| Sanacorp        | Base cream DAC   | 17133602     | 1              |
| Sanacorp        | Base cream DAC   | 17229601     | 2              |
| Sanacorp        | Base cream DAC   | 17225901     | 1              |
| Sanacorp        | Base cream DAC   | 17240001     | 1              |
| Sanacorp        | Base cream DAC   | 17264501     | 1              |
| Sanacorp        | Base cream DAC   | 2x310752     | 1              |
| Sanacorp        | Base cream DAC   | 17264301     | 1              |
| Sanacorp        | Base cream DAC   | 310752       | 3              |
| Sanacorp        | Base cream DAC   | 170000926    | 1              |
| Sanacorp        | Base cream DAC   | 310756       | 1              |
| Sanacorp        | Base cream DAC   | 17268601     | 1              |
| Sanacorp        | Base cream DAC   | 17349501     | 1              |
| Sanacorp        | Base cream DAC   | 18000497     | 1              |
| Sanacorp        | Base cream DAC   | 18000955     | 4              |
| Sanacorp        | Base cream DAC   | 18055602     | 1              |
| Sanacorp        | Base cream DAC   | 18037901     | 1              |
| Sanacorp        | Base cream DAC   | 18137301     | 2              |
| Sanacorp        | Base cream DAC   | 18138001     | 1              |
| Sanacorp        | Base cream DAC   | 18105602     | 1              |
| Sanacorp        | Base cream DAC   | 731/4        | 1              |
| Sanacorp        | Base cream DAC   | 18165301     | 1              |
| Sanacorp        | Base cream DAC   | 18138201     | 1              |
| Sanacorp        | Base cream DAC   | 18165601     | 1              |
| Sanacorp        | Base cream DAC   | 18138401     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Sanacorp                   | Base cream DAC   | 18165801         | 1              |
| Sanacorp                   | Base cream DAC   | 18001            | 1              |
| Sanacorp                   | Base cream DAC   | 18167101         | 2              |
| Sanacorp                   | Base cream DAC   | 18003938         | 2              |
| Sanacorp                   | Base cream DAC   | 18166801         | 1              |
| Sanacorp                   | Base cream DAC   | 18003933         | 1              |
| Sanacorp                   | Base cream DAC   | 18193201         | 1              |
| Sanacorp                   | Base cream DAC   | 18192801         | 1              |
| Sanacorp                   | Base cream DAC   | 18232601         | 2              |
| Sanacorp                   | Base cream DAC   | 18269301         | 1              |
| Sanacorp                   | Base cream DAC   | 18005242         | 1              |
| Sanacorp                   | Base cream DAC   | 18E23-T21-056349 | 1              |
| Sanacorp                   | Base cream DAC   | 18269901         | 1              |
| Sanacorp                   | Base cream DAC   | 18271301         | 1              |
| Sanacorp                   | Base cream DAC   | 13490119         | 4              |
| Sanacorp                   | Base cream DAC   | 29550618         | 1              |
| Sanacorp                   | Base cream DAC   | 19075901         | 1              |
| Sanacorp                   | Base cream DAC   | 47890419         | 1              |
| Sanacorp                   | Base cream DAC   | 60610519         | 2              |
| Sanacorp                   | Base cream DAC   | 19053001         | 2              |
| Sanacorp                   | Base cream DAC   | 19153801         | 1              |
| Sanacorp                   | Base cream DAC   | 19170401         | 1              |
| Sanacorp                   | Base cream DAC   | 19118101         | 1              |
| Sanacorp                   | Base cream DAC   | 19170301         | 1              |
| Sanacorp                   | Base cream DAC   | 19173301         | 1              |
| Sanacorp                   | Base cream DAC   | 19270601         | 2              |
| Sanacorp                   | Base cream DAC   | 8005713012       | 1              |
| Sanacorp                   | Base cream DAC   | 19269601         | 1              |
| Sanacorp                   | Base cream DAC   | 19270401         | 1              |
| Sanacorp                   | Base cream DAC   | 20000580001      | 2              |
| Sanacorp                   | Base cream DAC   | 8005713014       | 2              |
| Sanacorp                   | Base cream DAC   | 19003            | 1              |
| Sanacorp                   | Base cream DAC   | 20001678001      | 1              |
| Sanacorp                   | Base cream DAC   | 20001103001      | 1              |
| Sanacorp                   | Base cream DAC   | 20001852001      | 1              |
| Sanacorp                   | Base cream DAC   | 20001860001      | 1              |
| Sanacorp                   | Base cream DAC   | 20001865001      | 1              |
| Sanacorp                   | Base cream DAC   | 20003182001      | 1              |
| Sanacorp                   | Base cream DAC   | 20003190001      | 1              |
| Sanacorp                   | Base cream DAC   | 20003195001      | 1              |
| Sanacorp                   | Base cream DAC   | 1513401          | 1              |
| Sanacorp                   | Base cream DAC   | 78/AKD12         | 1              |
| SANACORP                   | Base cream DAC   | 19040101         | 2              |
| Sanacorp 16.07.2016        | Base cream DAC   | 1604023-01       | 1              |
| Caelo                      | Base cream DAC   | 14091901         | 6              |
| Caelo                      | Base cream DAC   | 14151301         | 2              |
| Caelo                      | Base cream DAC   | 14327701         | 7              |
| Caelo                      | Base cream DAC   | 15173501         | 7              |
| Caelo                      | Base cream DAC   | 15250501         | 16             |
| Caelo                      | Base cream DAC   | 170195501        | 1              |
| Caelo                      | Base cream DAC   | 20000099001      | 2              |
| Euro OTC                   | Base cream DAC   | 29560618         | 3              |
| Sanacorp 03.07.2018 8,...  | Base cream DAC   | 1800970          | 1              |
| Sanacorp 05.01.15 EK 7,89  | Base cream DAC   | 14290001         | 1              |
| Sanacorp 07.11 Ek.8,04     | Base cream DAC   | 16241001         | 1              |
| Sanacorp 17.01.20 8,77EUR  | Base cream DAC   | 19004713         | 1              |
| Sanacorp 22.02.17 EK:8,04  | Base cream DAC   | 16352701         | 1              |
| Sanacorp 26.01.15 EK 7,89  | Base cream DAC   | 1403801          | 1              |
| Sanacorp 27.08.2018 8,...  | Base cream DAC   | 18003107         | 1              |
| Sanacorp 30.03.2017 ek:... | Base cream DAC   | 17028901         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Sanacorp 31.07.2014 EK:... | Base cream DAC   | 14143901         | 1              |
| Sanacorp W.E:17.03.18 ...  | Base cream DAC   | 17266401         | 1              |
| Sanacorp WE 12.04.17 -8... | Base cream DAC   | 17029001         | 1              |
| Sanacorp WE 20.02.17 E...  | Base cream DAC   | 16350301         | 1              |
| Sanacorp WE: 24.08.17 ...  | Base cream DAC   | 17155201         | 1              |
| Sanacorp WE:5.01.18        | Base cream DAC   | 17230001         | 1              |
| Sanacorp, 8,04EUR, 24.1.17 | Base cream DAC   | 16350101         | 1              |
| Bombastus                  | Base cream DAC   | 271999           | 1              |
| Bombastus                  | Base cream DAC   | 272215           | 4              |
| Bombastus                  | Base cream DAC   | 272086           | 3              |
| Bombastus                  | Base cream DAC   | 275181           | 2              |
| Bombastus                  | Base cream DAC   | 275182           | 1              |
| Bombastus                  | Base cream DAC   | 278470           | 3              |
| Caelo                      | Base cream DAC   | 268820           | 2              |
| Caelo                      | Base cream DAC   | 19003901         | 10             |
| Sanacorp/ Ferd. Eimerma... | Base cream DAC   | 8821114          | 2              |
| Sanacorp/Beyvers           | Base cream DAC   | 640/1            | 3              |
| Sanacorp/Beyvers           | Base cream DAC   | 731/2            | 3              |
| Sanacorp/Beyvers           | Base cream DAC   | 731/3            | 2              |
| Sanacorp/Beyvers           | Base cream DAC   | 19002            | 4              |
| Sanacorp/Beyvers           | Base cream DAC   | 19005            | 4              |
| Caelo                      | Base cream DAC   | 12000601         | 1              |
| Caelo                      | Base cream DAC   | 12175101         | 1              |
| Caelo                      | Base cream DAC   | 72/AKD1          | 1              |
| Caelo                      | Base cream DAC   | 74/AKD2          | 1              |
| Caelo                      | Base cream DAC   | 14326801         | 6              |
| Caelo                      | Base cream DAC   | 16131901         | 8              |
| Caelo                      | Base cream DAC   | 16146001         | 10             |
| Caelo                      | Base cream DAC   | 16232001         | 10             |
| Caelo                      | Base cream DAC   | 6003682004       | 1              |
| Caelo                      | Base cream DAC   | 17029101         | 6              |
| Caelo                      | Base cream DAC   | 17100201         | 13             |
| Caelo                      | Base cream DAC   | 17121501         | 14             |
| Caelo                      | Base cream DAC   | 17154601         | 13             |
| Caelo                      | Base cream DAC   | 17268501         | 17             |
| Caelo                      | Base cream DAC   | 17269301         | 4              |
| Caelo                      | Base cream DAC   | 18037401         | 3              |
| Caelo                      | Base cream DAC   | 19003501         | 10             |
| Caelo                      | Base cream DAC   | 19270501         | 17             |
| Caelo                      | Base cream DAC   | 20000579001      | 2              |
| Fagron                     | Base cream DAC   | 17103801         | 1              |
| Sanacorp/Fargon            | Base cream DAC   | 17K24-T07-050507 | 1              |
| Sanacorp/Henry Lamotte     | Base cream DAC   | 5909300          | 1              |
| Sanacorp/Henry Lamotte     | Base cream DAC   | 6002237005       | 2              |
| Sanacorp                   | Base cream DAC   | 19240301         | 2              |
| Schmittmann GmbH           | Base cream DAC   | 14151901         | 1              |
| Sonnenberg-Apotheke        | Base cream DAC   | 289663           | 1              |
| Caelo                      | Base cream DAC   | 14036201         | 12             |
| Spangro 2.5.14             | Base cream DAC   | 14091501         | 1              |
| Spangro 22.01.2019         | Base cream DAC   | 18192701         | 1              |
| Spangro_07.11.2018         | Base cream DAC   | 18166101         | 1              |
| Spangropharm               | Base cream DAC   | 14092001         | 1              |
| Stumpf/Beyvers             | Base cream DAC   | 412/2            | 1              |
| Stumpf/Beyvers             | Base cream DAC   | 412/3            | 1              |
| Bombastus                  | Base cream DAC   | 286086           | 2              |
| Bombastus                  | Base cream DAC   | 283976           | 1              |
| Caelo                      | Base cream DAC   | 12241101         | 1              |
| Caelo                      | Base cream DAC   | 13012601         | 2              |
| Caelo                      | Base cream DAC   | 1315601          | 1              |
| Caelo                      | Base cream DAC   | 13158601         | 5              |

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| Supplier                   | Substance      | Batch            | Spectra |
|----------------------------|----------------|------------------|---------|
| unbekannt                  | Base cream DAC | 53812            | 1       |
| Unisan                     | Base cream DAC | 5537000          | 5       |
| VDL                        | Base cream DAC | 13380901         | 1       |
| Caelo                      | Base cream DAC | 12061601         | 1       |
| Caelo                      | Base cream DAC | 12168001         | 1       |
| Caelo                      | Base cream DAC | 12303901         | 2       |
| Caelo                      | Base cream DAC | 13000901         | 1       |
| WE:06.04.2016 Sanacorp     | Base cream DAC | 16058801         | 1       |
| WE:16.02.2016              | Base cream DAC | 15420201         | 1       |
| WE:Sanacorp 10.08.2016...  | Base cream DAC | 16152201         | 1       |
| WE:Sanacorp 31.10.2016 ... | Base cream DAC | 16232301         | 1       |
| WE:Sanacorp26.09.2016 ...  | Base cream DAC | 16155401         | 1       |
| WESanacorp 17.12.2016 ...  | Base cream DAC | 16260801         | 2       |
| / Anzag                    | Base cream DAC |                  | 1       |
|                            | Base cream DAC | 287114           | 1       |
|                            | Base cream DAC | 289527           | 1       |
| Beyvers                    | Base cream DAC |                  | 6       |
| Beyvers/AHD                | Base cream DAC |                  | 1       |
|                            | Base cream DAC | 19000944         | 1       |
| Bombastus                  | Base cream DAC |                  | 3       |
| Bombastus                  | Base cream DAC | 19002698         | 2       |
| Bombastus                  | Base cream DAC | 18005744         | 5       |
|                            | Base cream DAC | 19118301         | 1       |
| Caelo                      | Base cream DAC | 13139901         | 14      |
| Caelo                      | Base cream DAC |                  | 22      |
| Caelo                      | Base cream DAC | 14052901         | 13      |
| Caelo                      | Base cream DAC | 17028801         | 8       |
|                            | Base cream DAC | 27290917         | 1       |
| Ensbona/ Sanacorp          | Base cream DAC |                  | 2       |
| Euro OTC                   | Base cream DAC | 1304006-01       | 5       |
| Euro OTC                   | Base cream DAC | 39210516         | 1       |
| Fagron                     | Base cream DAC | 18L19-T15-062894 | 22      |
| Fagron                     | Base cream DAC | 18L20-T12-062935 | 11      |
| Fagron                     | Base cream DAC |                  | 5       |
| Gehe                       | Base cream DAC |                  | 8       |
|                            | Base cream DAC | 5909300          | 2       |
| Henry Lamotte              | Base cream DAC | 8004996002       | 4       |
| Euro OTC                   | Base cream DAC |                  | 1       |
| p.w beyers gmbh,phönix     | Base cream DAC |                  | 4       |
| P.W.Beyvers                | Base cream DAC |                  | 1       |
| Sanacorp                   | Base cream DAC |                  | 2       |

- 223 439 spectra from 1120 *Apo-Ident* customers from a total of 43 237 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Base cream DAC* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Base cream DAC* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 1280          | 0              | 62 659        |
| Type B | 0              | 10 247        | 3              | 81 161        |
| Type C | 0              | 16 441        | 1483           | 223 432       |

The substance/substance group *Base cream DAC* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.5313 %) |
| Type B | 100.0000 % (> 99.9657 %) | 99.9707 % (> 99.9415 %)  |
| Type C | 100.0000 % (> 99.6876 %) | 91.7262 % (> 91.7094 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Base cream DAC* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Wool alcohol cream SR         | 11.12                  | 18.68                          |
| Eucerin® cum Aqua             | 11.28                  | 20.56                          |
| Non-ionic hydrophil ointment  | 13.44                  | 12.60                          |
| Psorisol base cream Audor®    | 17.36                  | —                              |
| Wool alcohol cream DAB        | 18.19                  | 24.89                          |
| Lanette® ointment (conserved) | 40.12                  | 32.07                          |
| ⋮                             | ⋮                      | ⋮                              |
| 2-ethylhexyl laurate          | >50                    | 120.15                         |
| Squalane                      | >50                    | 152.93                         |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Base cream DAC* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30923     | 35200               | 6.49                         | 15.70                           |
| 31043     | 34030               | 5.66                         | 20.35                           |
| 31252     | 31252               | 0.00                         | 19.26                           |
| 31474     | 31474               | 0.00                         | 17.71                           |
| 31964     | 31964               | 0.00                         | 18.48                           |
| 32345     | 35488               | 6.22                         | 17.91                           |
| 34030     | 34030               | 0.00                         | 20.45                           |
| 34318     | 31252               | 4.25                         | 21.28                           |
| 34482     | 34482               | 0.00                         | 22.97                           |
| 34485     | 31252               | 6.85                         | 13.44                           |
| 34503     | 31964               | 4.40                         | 21.28                           |
| 34504     | 34030               | 7.82                         | 14.85                           |
| 35174     | 35174               | 0.00                         | 17.69                           |
| 35175     | 35175               | 0.00                         | 18.60                           |
| 35176     | 35176               | 0.00                         | 18.21                           |
| 35178     | 35178               | 0.00                         | 17.19                           |
| 35182     | 35182               | 0.00                         | 17.82                           |
| 35200     | 35200               | 0.00                         | 18.51                           |
| 35424     | 35424               | 0.00                         | 19.18                           |
| 35488     | 35488               | 0.00                         | 18.68                           |
| 35489     | 35488               | 2.43                         | 19.17                           |
| 35490     | 34030               | 8.89                         | 17.68                           |
| 35491     | 35491               | 0.00                         | 18.84                           |
| 35557     | 35557               | 0.00                         | 16.08                           |
| 35559     | 35559               | 0.00                         | 21.50                           |
| 35560     | 35560               | 0.00                         | 14.74                           |
| 35561     | 35561               | 0.00                         | 19.36                           |
| 35562     | 35562               | 0.00                         | 13.78                           |
| 35563     | 35563               | 0.00                         | 16.63                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Basis Cordes® RK**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30892-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Basis Cordes® RK

### Special notes

When selecting the *Basis Cordes® RK* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Basis Cordes® RK          | 4      | 3      | 83     |

## Second-stage model

For differentiation of the substance/substance group *Basis Cordes*<sup>®</sup> RK the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Basis Cordes*<sup>®</sup> RK:

| Supplier | Substance                    | Batch   | Sample ID | Spectra | Certificate |
|----------|------------------------------|---------|-----------|---------|-------------|
| Ichthyol | Basis Cordes <sup>®</sup> RK | 13A038  | 31078     | 40      | 20130301    |
| Ichthyol | Basis Cordes <sup>®</sup> RK | 14A087  | 31660     | 60      | 1511145     |
| Ichthyol | Basis Cordes <sup>®</sup> RK | 19A097  | 34688     | 40      | 20190411    |
| Ichthyol | Basis Cordes <sup>®</sup> RK | 20A0069 | 34839     | 40      | 20200430    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Basis Cordes*<sup>®</sup> RK. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Basis Cordes*<sup>®</sup> RK.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                    | Batch   | Sample ID | Spectra |
|----------|------------------------------|---------|-----------|---------|
| Ichthyol | Basis Cordes <sup>®</sup> RK | 16A035  | 32951     | 40      |
| Ichthyol | Basis Cordes <sup>®</sup> RK | 16A034  | 33617     | 40      |
| Ichthyol | Basis Cordes <sup>®</sup> RK | 20A0001 | 34840     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1362 spectra from 506 *Apo-Ident* customers from 98 batches from the substance/substance group *Basis Cordes® RK*.
- Among them are spectra of independent samples from 83 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance        | Batch   | Spectra |
|----------------------------|------------------|---------|---------|
| 09.01.19 Spangro           | Basis Cordes® RK | 18A108  | 1       |
| 200                        | Basis Cordes® RK | 13A206  | 1       |
| AHD                        | Basis Cordes® RK | 18A108  | 1       |
| AHD                        | Basis Cordes® RK | 19A0217 | 1       |
| AHD 04.02.15               | Basis Cordes® RK | 14A087  | 1       |
| AHD 13.12.16 EK 16,54      | Basis Cordes® RK | 16A035  | 1       |
| AHD/ichthyol               | Basis Cordes® RK | 16A035  | 1       |
| AHD17.11.14 EK 16,06       | Basis Cordes® RK | 13A206  | 1       |
| Alliance healthcare        | Basis Cordes® RK | 13A038  | 1       |
| Alliance Healthcare        | Basis Cordes® RK | 20A0069 | 1       |
| Alliance/ICHTHYOL          | Basis Cordes® RK | 20A0001 | 1       |
| Anzag                      | Basis Cordes® RK | 19A097  | 1       |
| Anzag/ Ichtyol             | Basis Cordes® RK | 12A046  | 2       |
| Anzag/Ichtyol              | Basis Cordes® RK | 12A046  | 1       |
| Anzag/Ichtyol-Gesellsch... | Basis Cordes® RK | 13A104  | 1       |
| Anzag/Ichtyol-Gesellsch... | Basis Cordes® RK | 14A051  | 1       |
| AnzagIchthyol              | Basis Cordes® RK | 16A035  | 1       |
| apomix/Noweda              | Basis Cordes® RK | 16A034  | 1       |
| Bombastus                  | Basis Cordes® RK | 16A035  | 4       |
| Bombastus                  | Basis Cordes® RK | 13A103  | 1       |
| Bombastus                  | Basis Cordes® RK | 16A197  | 1       |
| Bombastus                  | Basis Cordes® RK | 17A149  | 2       |
| Caelo                      | Basis Cordes® RK | 12345   | 1       |
| Caelo                      | Basis Cordes® RK | 13A104  | 1       |
| Caelo                      | Basis Cordes® RK | 15A051  | 1       |
| Caelo                      | Basis Cordes® RK | 17A083  | 4       |
| Caelo                      | Basis Cordes® RK | 17A046  | 1       |
| Caelo                      | Basis Cordes® RK | 17A149  | 5       |
| Caelo                      | Basis Cordes® RK | 17A198  | 1       |
| Caelo                      | Basis Cordes® RK | 18A182  | 1       |
| Caelo                      | Basis Cordes® RK | 19A097  | 1       |
| Caelo                      | Basis Cordes® RK | 17A046  | 7       |
| Caelo                      | Basis Cordes® RK | 13A038  | 2       |
| Caelo                      | Basis Cordes® RK | 15A172  | 1       |
| Caelo                      | Basis Cordes® RK | 13A206  | 2       |
| Caelo                      | Basis Cordes® RK | 16A035  | 2       |
| Caelo                      | Basis Cordes® RK | P160/14 | 1       |
| Caelo                      | Basis Cordes® RK | 14D87   | 1       |
| Caelo                      | Basis Cordes® RK | 18A103  | 1       |
| Fagron                     | Basis Cordes® RK | 18A106  | 1       |
| Caelo                      | Basis Cordes® RK | 15A057  | 4       |

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| <b>Supplier</b>             | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------------------|--------------|----------------|
| Caelo                       | Basis Cordes <sup>®</sup> RK | 16A034       | 11             |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 13A103       | 1              |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 14A205       | 3              |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 16A125       | 1              |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 18A108       | 7              |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 4312A-03300  | 1              |
| Cordes                      | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Cordes / Gehe               | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Cordes, Hermani / Gehe      | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Cordes, Hermani / Gehe      | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Cordes, Hermanni & Co       | Basis Cordes <sup>®</sup> RK | 13A206       | 2              |
| Cordes/AHD                  | Basis Cordes <sup>®</sup> RK | 13A038       | 1              |
| Cordes/Anzag                | Basis Cordes <sup>®</sup> RK | 13A038       | 2              |
| Cordes/Gehe                 | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Cordes/Gehe                 | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Cordes/Noweda               | Basis Cordes <sup>®</sup> RK | 16A125       | 1              |
| Cordes/Phoenix              | Basis Cordes <sup>®</sup> RK | 12A114       | 1              |
| Delta Apotheke              | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Dr. Wolff                   | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ebert                       | Basis Cordes <sup>®</sup> RK | 11A079       | 1              |
| Euro OTC                    | Basis Cordes <sup>®</sup> RK | 15A194       | 2              |
| Fagron                      | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Fagron                      | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Fagron                      | Basis Cordes <sup>®</sup> RK | 13A103       | 2              |
| Fiebig                      | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Fiebig                      | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Fiebig Ludw./ Ichthyol-...  | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 12A045       | 4              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 12A030       | 2              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 13A039       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 13A104       | 2              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 14A205       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 15A057       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Gehe                        | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| GEHE                        | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| GEHE                        | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Gehe - Ichthyol             | Basis Cordes <sup>®</sup> RK | 13A039       | 1              |
| GEHE / ICHTYOL Gesellsch... | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Gehe amax                   | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Gehe/ Ichthyol              | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 15A194       | 3              |
| Gehe/Ichthyol               | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Gehe/Ichthyol               | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Gehe/Ichthyol               | Basis Cordes <sup>®</sup> RK | 20A0069      | 2              |
| Gehe/Ichthyol 23.11.16      | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Gehe/Ichthyol Gesellsch...  | Basis Cordes <sup>®</sup> RK | 19A0217      | 3              |
| Gehe/Ichthyol               | Basis Cordes <sup>®</sup> RK | 18A103       | 1              |
| Geibo/Ichthyol-Gesellsch... | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Hepart AG                   | Basis Cordes <sup>®</sup> RK | 17A083       | 2              |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol-Gesellschaft       | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol                    | Basis Cordes <sup>®</sup> RK | 15A057       | 1              |
| ichthol                     | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthol/ Gehe               | Basis Cordes <sup>®</sup> RK | 20A0001      | 2              |
| Ichthol/ gehe 28.01.19      | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichthol/ Noweda             | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |

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| Supplier                     | Substance                    | Batch       | Spectra |
|------------------------------|------------------------------|-------------|---------|
| Ichthol-Gesellschaft/Ph. . . | Basis Cordes <sup>®</sup> RK | 1SA108      | 1       |
| ICHTHYL-GESELLSCHAFT Co. . . | Basis Cordes <sup>®</sup> RK | 19A0217     | 1       |
| ICHTHYL-GESELLSCHAFT Co. . . | Basis Cordes <sup>®</sup> RK | 17A149      | 1       |
| Ichthyo/Phönix               | Basis Cordes <sup>®</sup> RK | 16A034      | 1       |
| Ichthyo/Phönix               | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 1213Q-03300 | 1       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A103      | 1       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 16A035      | 1       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A083      | 2       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A046      | 1       |
| ichthyol                     | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A030      | 8       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 11A067      | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 11A156      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 10A138      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 10A064      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 19111208    | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A046      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A167      | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A114      | 6       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 11A079      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A039      | 2       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A104      | 2       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A039      | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A045      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 30041301    | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A103      | 6       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 12A103      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 14A038      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 10071401    | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A206      | 8       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 27102014B   | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 28011507    | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 14a087      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 14A205      | 3       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 20061501    | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A057      | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A057      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A051      | 2       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A115      | 5       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A194      | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 15A172      | 3       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 16A035      | 6       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 16A125      | 2       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 16A034      | 7       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A046      | 13      |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A083      | 10      |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 16A197      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A083      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 17A149      | 13      |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 14A149      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 17a149      | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 18A108      | 3       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 18A134      | 3       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 18A182      | 7       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 19A0217     | 4       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 19A97       | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 20A0189     | 2       |
| ICHTHYOL                     | Basis Cordes <sup>®</sup> RK | 17A046      | 1       |
| ICHTHYOL                     | Basis Cordes <sup>®</sup> RK | 17A083      | 1       |

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| Supplier                   | Substance                    | Batch   | Spectra |
|----------------------------|------------------------------|---------|---------|
| ICHTHYOL                   | Basis Cordes <sup>®</sup> RK | 17A149  | 2       |
| ICHTHYOL                   | Basis Cordes <sup>®</sup> RK | 18A103  | 1       |
| ICHTHYOL                   | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| ICHTHYOL                   | Basis Cordes <sup>®</sup> RK | 18A1080 | 1       |
| ICHTHYOL                   | Basis Cordes <sup>®</sup> RK | 18A182  | 2       |
| ICHTHYOL / Sanacorp        | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Ichthyol - Gesellschaft    | Basis Cordes <sup>®</sup> RK | 11A079  | 1       |
| Ichthyol - Gesellschaft    | Basis Cordes <sup>®</sup> RK | 12A046  | 1       |
| ICHTHYOL - GESELLSCHAFT... | Basis Cordes <sup>®</sup> RK | 19A097  | 1       |
| ICHTHYOL - GESELLSCHAFT... | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Ichthyol , Noweda          | Basis Cordes <sup>®</sup> RK | 13A038  | 1       |
| Ichthyol / 1               | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| ICHTHYOL / 20              | Basis Cordes <sup>®</sup> RK | 15A194  | 1       |
| ICHTHYOL / 20              | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| ICHTHYOL / 20              | Basis Cordes <sup>®</sup> RK | 20A0069 | 1       |
| ICHTHYOL / 30              | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol / Alliance        | Basis Cordes <sup>®</sup> RK | 18A134  | 1       |
| Ichthyol / Anzag           | Basis Cordes <sup>®</sup> RK | 11A156  | 1       |
| Ichthyol / Anzag           | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Ichthyol / Anzag           | Basis Cordes <sup>®</sup> RK | 19A217  | 1       |
| Ichthyol / G               | Basis Cordes <sup>®</sup> RK | 15A194  | 1       |
| Ichthyol / Gehe            | Basis Cordes <sup>®</sup> RK | 17A046  | 5       |
| Ichthyol / Gehe            | Basis Cordes <sup>®</sup> RK | 18A108  | 2       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 13A039  | 1       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 16A035  | 2       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 17A198  | 1       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Ichthyol / Noweda          | Basis Cordes <sup>®</sup> RK | 20A0001 | 1       |
| Ichthyol / Phoenix         | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol / Phoenix         | Basis Cordes <sup>®</sup> RK | 19A097  | 1       |
| Ichthyol / Phoenix         | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| Ichthyol / Phoenix         | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Ichthyol / Phönix          | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Ichthyol / Phönix          | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| Ichthyol / Phönix          | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Ichthyol / Sanacorp        | Basis Cordes <sup>®</sup> RK | 15A115  | 1       |
| Ichthyol / Sanacorp 04...  | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| ichthyol /2                | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| ichthyol /2                | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Ichthyol /Gehe             | Basis Cordes <sup>®</sup> RK | 14A087  | 1       |
| Ichthyol /Gehe             | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Ichthyol /Noweda           | Basis Cordes <sup>®</sup> RK | 13A039  | 2       |
| Ichthyol /Noweda           | Basis Cordes <sup>®</sup> RK | 13A103  | 3       |
| Ichthyol /Noweda           | Basis Cordes <sup>®</sup> RK | 16A034  | 2       |
| Ichthyol /Noweda           | Basis Cordes <sup>®</sup> RK | 16A197  | 1       |
| Ichthyol /Noweda           | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Ichthyol /Sanacorp         | Basis Cordes <sup>®</sup> RK | 20A0069 | 1       |
| Ichthyol AG /Alliance H... | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol Cordes            | Basis Cordes <sup>®</sup> RK | 13A104  | 1       |
| Ichthyol Cordes/Gehe       | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| Ichthyol Cordes/Gehe 16... | Basis Cordes <sup>®</sup> RK | 19A097  | 1       |
| Ichthyol G./Gehe           | Basis Cordes <sup>®</sup> RK | 10A108  | 1       |
| Ichthyol Ges.              | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol Ges. / Gehe       | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol Ges. / Gehe       | Basis Cordes <sup>®</sup> RK | 15A194  | 1       |
| Ichthyol Gesellsch./Now... | Basis Cordes <sup>®</sup> RK | 15A194  | 1       |
| Ichthyol Gesellsch./Pho... | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| ichthyol gesellschaft      | Basis Cordes <sup>®</sup> RK | 14A205  | 1       |

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| Supplier                    | Substance                    | Batch       | Spectra |
|-----------------------------|------------------------------|-------------|---------|
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 12A045      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 13A104      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 13A039      | 2       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 14A148      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 14A205      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 15A057      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 16A035      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 16A197      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 17A046      | 3       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 17A149      | 3       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 18A134      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 19A0217     | 1       |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 20A0001     | 1       |
| Ichthyol-Gesellschaft       | Basis Cordes <sup>®</sup> RK | 13A038      | 1       |
| Ichthyol- Gesellschaft      | Basis Cordes <sup>®</sup> RK | 13A039      | 2       |
| Ichthyol- Gesellschaft      | Basis Cordes <sup>®</sup> RK | 16A035      | 1       |
| ICHTHYOL GESELLSCHAFT       | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| ichthyol Gesellschaft ...   | Basis Cordes <sup>®</sup> RK | 14A205      | 1       |
| Ichthyol Gesellschaft /...  | Basis Cordes <sup>®</sup> RK | 15A115      | 1       |
| Ichthyol Gesellschaft /...  | Basis Cordes <sup>®</sup> RK | 20A0114     | 1       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 14A087      | 2       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 15A057      | 1       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 18A108      | 1       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 16A035      | 1       |
| ICHTHYOL- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| ICHTHYOL- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 12A045      | 1       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 12A046      | 1       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 15A057      | 1       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| Ichthyol- Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 17A046      | 1       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 1417E-03300 | 1       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 16A034      | 2       |
| Ichthyol- Gesellschaft ...  | Basis Cordes <sup>®</sup> RK | 17A083      | 2       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| Ichthyol Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 15A115      | 1       |
| Ichthyol Gesellschaft- ...  | Basis Cordes <sup>®</sup> RK | 14A205      | 2       |
| Ichthyol Gesellschaft- ...  | Basis Cordes <sup>®</sup> RK | 15A194      | 1       |
| Ichthyol Gesellschaft, ...  | Basis Cordes <sup>®</sup> RK | 20A0069     | 1       |
| Ichthyol Gesellschaft/ ...  | Basis Cordes <sup>®</sup> RK | 18A108      | 1       |
| Ichthyol Gesellschaft/AHD   | Basis Cordes <sup>®</sup> RK | 15A194      | 1       |
| Ichthyol Gesellschaft/AHD   | Basis Cordes <sup>®</sup> RK | 17A083      | 1       |
| Ichthyol Gesellschaft/AHD   | Basis Cordes <sup>®</sup> RK | 18A0108     | 1       |
| Ichthyol Gesellschaft/AHD   | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| Ichthyol Gesellschaft/C...  | Basis Cordes <sup>®</sup> RK | 18A108      | 1       |
| Ichthyol Gesellschaft/G...  | Basis Cordes <sup>®</sup> RK | 17A083      | 1       |
| Ichthyol Gesellschaft/G...  | Basis Cordes <sup>®</sup> RK | 17A149      | 1       |
| Ichthyol Gesellschaft/G...  | Basis Cordes <sup>®</sup> RK | 18A108      | 1       |
| Ichthyol Gesellschaft/G...  | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| Ichthyol Gesellschaft/J...  | Basis Cordes <sup>®</sup> RK | 16A034      | 1       |
| Ichthyol Gesellschaft/K...  | Basis Cordes <sup>®</sup> RK | 17A149      | 1       |
| Ichthyol Gesellschaft/N...  | Basis Cordes <sup>®</sup> RK | 17A046      | 1       |
| Ichthyol Gesellschaft/N...  | Basis Cordes <sup>®</sup> RK | 18A108      | 1       |
| Ichthyol Gesellschaft/N...  | Basis Cordes <sup>®</sup> RK | 18A182      | 1       |
| Ichthyol Gesellschaft/N...  | Basis Cordes <sup>®</sup> RK | 19A097      | 1       |
| Ichthyol Gesellschaft/N...  | Basis Cordes <sup>®</sup> RK | 19A0217     | 1       |
| Ichthyol Gesellschaft/P...  | Basis Cordes <sup>®</sup> RK | 19A0217     | 1       |
| Ichthyol Gesellschaft/P...  | Basis Cordes <sup>®</sup> RK | 20A0069     | 2       |

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| <b>Supplier</b>            | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------------------|--------------|----------------|
| Ichthyol Gesellschaft/S... | Basis Cordes <sup>®</sup> RK | 17A198       | 1              |
| Ichthyol GmbH              | Basis Cordes <sup>®</sup> RK | 17A083       | 3              |
| Ichthyol GmbH              | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Ichthyol GmbH              | Basis Cordes <sup>®</sup> RK | 13A038       | 1              |
| Ichthyol GmbH, Phönix      | Basis Cordes <sup>®</sup> RK | 13A038       | 1              |
| Ichthyol über Phoenix      | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichthyol Werke             | Basis Cordes <sup>®</sup> RK | 12A114       | 1              |
| Ichthyol Werke             | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Ichthyol Werke             | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| Ichthyol, Noweda           | Basis Cordes <sup>®</sup> RK | 13A039       | 1              |
| Ichthyol, Noweda           | Basis Cordes <sup>®</sup> RK | 19A097       | 2              |
| Ichthyol/ AEP              | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichthyol/ Anzag            | Basis Cordes <sup>®</sup> RK | 15A115       | 2              |
| ichthyol/ Gehe             | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/ Gehe             | Basis Cordes <sup>®</sup> RK | 12A045       | 1              |
| Ichthyol/ Gehe             | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/ Gehe 15.10.19    | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/ Gehe 22.05.19    | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Ichthyol/ Krieger          | Basis Cordes <sup>®</sup> RK | 15A172       | 1              |
| Ichthyol/ Krieger          | Basis Cordes <sup>®</sup> RK | 16A125       | 1              |
| Ichthyol/ Krieger          | Basis Cordes <sup>®</sup> RK | 16A197       | 1              |
| Ichthyol/ Krieger          | Basis Cordes <sup>®</sup> RK | 17A198       | 2              |
| Ichthyol/ Krieger          | Basis Cordes <sup>®</sup> RK | 18A134       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 12A046       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 11A079       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 17A083       | 2              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 19A097       | 2              |
| Ichthyol/ Noweda           | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/ NOWEDA           | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/ Phoenix          | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichthyol/ Phoenix          | Basis Cordes <sup>®</sup> RK | 14A205       | 3              |
| Ichthyol/ Phoenix          | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ichthyol/ Phoenix          | Basis Cordes <sup>®</sup> RK | 16A034       | 5              |
| Ichthyol/ Phönix           | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Ichthyol/ Phönix 13.05.20  | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| ichthyol/ Sanacorp         | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| ichthyol/ Sanacorp         | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/ Sanacorp         | Basis Cordes <sup>®</sup> RK | 15A057       | 1              |
| ICHTHYOL/ Sanacorp         | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/ VDL              | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/AEP               | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| ichthyol/AHD               | Basis Cordes <sup>®</sup> RK | 13A039       | 1              |
| Ichthyol/AHD               | Basis Cordes <sup>®</sup> RK | 14A205       | 1              |
| Ichthyol/AHD               | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ichthyol/AHD               | Basis Cordes <sup>®</sup> RK | 19A097       | 2              |
| Ichthyol/AHD               | Basis Cordes <sup>®</sup> RK | 19A0217      | 2              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 17A046       | 3              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 16A197       | 1              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 17A193       | 1              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 18A108       | 2              |
| Ichthyol/Alliance          | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/Alliance healt... | Basis Cordes <sup>®</sup> RK | 13A103       | 1              |
| Ichthyol/Alliance Healt... | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Ichthyol/Alliance Healt... | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| Ichthyol/Alliance Healt... | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 12A045       | 1              |

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| Supplier                   | Substance                    | Batch   | Spectra |
|----------------------------|------------------------------|---------|---------|
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 13A206  | 2       |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 15A051  | 1       |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol/Anzag             | Basis Cordes <sup>®</sup> RK | 19A097  | 2       |
| Ichthyol/E&J               | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Ichthyol/E&J               | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Ichthyol/Ebert             | Basis Cordes <sup>®</sup> RK | 12A114  | 1       |
| Ichthyol/Ebert             | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| Ichthyol/Fiebig            | Basis Cordes <sup>®</sup> RK | 14A205  | 2       |
| Ichthyol/Fiebig            | Basis Cordes <sup>®</sup> RK | 12A114  | 1       |
| Ichthyol/Fiebig            | Basis Cordes <sup>®</sup> RK | 17A083  | 3       |
| ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 13A104  | 2       |
| Ichthyol/gehe              | Basis Cordes <sup>®</sup> RK | 13A039  | 1       |
| Ichthyol/gehe              | Basis Cordes <sup>®</sup> RK | 13A103  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 13A103  | 3       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 14A038  | 2       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 13A206  | 2       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 14A087  | 2       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 14A205  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 15A115  | 5       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 16A035  | 2       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 17A046  | 3       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 18A108  | 3       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 18A182  | 4       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 18A134  | 3       |
| Ichthyol/Gehe              | Basis Cordes <sup>®</sup> RK | 19A097  | 3       |
| Ichthyol/GEHE              | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol/GEHE              | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| ICHTHYOL/GEHE              | Basis Cordes <sup>®</sup> RK | 14A087  | 1       |
| Ichthyol/Jenne             | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol/Jenne             | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Ichthyol/Jenne             | Basis Cordes <sup>®</sup> RK | 20A0069 | 1       |
| Ichthyol/Kehr              | Basis Cordes <sup>®</sup> RK | 17A083  | 2       |
| Ichthyol/Kehr              | Basis Cordes <sup>®</sup> RK | 17A149  | 2       |
| Ichthyol/Kehr              | Basis Cordes <sup>®</sup> RK | 16A197  | 1       |
| Ichthyol/Kehr              | Basis Cordes <sup>®</sup> RK | 18A182  | 2       |
| Ichthyol/Kehr              | Basis Cordes <sup>®</sup> RK | 19A097  | 2       |
| ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 19A114  | 1       |
| ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 20A0001 | 1       |
| Ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 14A087  | 1       |
| Ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 16A197  | 1       |
| Ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 17A198  | 1       |
| Ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| Ichthyol/Krieger           | Basis Cordes <sup>®</sup> RK | 20A0001 | 1       |
| Ichthyol/N                 | Basis Cordes <sup>®</sup> RK | 15A115  | 1       |
| Ichthyol/N/17.04.2013/P... | Basis Cordes <sup>®</sup> RK | 12A167  | 1       |
| Ichthyol/N/PZN:01114881    | Basis Cordes <sup>®</sup> RK | 13A104  | 1       |
| ichthyol/noweda            | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| ichthyol/noweda            | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| ichthyol/noweda            | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Ichthyol/Noweda            | Basis Cordes <sup>®</sup> RK | 13A104  | 1       |
| Ichthyol/Noweda            | Basis Cordes <sup>®</sup> RK | 13A103  | 2       |
| Ichthyol/Noweda            | Basis Cordes <sup>®</sup> RK | 14A087  | 2       |
| Ichthyol/Noweda            | Basis Cordes <sup>®</sup> RK | 15A057  | 5       |

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| <b>Supplier</b>  | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|------------------|------------------------------|--------------|----------------|
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 15a115       | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 15A194       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 15a194       | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 16A034       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 17A046       | 2              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 17A083       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 17A149       | 4              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 17A198       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 18A108       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 18A109       | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 16A197       | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 18A134       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 18A182       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 19A114       | 2              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 19A097       | 3              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 19a097       | 1              |
| Ichthyol/Noweda  | Basis Cordes <sup>®</sup> RK | 20A0189      | 1              |
| ICHTHYOL/Noweda  | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| ICHTHYOL/Noweda  | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| ICHTHYOL/Noweda  | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| ICHTHYOL/Noweda  | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/Otto    | Basis Cordes <sup>®</sup> RK | 13A103       | 1              |
| Ichthyol/Otto    | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Ichthyol/P       | Basis Cordes <sup>®</sup> RK | 17A046       | 2              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 14A205       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 15A051       | 7              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 16A035       | 4              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 17A083       | 2              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 18A108       | 2              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 18A109       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 18A182       | 2              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 19A114       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/Phoenix | Basis Cordes <sup>®</sup> RK | 19A0217      | 1              |
| Ichthyol/phönix  | Basis Cordes <sup>®</sup> RK | 14A205       | 3              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 12A114       | 1              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 14A038       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 14A148       | 5              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 15A194       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 15A172       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 16A035       | 3              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 16A125       | 8              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 16A034       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 16A197       | 5              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 17A083       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 17A149       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 17A198       | 3              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 17A193       | 1              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 18A108       | 2              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 18A134       | 2              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 18A182       | 4              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 19A114       | 3              |
| Ichthyol/Phönix  | Basis Cordes <sup>®</sup> RK | 20A0001      | 1              |

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| Supplier                   | Substance        | Batch       | Spectra |
|----------------------------|------------------|-------------|---------|
| Ichthyol/Phönix            | Basis Cordes® RK | 19A0217     | 2       |
| Ichthyol/Phönix            | Basis Cordes® RK | 19A0217     | 1       |
| Ichthyol/Phönix            | Basis Cordes® RK | 20A0069     | 4       |
| ICHTHYOL/Phönix            | Basis Cordes® RK | 18A108      | 1       |
| ICHTHYOL/PHÖNIX            | Basis Cordes® RK | 10A108      | 1       |
| Ichthyol/PX                | Basis Cordes® RK | 14A205      | 1       |
| Ichthyol/sanacorp          | Basis Cordes® RK | 1115E-03300 | 1       |
| Ichthyol/sanacorp          | Basis Cordes® RK | 16A034      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 13A038      | 3       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 13A104      | 3       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 12A167      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 13A206      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 14A038      | 3       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 14A148      | 4       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 14A205      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 15A051      | 5       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 15A115      | 2       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 15A194      | 2       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 15A172      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 16A034      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 16A035      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 17A046      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 17A083      | 2       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 17A149      | 2       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 17A198      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 18A108      | 3       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 18A134      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 18A182      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 19A097      | 2       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 19A114      | 1       |
| Ichthyol/Sanacorp          | Basis Cordes® RK | 19A0217     | 1       |
| Ichthyol/VDL               | Basis Cordes® RK | 14A205      | 1       |
| ICHTHYOL_GESELLSCHAFT      | Basis Cordes® RK | 20A0189     | 2       |
| IchthyolAlliance Health... | Basis Cordes® RK | 13A206      | 1       |
| ICHTHYOL-GES.              | Basis Cordes® RK | 12A114      | 1       |
| Ichthyol-Ges. / G          | Basis Cordes® RK | 18A108      | 1       |
| Ichthyol-Ges./Phönix       | Basis Cordes® RK | 18A182      | 1       |
| ICHTHYOL-GES/GEHE          | Basis Cordes® RK | 11A079      | 1       |
| ICHTHYOL-GES/GEHE          | Basis Cordes® RK | 12A045      | 1       |
| Ichthyol-Ges/Sanacor       | Basis Cordes® RK | 17A046      | 1       |
| Ichthyol-Ges/Sanacor       | Basis Cordes® RK | 17A083      | 1       |
| Ichthyol-Ges/Sanacor       | Basis Cordes® RK | 19A097      | 1       |
| ICHTHYOL-Gesellsch. Cor... | Basis Cordes® RK | 1318A-03300 | 1       |
| IchthyolGesellsch/Ph       | Basis Cordes® RK | 18A108      | 1       |
| IchthyolGesellsch/Ph       | Basis Cordes® RK | 18A182      | 1       |
| Ichthyol-Gesellschaft ...  | Basis Cordes® RK | 18A1008     | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 12A046      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 12A030      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 12A114      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 13A038      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 13A039      | 3       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 13A103      | 3       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 14A087      | 3       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 13A206      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 14A205      | 5       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 14A148      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 15A057      | 7       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 15A051      | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 15A115      | 6       |
| Ichthyol-Gesellschaft      | Basis Cordes® RK | 15A194      | 5       |

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| Supplier                   | Substance                    | Batch    | Spectra |
|----------------------------|------------------------------|----------|---------|
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 16A035   | 5       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 15A172   | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 16A034   | 10      |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 16A125   | 2       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 17A046   | 5       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 17A083   | 4       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 17a083   | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 12051803 | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 17A149   | 4       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 18A108   | 4       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 18A182   | 4       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 19A114   | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 19A097   | 3       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 19A0217  | 1       |
| Ichthyol-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 20A0069  | 1       |
| ICHTHYOL-Gesellschaft      | Basis Cordes <sup>®</sup> RK | 18A108   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 11A079   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 12A046   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 14A205   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 16A035   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 17A083   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 18A108   | 1       |
| ICHTHYOL-GESELLSCHAFT      | Basis Cordes <sup>®</sup> RK | 17A149   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 18A108   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 17A083   | 2       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 15A194   | 2       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 16A034   | 2       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 18A108   | 1       |
| Ichthyol-Gesellschaft / E  | Basis Cordes <sup>®</sup> RK | 12A045   | 1       |
| Ichthyol-Gesellschaft / G  | Basis Cordes <sup>®</sup> RK | 13A038   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 15A057   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 18A182   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 19A097   | 2       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 17A149   | 2       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 19A0217  | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 14A205   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 16A034   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 18A182   | 3       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 18A2     | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 17A046   | 2       |
| ICHTHYOL-GESELLSCHAFT /... | Basis Cordes <sup>®</sup> RK | 17A149   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 13A103   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 13A206   | 1       |
| Ichthyol-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 14A038   | 1       |
| ICHTHYOL-Gesellschaft /... | Basis Cordes <sup>®</sup> RK | 20A0069  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 15A172   | 4       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 16A035   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 17A149   | 4       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 18A108   | 3       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 18A182   | 3       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 19A097   | 3       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 19A0217  | 2       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 20A0069  | 2       |
| ICHTHYOL-GESELLSCHAFT C... | Basis Cordes <sup>®</sup> RK | 15A057   | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Basis Cordes <sup>®</sup> RK | 15A115   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 17A046   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 17A149   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 19A097   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 17A149   | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes <sup>®</sup> RK | 18A108   | 3       |

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| Supplier                   | Substance        | Batch   | Spectra |
|----------------------------|------------------|---------|---------|
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 19A097  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 18A182  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 19A0217 | 4       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 20A0069 | 3       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 20A0189 | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Basis Cordes® RK | 14A087  | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Basis Cordes® RK | 19A097  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 19A097  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 14A038  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 14A148  | 2       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 15A051  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 15A172  | 4       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 16A035  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 16A125  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 20A0069 | 2       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 19A114  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 13A103  | 1       |
| ICHTHYOL-Gesellschaft C... | Basis Cordes® RK | 18D017  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 16A034  | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Basis Cordes® RK | 17A046  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 15A194  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 16A035  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 18A108  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 18A182  | 1       |
| Ichthyol-Gesellschaft C... | Basis Cordes® RK | 19A097  | 1       |
| Ichthyolgesellschaft Gehe  | Basis Cordes® RK | 19A097  | 1       |
| Ichthyol-Gesellschaft N... | Basis Cordes® RK | 17A083  | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 17A083  | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 17A083  | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 15A194  | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 13A206  | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 18A182  | 1       |
| ichthyolgesellschaft/P...  | Basis Cordes® RK | 20A0069 | 1       |
| Ichthyol-Gesellschaft/...  | Basis Cordes® RK | 19A097  | 1       |
| Ichthyol-Gesellschaft/AHD  | Basis Cordes® RK | 15A194  | 1       |
| Ichthyol-Gesellschaft/AHD  | Basis Cordes® RK | 19A0217 | 1       |
| Ichthyol-Gesellschaft/A... | Basis Cordes® RK | 17A193  | 1       |
| Ichthyol-Gesellschaft/A... | Basis Cordes® RK | 15A057  | 1       |
| Ichthyol-Gesellschaft/G... | Basis Cordes® RK | 16A035  | 2       |
| Ichthyol-Gesellschaft/G... | Basis Cordes® RK | 17A046  | 1       |
| Ichthyol-Gesellschaft/G... | Basis Cordes® RK | 18A182  | 1       |
| Ichthyol-Gesellschaft/J... | Basis Cordes® RK | 18A182  | 1       |
| Ichthyol-Gesellschaft/N... | Basis Cordes® RK | 19A0217 | 1       |
| Ichthyol-Gesellschaft/N... | Basis Cordes® RK | 13A103  | 1       |
| Ichthyol-Gesellschaft/N... | Basis Cordes® RK | 13A206  | 2       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 13A039  | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 16A035  | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 18A103  | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 19A0217 | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 20A0189 | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 16A035  | 1       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 17A046  | 2       |
| Ichthyol-Gesellschaft/P... | Basis Cordes® RK | 17A149  | 1       |
| ICHTHYOL-Gesellschaft/P... | Basis Cordes® RK | 19A097  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Basis Cordes® RK | 20A0069 | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Basis Cordes® RK | 16A035  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Basis Cordes® RK | 17A149  | 1       |
| Ichthyol-Gesellschaft/S... | Basis Cordes® RK | 16A035  | 2       |
| Ichthyol-Gesellschaft/S... | Basis Cordes® RK | 16A034  | 1       |
| Ichthyol-Gesellschaft/S... | Basis Cordes® RK | 17A046  | 1       |

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| <b>Supplier</b>             | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------------------|--------------|----------------|
| Ichthyol-Gesellschaft/S...  | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Ichthyol-Gesellschaft/S...  | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Ichthyol-Gesellschaft/V...  | Basis Cordes <sup>®</sup> RK | 13A103       | 1              |
| IchthyolGesellschaftCor...  | Basis Cordes <sup>®</sup> RK | 15A115       | 2              |
| Ichthyol-Gesellschaft       | Basis Cordes <sup>®</sup> RK | 24061704     | 1              |
| Ichthyol-Gesellschaft Co... | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Ichthyol-Gesellschaft/Ph... | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Ichtiol/Noweda              | Basis Cordes <sup>®</sup> RK | 19A114       | 1              |
| ICHTL/Phönix                | Basis Cordes <sup>®</sup> RK | 18A108       | 3              |
| Ichthyol/Sanacorp           | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 15A115       | 2              |
| Ichthyol Gesellschaft       | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 12A114       | 1              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 11A156       | 1              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 13A038       | 1              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 13A103       | 2              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 15A115       | 1              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 16A035       | 2              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 16A034       | 3              |
| Ichtyol                     | Basis Cordes <sup>®</sup> RK | 17A198       | 1              |
| Ichtyol - Gesellschaft      | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichtyol - Gesellschaft      | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichtyol / Gehe              | Basis Cordes <sup>®</sup> RK | 17A083       | 4              |
| Ichtyol / Gehe              | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichtyol / Gehe              | Basis Cordes <sup>®</sup> RK | 18A182       | 2              |
| Ichtyol /Gehe               | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichtyol /Jenne 16.01.2014   | Basis Cordes <sup>®</sup> RK | 13A039       | 1              |
| Ichtyol 004                 | Basis Cordes <sup>®</sup> RK | 12A046       | 1              |
| Ichtyol Gehe                | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichtyol Gesellschaft        | Basis Cordes <sup>®</sup> RK | 15A057       | 3              |
| Ichtyol Gesellschaft / ...  | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| ichtyol gesellschaft co...  | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| ichtyol gesellschaft co...  | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| ICHTYOL GESELLSCHAFT Co...  | Basis Cordes <sup>®</sup> RK | 15A057       | 1              |
| ICHTYOL GESELLSCHAFT Co...  | Basis Cordes <sup>®</sup> RK | 16A197       | 1              |
| Ichtyol- Gesellschaft C...  | Basis Cordes <sup>®</sup> RK | 19A097       | 1              |
| Ichtyol Gesellschaft/ G...  | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ichtyol Gesellschaft/ N...  | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichtyol Gesllschaft         | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| Ichtyol Gesllschaft         | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Ichtyol GmbH                | Basis Cordes <sup>®</sup> RK | 17A149       | 1              |
| Ichtyol GmbH                | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Ichtyol GmbH                | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Ichtyol/ Noweda             | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichtyol/Anzag               | Basis Cordes <sup>®</sup> RK | 17A083       | 1              |
| Ichtyol/Anzag               | Basis Cordes <sup>®</sup> RK | 18A108       | 1              |
| Ichtyol/Anzag               | Basis Cordes <sup>®</sup> RK | 19A0217      | 2              |
| Ichtyol/Gehe                | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichtyol/Noweda              | Basis Cordes <sup>®</sup> RK | 15A194       | 1              |
| Ichtyol/Noweda              | Basis Cordes <sup>®</sup> RK | 16A035       | 1              |
| Ichtyol/Noweda              | Basis Cordes <sup>®</sup> RK | 16A034       | 1              |
| Ichtyol/Noweda              | Basis Cordes <sup>®</sup> RK | 17A046       | 1              |
| Ichtyol/Phoenix             | Basis Cordes <sup>®</sup> RK | 14A148       | 1              |
| Ichtyol/Phoenix             | Basis Cordes <sup>®</sup> RK | 15A057       | 1              |
| Ichtyol/Phoenix             | Basis Cordes <sup>®</sup> RK | 18A134       | 1              |
| Ichtyol/Phoenix             | Basis Cordes <sup>®</sup> RK | 20A0114      | 1              |
| Ichtyol/Phönix              | Basis Cordes <sup>®</sup> RK | 18A182       | 1              |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 13A038       | 1              |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 13A206       | 1              |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 14A087       | 1              |

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| Supplier                    | Substance                    | Batch          | Spectra |
|-----------------------------|------------------------------|----------------|---------|
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 14A205         | 2       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 14A038         | 1       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 15A057         | 1       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 15A172         | 4       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 16A125         | 5       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 16A034         | 2       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 16A197         | 5       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 17A046         | 3       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 17A083         | 1       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 17A198         | 6       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 17A149         | 1       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 18A108         | 1       |
| Ichtyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 19A114         | 1       |
| Ichtyol-Gesellschaft / Ph   | Basis Cordes <sup>®</sup> RK | 17A083         | 4       |
| Ichtyol-Gesellschaft / Ph   | Basis Cordes <sup>®</sup> RK | 17A149         | 1       |
| Ichtyol-Gesellschaft / ...  | Basis Cordes <sup>®</sup> RK | 18A182         | 3       |
| Ichtyolgesellschaft Cor...  | Basis Cordes <sup>®</sup> RK | 17A046         | 1       |
| Ichtyol-Gesellschaft Co...  | Basis Cordes <sup>®</sup> RK | 17A083         | 1       |
| Ichtyol-Gesellschaft Co...  | Basis Cordes <sup>®</sup> RK | 19A0217        | 1       |
| Ichtyol-Gesellschaft/Ph...  | Basis Cordes <sup>®</sup> RK | 12A114         | 1       |
| Ichtyol-Gesellschaft/Sa...  | Basis Cordes <sup>®</sup> RK | 20A0069        | 1       |
| Ichtyol-Gesellschaft AHD... | Basis Cordes <sup>®</sup> RK | 16A034         | 1       |
| Infectopharm                | Basis Cordes <sup>®</sup> RK | 3318J-003300   | 1       |
| Infectopharm/Phönix         | Basis Cordes <sup>®</sup> RK | 18A103         | 1       |
| Jenne                       | Basis Cordes <sup>®</sup> RK | 18A182         | 1       |
| krieger                     | Basis Cordes <sup>®</sup> RK | 19A114         | 1       |
| Krieger                     | Basis Cordes <sup>®</sup> RK | 17A083         | 2       |
| Krieger                     | Basis Cordes <sup>®</sup> RK | 17A149         | 1       |
| Krieger/Ichthyol            | Basis Cordes <sup>®</sup> RK | 15A194         | 1       |
| Krieger/Ichthyol            | Basis Cordes <sup>®</sup> RK | 15A172         | 1       |
| L10                         | Basis Cordes <sup>®</sup> RK | 17A046         | 1       |
| L12                         | Basis Cordes <sup>®</sup> RK | 18A108         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 11A156         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 13A038         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 14A087         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 15A057         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 15A194         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 16A035         | 3       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 16A034         | 2       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 17A149         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 18A108         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 18A109         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 18A134         | 3       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 18A182         | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 19A097         | 3       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 19A0217        | 1       |
| Noweda                      | Basis Cordes <sup>®</sup> RK | 20A0189        | 1       |
| Noweda 29.032016            | Basis Cordes <sup>®</sup> RK | 15A115         | 2       |
| Noweda ichthyol 17.11.1...  | Basis Cordes <sup>®</sup> RK | 18A108         | 1       |
| Bombastus                   | Basis Cordes <sup>®</sup> RK | 13A038         | 1       |
| Noweda/ Ichthyol            | Basis Cordes <sup>®</sup> RK | 16A0335        | 1       |
| noweda/anzag                | Basis Cordes <sup>®</sup> RK | 19A097         | 1       |
| Noweda/Cordes               | Basis Cordes <sup>®</sup> RK | 17A046         | 1       |
| Noweda/Ichthyol             | Basis Cordes <sup>®</sup> RK | 14A038         | 1       |
| Noweda/Ichthyol             | Basis Cordes <sup>®</sup> RK | 18A108         | 1       |
| Noweda/Ichthyol             | Basis Cordes <sup>®</sup> RK | 19A114         | 2       |
| Noweda/Ichthyol             | Basis Cordes <sup>®</sup> RK | 19A097         | 2       |
| Caelo                       | Basis Cordes <sup>®</sup> RK | 17A0462ma1250g | 1       |
| Noweda/Wepa                 | Basis Cordes <sup>®</sup> RK | 13A206         | 1       |
| Occasio/ Ichthyol           | Basis Cordes <sup>®</sup> RK | 16A197         | 1       |

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| Supplier                     | Substance                    | Batch   | Spectra |
|------------------------------|------------------------------|---------|---------|
| Occasio/ Ichthyol            | Basis Cordes <sup>®</sup> RK | 17A198  | 1       |
| Oststadt                     | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Phoe                         | Basis Cordes <sup>®</sup> RK | 16A035  | 1       |
| Phoenix                      | Basis Cordes <sup>®</sup> RK | 13A039  | 1       |
| Phoenix                      | Basis Cordes <sup>®</sup> RK | 19A097  | 2       |
| phoenix/ ichthyol-gesel. . . | Basis Cordes <sup>®</sup> RK | 18A182  | 4       |
| Phoenix/Ichthyol-Gesell. . . | Basis Cordes <sup>®</sup> RK | 19A097  | 2       |
| phönix                       | Basis Cordes <sup>®</sup> RK | 15A115  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 12A167  | 2       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 15A194  | 2       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 17a149  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 18a182  | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Phönix                       | Basis Cordes <sup>®</sup> RK | 20a0189 | 1       |
| Phönix / Gehe                | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Phönix Cordes                | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 12A045  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 12A114  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 13A103  | 2       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 13A2C6  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 14A205  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 15A051  | 1       |
| Phönix Gotha                 | Basis Cordes <sup>®</sup> RK | 17A149  | 1       |
| Caelo                        | Basis Cordes <sup>®</sup> RK | 15A115  | 2       |
| Phönix/Ichthyol              | Basis Cordes <sup>®</sup> RK | 12A046  | 1       |
| Phönix/Ichthyol              | Basis Cordes <sup>®</sup> RK | 17A149  | 5       |
| Phönix/Ichthyol              | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Sanacop/Ichthyol             | Basis Cordes <sup>®</sup> RK | 14A046  | 1       |
| Sanacop/Ichthyol             | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| sanacorp                     | Basis Cordes <sup>®</sup> RK | 12A046  | 1       |
| Sanacorp                     | Basis Cordes <sup>®</sup> RK | 13A103  | 1       |
| Sanacorp                     | Basis Cordes <sup>®</sup> RK | 15A115  | 1       |
| Sanacorp                     | Basis Cordes <sup>®</sup> RK | 16A034  | 1       |
| Sanacorp                     | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| Sanacorp                     | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| SANACORP                     | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| Sanacorp / Ichthyol          | Basis Cordes <sup>®</sup> RK | 12A167  | 2       |
| Sanacorp/ Ichthyol Gese. . . | Basis Cordes <sup>®</sup> RK | 12A045  | 1       |
| Sanacorp/Ichthyol            | Basis Cordes <sup>®</sup> RK | 18A108  | 1       |
| Sanacorp/Ichthyol            | Basis Cordes <sup>®</sup> RK | 18A182  | 1       |
| Sanacorp/Ichthyol            | Basis Cordes <sup>®</sup> RK | 19A097  | 1       |
| Sanacorp/Ichthyol            | Basis Cordes <sup>®</sup> RK | 19A0217 | 1       |
| Sonnenberg-Apotheke          | Basis Cordes <sup>®</sup> RK | 4643491 | 1       |
| Spangropharm                 | Basis Cordes <sup>®</sup> RK | 17A083  | 1       |
| VDL;8.12.14;15,91EUR         | Basis Cordes <sup>®</sup> RK | 13A206  | 2       |
| WEPA                         | Basis Cordes <sup>®</sup> RK | 17A046  | 1       |
| Ychthyol-Gesellschaft        | Basis Cordes <sup>®</sup> RK | 16A035  | 2       |
|                              | Basis Cordes <sup>®</sup> RK | 15A057  | 1       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 13A038  | 12      |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 14A087  | 5       |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 19A097  | 16      |
| Ichthyol                     | Basis Cordes <sup>®</sup> RK | 20A0069 | 2       |
| Ichthyol/sanacorp            | Basis Cordes <sup>®</sup> RK |         | 1       |

- 240 001 spectra from 1121 *Apo-Ident* customers from a total of 46 909 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Basis Cordes® RK* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Basis Cordes® RK* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 120           | 0              | 91 341        |
| <b>Type C</b> | 0              | 1076          | 286            | 239 811       |

The substance/substance group *Basis Cordes® RK* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9657 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6805 %) | 79.0015 % (> 78.7812 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Basis Cordes® RK* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                   | Distance in main model | Distance in second-stage model |
|-----------------------------|------------------------|--------------------------------|
| Lanolin DAB                 | 28.91                  | —                              |
| Cooling cream DAB           | 32.30                  | —                              |
| Clotrimazole 10% Cordes® RK | 40.99                  | —                              |
| Macrogols 300               | 64.17                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Basis Cordes® RK* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31078     | 31660               | 18.53                        | 51.94                           |
| 31660     | 31660               | 0.00                         | 42.62                           |
| 34688     | 31660               | 9.02                         | 45.24                           |
| 34839     | 31660               | 9.99                         | 38.56                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Benzalkonium chloride solution 50%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30667-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Benzalkonium chloride solution 50%; Solutio benzalkonii chlorati 50%

### Special notes

When selecting the *Benzalkonium chloride solution 50%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group          | Type A | Type B | Type C |
|------------------------------------|--------|--------|--------|
| Benzalkonium chloride solution 50% | 3      | 3      | 60     |

## Second-stage model

For differentiation of the substance/substance group *Benzalkonium chloride solution 50%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Benzalkonium chloride solution 50%*:

| Supplier | Substance             | Batch       | Sample ID | Spectra | Certificate |
|----------|-----------------------|-------------|-----------|---------|-------------|
| Caelo    | Benzalkonium chl. ... | 11271919    | 30667     | 40      | 1402369     |
| Caelo    | Benzalkonium chl. ... | 15051325    | 33605     | 40      | 20150804    |
| Euro OTC | Benzalkonium chl. ... | 1105041V-03 | 31613     | 60      | 20130809    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Benzalkonium chloride solution 50%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 799 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Benzalkonium chloride solution 50%*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Benzalkonium chloride soluti... | 15051305 | 32960     | 40      |
| Caelo    | Benzalkonium chloride soluti... | 15051327 | 33834     | 40      |
| Caelo    | Benzalkonium chloride soluti... | 182660   | 34334     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 455 spectra from 305 *Apo-Ident* customers from 63 batches from the substance/substance group *Benzalkonium chloride solution 50%*.
- Among them are spectra of independent samples from 60 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                       | Batch        | Spectra |
|---------------------|---------------------------------|--------------|---------|
| AHD                 | Benzalkonium chloride soluti... | 192838002    | 1       |
| Alliance Healthcare | Benzalkonium chloride soluti... | 192838002    | 1       |
| Anzag               | Benzalkonium chloride soluti... | 18039409     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 12254603     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 11271912     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 12254608     | 3       |
| Caelo               | Benzalkonium chloride soluti... | 11271906     | 2       |
| Caelo               | Benzalkonium chloride soluti... | 12254610     | 2       |
| Caelo               | Benzalkonium chloride soluti... | 12254615     | 3       |
| Caelo               | Benzalkonium chloride soluti... | 611benz      | 1       |
| Caelo               | Benzalkonium chloride soluti... | 31011402     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 8041406      | 1       |
| Caelo               | Benzalkonium chloride soluti... | 13152123     | 3       |
| Caelo               | Benzalkonium chloride soluti... | 13152125     | 21      |
| Caelo               | Benzalkonium chloride soluti... | 1315225      | 1       |
| Caelo               | Benzalkonium chloride soluti... | 13152115     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 15051317     | 11      |
| Caelo               | Benzalkonium chloride soluti... | 15051320     | 4       |
| Caelo               | Benzalkonium chloride soluti... | 15051323     | 23      |
| Caelo               | Benzalkonium chloride soluti... | 15051327     | 5       |
| Caelo               | Benzalkonium chloride soluti... | 17044901     | 35      |
| Caelo               | Benzalkonium chloride soluti... | 18039405     | 27      |
| Caelo               | Benzalkonium chloride soluti... | 7111806      | 1       |
| Caelo               | Benzalkonium chloride soluti... | 18266003     | 3       |
| Caelo               | Benzalkonium chloride soluti... | 18266006     | 10      |
| Caelo               | Benzalkonium chloride soluti... | 182660002    | 22      |
| Caelo               | Benzalkonium chloride soluti... | 18266002     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 15051309     | 13      |
| Caelo               | Benzalkonium chloride soluti... | 15051305     | 14      |
| Caelo               | Benzalkonium chloride soluti... | 7082007      | 1       |
| Caelo               | Benzalkonium chloride soluti... | 13152114     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 15051312     | 9       |
| Caelo               | Benzalkonium chloride soluti... | 15119505     | 11      |
| Caelo               | Benzalkonium chloride soluti... | 5117A-01168  | 1       |
| Caelo               | Benzalkonium chloride soluti... | 180394095743 | 1       |
| Caelo               | Benzalkonium chloride soluti... | 20003906004  | 1       |
| Caelo               | Benzalkonium chloride soluti... | 13152121     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 13152105     | 6       |
| Caelo               | Benzalkonium chloride soluti... | 12254620     | 3       |
| Caelo               | Benzalkonium chloride soluti... | 60547317     | 1       |
| Caelo               | Benzalkonium chloride soluti... | 1704901      | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | Benzalkonium chloride soluti... | 180394505   | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 192838002   | 5       |
| Caelo                      | Benzalkonium chloride soluti... | 15119501    | 6       |
| Caelo                      | Benzalkonium chloride soluti... | 192838005   | 3       |
| Caelo                      | Benzalkonium chloride soluti... | 13152111    | 4       |
| Caelo                      | Benzalkonium chloride soluti... | 18036405    | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 18039409    | 42      |
| Caeolo                     | Benzalkonium chloride soluti... | 15119505    | 1       |
| Caeolo/Gehe                | Benzalkonium chloride soluti... | 18039405    | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 1826606     | 1       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 18266001    | 4       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 18039409    | 2       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 18039410    | 1       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 18266006    | 5       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 182660002   | 5       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 192838002   | 4       |
| Caesar & Loretz GmbH       | Benzalkonium chloride soluti... | 20003906001 | 1       |
| Caesar & Loretz GmbH/ J... | Benzalkonium chloride soluti... | 182660002   | 1       |
| Caesar/Noweda              | Benzalkonium chloride soluti... | 5012m-01168 | 1       |
| Ebert-Jacobi               | Benzalkonium chloride soluti... | 15051325    | 1       |
| Euro OTC                   | Benzalkonium chloride soluti... | 110041V-03  | 1       |
| Euro OTC                   | Benzalkonium chloride soluti... | 15051309    | 1       |
| Euro OTC                   | Benzalkonium chloride soluti... | 1105041-01  | 4       |
| Euro OTC                   | Benzalkonium chloride soluti... | 1105041V    | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 7F21-N09    | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 2913A-01168 | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 15051323    | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 18039405    | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 15119501    | 1       |
| Fagron                     | Benzalkonium chloride soluti... | 15051320    | 1       |
| Fischar                    | Benzalkonium chloride soluti... | 17044901    | 1       |
| Gehe                       | Benzalkonium chloride soluti... | 15051323    | 1       |
| Gehe                       | Benzalkonium chloride soluti... | 15051325    | 1       |
| Gehe                       | Benzalkonium chloride soluti... | 18039409    | 2       |
| GEHE                       | Benzalkonium chloride soluti... | 18039405    | 1       |
| GEHE                       | Benzalkonium chloride soluti... | 17044901    | 1       |
| L10                        | Benzalkonium chloride soluti... | 18039405    | 1       |
| L12                        | Benzalkonium chloride soluti... | 15051312    | 1       |
| Löhr Center/               | Benzalkonium chloride soluti... | 2013U-01168 | 1       |
| Noweda                     | Benzalkonium chloride soluti... | 12254615    | 1       |
| Noweda                     | Benzalkonium chloride soluti... | 15051327    | 1       |
| Noweda                     | Benzalkonium chloride soluti... | 182660002   | 1       |
| Noweda                     | Benzalkonium chloride soluti... | 192838002   | 1       |
| Noweda                     | Benzalkonium chloride soluti... | 20003906001 | 1       |
| Phoenix                    | Benzalkonium chloride soluti... | 15051309    | 1       |
| Phoenix                    | Benzalkonium chloride soluti... | 3412        | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 13152104    | 1       |
| Phönix                     | Benzalkonium chloride soluti... | 13152125    | 1       |
| Phönix                     | Benzalkonium chloride soluti... | 18039410    | 1       |
| Phönix                     | Benzalkonium chloride soluti... | 18266001    | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 17344901    | 1       |
| Phönix Gotha               | Benzalkonium chloride soluti... | 13152125    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 12254608    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 4/AKD2      | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 13152125    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 15119501    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 15051325    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 17044901    | 1       |
| Sanacorp                   | Benzalkonium chloride soluti... | 18039405    | 1       |
| Caelo                      | Benzalkonium chloride soluti... | 18039410    | 15      |

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| Supplier | Substance                       | Batch       | Spectra |
|----------|---------------------------------|-------------|---------|
| Caelo    | Benzalkonium chloride soluti... | 18266001    | 28      |
| Caelo    | Benzalkonium chloride soluti... | 15051325    | 23      |
| Caelo    | Benzalkonium chloride soluti... | 11271919    | 3       |
| Euro OTC | Benzalkonium chloride soluti... | 1105041V-03 | 3       |

- 240 908 spectra from 1121 *Apo-Ident* customers from a total of 46 945 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Benzalkonium chloride solution 50%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Benzalkonium chloride solution 50%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 140           | 0              | 63 799        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 453           | 2              | 240 908       |

The substance/substance group *Benzalkonium chloride solution 50%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.5604 % (> 98.9011 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Benzalkonium chloride solution 50%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                  | Distance in main model | Distance in second-stage model |
|--------------------------------------------|------------------------|--------------------------------|
| Anionic hydrophilic cream without prese... | 49.52                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)    | 50.03                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Benzalkonium chloride solution 50%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30667     | 30667               | 0.00                         | 48.55                           |
| 31613     | 30667               | 8.16                         | 47.68                           |
| 33605     | 30667               | 14.01                        | 47.62                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Benzyl alcohol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30574-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Benzyl alcohol; Alkohol benzylicus

### Special notes

When selecting the *Benzyl alcohol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Benzyl alcohol            | 5      | 3      | 30     |

## Second-stage model

For differentiation of the substance/substance group *Benzyl alcohol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Benzyl alcohol*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate |
|----------|----------------|----------|-----------|---------|-------------|
| Caelo    | Benzyl alcohol | 13292103 | 31220     | 40      | 1403478     |
| Caelo    | Benzyl alcohol | 13292107 | 31369     | 60      | 20131028    |
| Caelo    | Benzyl alcohol | 16277302 | 32969     | 40      | 20161024    |
| Caelo    | Benzyl alcohol | 190780   | 34631     | 40      | 20190410*   |
| Caelo    | Benzyl alcohol | 21002213 | 35724     | 50      | 20210806*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 230 spectra of 5 reference samples from the substance/substance group *Benzyl alcohol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 709 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Benzyl alcohol*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Benzyl alcohol | 16341802 | 32968     | 40      |
| Caelo    | Benzyl alcohol | 17191002 | 33857     | 40      |
| Caelo    | Benzyl alcohol | 20002326 | 35277     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 67 spectra from 21 *Apo-Ident* customers from 34 batches from the substance/substance group *Benzyl alcohol*.
- Among them are spectra of independent samples from 30 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                  | Substance      | Batch        | Spectra |
|---------------------------|----------------|--------------|---------|
| Applichem                 | Benzyl alcohol | 17191004     | 1       |
| Caelo                     | Benzyl alcohol | 12256208     | 1       |
| Caelo                     | Benzyl alcohol | 12108503     | 1       |
| Caelo                     | Benzyl alcohol | 13056803     | 1       |
| Caelo                     | Benzyl alcohol | 14206201     | 2       |
| Caelo                     | Benzyl alcohol | 14206209     | 1       |
| Caelo                     | Benzyl alcohol | 15318406     | 1       |
| Caelo                     | Benzyl alcohol | 16341805     | 3       |
| Caelo                     | Benzyl alcohol | 17353904     | 1       |
| Caelo                     | Benzyl alcohol | 18087804     | 1       |
| Caelo                     | Benzyl alcohol | 180878       | 1       |
| Caelo                     | Benzyl alcohol | 19078005     | 1       |
| Caelo                     | Benzyl alcohol | 16341802     | 2       |
| Caelo                     | Benzyl alcohol | 17191002     | 3       |
| Caelo                     | Benzyl alcohol | 17353903     | 2       |
| Caelo                     | Benzyl alcohol | 15318403     | 3       |
| Caelo                     | Benzyl alcohol | 15437503     | 3       |
| Caelo                     | Benzyl alcohol | 15014901     | 5       |
| Caelo                     | Benzyl alcohol | 15014907     | 1       |
| Caelo                     | Benzyl alcohol | 16341809     | 1       |
| Caesar & Loretz GmbH      | Benzyl alcohol | 18087809     | 1       |
| Caesar & Loretz GmbH      | Benzyl alcohol | 190780002    | 1       |
| Caesar & Loretz GmbH      | Benzyl alcohol | 19078001     | 2       |
| Caesar & Loretz GmbH/Gehe | Benzyl alcohol | 190780002    | 1       |
| Gatt-Koller               | Benzyl alcohol | 1803541      | 2       |
| Gehe                      | Benzyl alcohol | 15318406     | 1       |
| Gehe                      | Benzyl alcohol | 15437509     | 1       |
| Gehe                      | Benzyl alcohol | 15437503     | 1       |
| Gehe                      | Benzyl alcohol | 15437512     | 1       |
| GEHE                      | Benzyl alcohol | 17353903     | 1       |
| GEHE                      | Benzyl alcohol | 17353906     | 1       |
| Caelo                     | Benzyl alcohol | 17353906     | 2       |
| Caelo                     | Benzyl alcohol | 18087809     | 1       |
| Kögl                      | Benzyl alcohol | 241507163116 | 1       |
| Kögl                      | Benzyl alcohol | 241507161217 | 1       |

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| Supplier | Substance      | Batch    | Spectra |
|----------|----------------|----------|---------|
| Kögl     | Benzyl alcohol | 1800440  | 2       |
| PHÖNIX   | Benzyl alcohol | 17191002 | 2       |
| Sanacorp | Benzyl alcohol | 15014907 | 1       |
| Caelo    | Benzyl alcohol | 16277302 | 1       |
| Caelo    | Benzyl alcohol | 190780   | 3       |
| Caelo    | Benzyl alcohol | 13292107 | 2       |
| Caelo    | Benzyl alcohol | 13292103 | 3       |

- 241 296 spectra from 1121 *Apo-Ident* customers from a total of 46 972 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Benzyl alcohol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Benzyl alcohol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 230           | 0              | 63 709        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 67            | 0              | 241 296       |

The substance/substance group *Benzyl alcohol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.3913 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6850 %) | 100.0000 % (> 91.0448 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Benzyl alcohol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.



| Substance               | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------|---------------------------|-----------------------------------|
| Hydroxyethyl salicylate | 68.55                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Benzyl alcohol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31220     | 31220                  | 0.00                            | 103.40                             |
| 31369     | 31220                  | 1.75                            | 104.87                             |
| 32969     | 35724                  | 10.54                           | 102.51                             |
| 34631     | 34631                  | 0.00                            | 111.20                             |
| 35724     | 35724                  | 0.00                            | 106.63                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Benzyl benzoate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31208-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Benzyl benzoate; Benzylis benzoas

### Special notes

When selecting the *Benzyl benzoate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Benzyl benzoate           | 5      | 2      | 34     |

## Second-stage model

For differentiation of the substance/substance group *Benzyl benzoate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Benzyl benzoate*:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------|----------|-----------|---------|-------------|
| Caelo    | Benzyl benzoate | 13099320 | 31208     | 40      | 1403156     |
| Caelo    | Benzyl benzoate | 14029602 | 31435     | 60      | 20140207    |
| Caelo    | Benzyl benzoate | 171562   | 33695     | 40      | 20170530*   |
| Caelo    | Benzyl benzoate | 181819   | 34219     | 40      | 20180907*   |
| Caelo    | Benzyl benzoate | 190546   | 34634     | 40      | 20190314*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Benzyl benzoate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Benzyl benzoate*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Benzyl benzoate | 16140805 | 32959     | 40      |
| Caelo    | Benzyl benzoate | 172351   | 33696     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 53 spectra from 21 *Apo-Ident* customers from 34 batches from the substance/substance group *Benzyl benzoate*.
- Among them are spectra of independent samples from 34 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance       | Batch       | Spectra |
|----------------------|-----------------|-------------|---------|
| Caelo                | Benzyl benzoate | 11340415    | 1       |
| Caelo                | Benzyl benzoate | 15243012    | 1       |
| Caelo                | Benzyl benzoate | 16140806    | 2       |
| Caelo                | Benzyl benzoate | 16140807    | 1       |
| Caelo                | Benzyl benzoate | 15250301    | 1       |
| Caelo                | Benzyl benzoate | 18003202    | 1       |
| Caelo                | Benzyl benzoate | 90546001    | 1       |
| Caelo                | Benzyl benzoate | 18003001    | 1       |
| Caelo                | Benzyl benzoate | 14029613    | 1       |
| Caelo                | Benzyl benzoate | 17235101    | 3       |
| Caelo                | Benzyl benzoate | 15243002    | 1       |
| Caelo                | Benzyl benzoate | 1723        | 1       |
| Caelo                | Benzyl benzoate | 16250301    | 2       |
| Caelo                | Benzyl benzoate | 17156204    | 1       |
| Caelo                | Benzyl benzoate | 15243005    | 1       |
| Caelo                | Benzyl benzoate | 19054602    | 5       |
| Caelo                | Benzyl benzoate | 15133401    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 12141003    | 2       |
| Caesar & Loretz GmbH | Benzyl benzoate | 14029603    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 13099313    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 14029613    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 15133401    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 18181906    | 2       |
| Caesar & Loretz GmbH | Benzyl benzoate | 18003101    | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 19054605    | 3       |
| Caesar & Loretz GmbH | Benzyl benzoate | 19054607    | 3       |
| Caesar & Loretz GmbH | Benzyl benzoate | 20000645003 | 1       |
| Caesar & Loretz GmbH | Benzyl benzoate | 190546004   | 1       |
| Gatt-Koller          | Benzyl benzoate | KNC0919J18  | 1       |
| Gehe                 | Benzyl benzoate | 13099317    | 1       |
| Gehe                 | Benzyl benzoate | 15243003    | 1       |
| Gehe                 | Benzyl benzoate | 15243006    | 1       |
| Caelo                | Benzyl benzoate | 16140808    | 2       |
| Bombastus            | Benzyl benzoate | 16140807    | 1       |
| Caelo                | Benzyl benzoate | 16140810    | 2       |
| Phönix               | Benzyl benzoate | 12141008    | 1       |
| Sanacorp             | Benzyl benzoate | 15243014    | 1       |

- 241 310 spectra from 1121 *Apo-Ident* customers from a total of 46 973 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Benzyl benzoate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Benzyl benzoate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 52            | 1              | 241 310       |

The substance/substance group *Benzyl benzoate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 98.1132 % (> 92.4528 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Benzyl benzoate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Benzyl nicotinate | 31.90                  | —                              |
| Methyl salicylate | 94.31                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Benzyl benzoate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31208     | 31208               | 0.00                         | 47.12                           |
| 31435     | 31208               | 2.11                         | 49.84                           |
| 33695     | 33695               | 0.00                         | 43.37                           |
| 34219     | 34219               | 0.00                         | 45.21                           |
| 34634     | 34634               | 0.00                         | 48.16                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Benzyl nicotinate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30502-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Benzyl nicotinate; Benzyliis nicotinas

### Special notes

When selecting the *Benzyl nicotinate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Benzyl nicotinate         | 5      | 2      | 42     |

## Second-stage model

For differentiation of the substance/substance group *Benzyl nicotinate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Benzyl nicotinate*:

| Supplier | Substance         | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------------|----------|-----------|---------|-------------|
| Caelo    | Benzyl nicotinate | 13272502 | 31199     | 40      | 1403109     |
| Caelo    | Benzyl nicotinate | 14112404 | 31383     | 40      | 20140407    |
| Caelo    | Benzyl nicotinate | 16358301 | 32967     | 40      | 20170113    |
| Caelo    | Benzyl nicotinate | 163583   | 33055     | 40      | 20170113*   |
| Caelo    | Benzyl nicotinate | 191097   | 34450     | 40      | 20190614*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 200 spectra of 5 reference samples from the substance/substance group *Benzyl nicotinate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 739 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Benzyl nicotinate*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance         | Batch    | Sample ID | Spectra |
|----------|-------------------|----------|-----------|---------|
| Caelo    | Benzyl nicotinate | 15444804 | 32592     | 40      |
| Caelo    | Benzyl nicotinate | 16358302 | 32966     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 99 spectra from 61 *Apo-Ident* customers from 44 batches from the substance/substance group *Benzyl nicotinate*.
- Among them are spectra of independent samples from 42 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier       | Substance         | Batch       | Spectra |
|----------------|-------------------|-------------|---------|
| anzag          | Benzyl nicotinate | 12282802    | 1       |
| Anzag          | Benzyl nicotinate | 12282802    | 1       |
| Anzag          | Benzyl nicotinate | 16358302    | 1       |
| Anzag          | Benzyl nicotinate | 17236704    | 1       |
| Caelo          | Benzyl nicotinate | 13157201    | 1       |
| Anzag/ichthyol | Benzyl nicotinate | 13035408    | 1       |
| Beiersdorf AG  | Benzyl nicotinate | 15293104    | 1       |
| Caelo          | Benzyl nicotinate | 10111403    | 1       |
| Caelo          | Benzyl nicotinate | 12142004    | 1       |
| Caelo          | Benzyl nicotinate | 12142008    | 2       |
| Caelo          | Benzyl nicotinate | 12282802    | 2       |
| Caelo          | Benzyl nicotinate | 2091301     | 1       |
| Caelo          | Benzyl nicotinate | 15124402    | 5       |
| Caelo          | Benzyl nicotinate | 15444803    | 1       |
| Caelo          | Benzyl nicotinate | 1529304     | 1       |
| Caelo          | Benzyl nicotinate | 16154409    | 1       |
| Caelo          | Benzyl nicotinate | 17236705    | 1       |
| Caelo          | Benzyl nicotinate | 18032112    | 2       |
| Caelo          | Benzyl nicotinate | 18032110    | 1       |
| Caelo          | Benzyl nicotinate | 19028909    | 1       |
| Caelo          | Benzyl nicotinate | 19028908    | 1       |
| Caelo          | Benzyl nicotinate | 19109704    | 2       |
| Caelo          | Benzyl nicotinate | 16358302    | 8       |
| Caelo          | Benzyl nicotinate | 13035402    | 3       |
| Caelo          | Benzyl nicotinate | 16358308    | 3       |
| Caelo          | Benzyl nicotinate | 14112408    | 4       |
| Caelo          | Benzyl nicotinate | 12282804    | 1       |
| Caelo          | Benzyl nicotinate | 13157205    | 3       |
| Caelo          | Benzyl nicotinate | 19028904    | 2       |
| Caelo          | Benzyl nicotinate | 15293104    | 1       |
| Caelo          | Benzyl nicotinate | 18215204    | 2       |
| Caelo          | Benzyl nicotinate | 17236707    | 2       |
| Caelo          | Benzyl nicotinate | 14112405    | 1       |
| Caelo          | Benzyl nicotinate | 1217I-01176 | 1       |
| Caelo          | Benzyl nicotinate | 18032105    | 2       |
| Caelo          | Benzyl nicotinate | 17191405    | 1       |

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| Supplier                   | Substance         | Batch        | Spectra |
|----------------------------|-------------------|--------------|---------|
| Caelo                      | Benzyl nicotinate | 180321125750 | 1       |
| Caelo                      | Benzyl nicotinate | 15124408     | 1       |
| Caelo                      | Benzyl nicotinate | 17236704     | 3       |
| Caelo                      | Benzyl nicotinate | 20002141003  | 2       |
| Caelo                      | Benzyl nicotinate | 19000599003  | 3       |
| Caesar & Loretz GmbH       | Benzyl nicotinate | 19109704     | 3       |
| Caesar & Loretz GmbH       | Benzyl nicotinate | 19000599003  | 3       |
| Caesar & Loretz GmbH       | Benzyl nicotinate | 20002141003  | 1       |
| Caesar & Loretz GmbH, A... | Benzyl nicotinate | 18032104     | 1       |
| Caesar & Loretz GmbH/Ph... | Benzyl nicotinate | 19000599003  | 1       |
| Caesar Loretz GmbH         | Benzyl nicotinate | 17191405     | 1       |
| Fagron                     | Benzyl nicotinate | 12I20-N01    | 1       |
| Fagron                     | Benzyl nicotinate | 18215206     | 1       |
| Fiebig                     | Benzyl nicotinate | 19028904     | 1       |
| Gatt-Koller                | Benzyl nicotinate | 1803252      | 1       |
| Noweda                     | Benzyl nicotinate | 19000599003  | 1       |
| Caelo                      | Benzyl nicotinate | 15444804     | 4       |
| Phönix                     | Benzyl nicotinate | 17236707     | 1       |
| Phönix 28.01.2014          | Benzyl nicotinate | 13272502     | 1       |
| VDL                        | Benzyl nicotinate | 12D25-N07    | 1       |
| Caelo                      | Benzyl nicotinate | 13272502     | 2       |
| Caelo                      | Benzyl nicotinate | 14112404     | 1       |

- 241 264 spectra from 1121 *Apo-Ident* customers from a total of 46 962 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Benzyl nicotinate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Benzyl nicotinate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 200           | 0              | 63 739        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 98            | 1              | 241 264       |

The substance/substance group *Benzyl nicotinate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 98.9899 % (> 95.9596 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Benzyl nicotinate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                 | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------------|---------------------------|-----------------------------------|
| Benzyl benzoate           | 24.93                     | —                                 |
| Cinnamon bark oil, Ceylon | 53.39                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Benzyl nicotinate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31199     | 31199                  | 0.00                            | 31.16                              |
| 31383     | 34450                  | 2.96                            | 28.82                              |
| 32967     | 33055                  | 1.56                            | 32.69                              |
| 33055     | 33055                  | 0.00                            | 33.05                              |
| 34450     | 34450                  | 0.00                            | 30.41                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Bergamot oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31678-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Bergamot oil; Oleum citrus bergamia

### Special notes

When selecting the *Bergamot oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Bergamot oil              | 4      | 2      | 35     |

## Second-stage model

For differentiation of the substance/substance group *Bergamot oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Bergamot oil*:

| Supplier | Substance    | Batch    | Sample ID | Spectra | Certificate        |
|----------|--------------|----------|-----------|---------|--------------------|
| Caelo    | Bergamot oil | 15042001 | 31678     | 60      | AR-15-FG-008850-02 |
| Caelo    | Bergamot oil | 15042001 | 31696     | 60      | 20150217           |
| Caelo    | Bergamot oil | 16083611 | 33497     | 40      | 20160404           |
| Caelo    | Bergamot oil | 16083611 | 33655     | 40      | 20160404           |
| Caelo    | Bergamot oil | 190681   | 34445     | 40      | 20190312*          |
| Caelo    | Bergamot oil | 192330   | 34705     | 40      | 20190828*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 280 spectra of 6 reference samples from the substance/substance group *Bergamot oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 659 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Bergamot oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance    | Batch  | Sample ID | Spectra |
|----------|--------------|--------|-----------|---------|
| Caelo    | Bergamot oil | 171992 | 33894     | 40      |
| Caelo    | Bergamot oil | 180207 | 34230     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 101 spectra from 48 *Apo-Ident* customers from 37 batches from the substance/substance group *Bergamot oil*.
- Among them are spectra of independent samples from 35 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance    | Batch           | Spectra |
|----------------------|--------------|-----------------|---------|
| Bombastus            | Bergamot oil | 309941          | 7       |
| Bombastus            | Bergamot oil | 18001281        | 3       |
| Bombastus            | Bergamot oil | 19000361        | 6       |
| Bombastus            | Bergamot oil | 19003632        | 4       |
| Bombastus            | Bergamot oil | 19006588        | 1       |
| Bombastus            | Bergamot oil | 19001360        | 1       |
| Bombastus            | Bergamot oil | 19006566        | 1       |
| Bombastus            | Bergamot oil | 300470          | 1       |
| Bombastus            | Bergamot oil | 309494          | 1       |
| Bombastus            | Bergamot oil | 1801281         | 1       |
| Caelo                | Bergamot oil | 15042008        | 2       |
| Caelo                | Bergamot oil | 16083601        | 14      |
| Caelo                | Bergamot oil | 14125805        | 2       |
| Caelo                | Bergamot oil | 17199201        | 1       |
| Caelo                | Bergamot oil | 18020709        | 1       |
| Caelo                | Bergamot oil | 15042002        | 1       |
| Caelo                | Bergamot oil | 192330004       | 5       |
| Caelo                | Bergamot oil | 15042011        | 3       |
| Caelo                | Bergamot oil | 18020710        | 5       |
| Caelo                | Bergamot oil | 19068101        | 2       |
| Caelo                | Bergamot oil | 18020702        | 9       |
| Caelo                | Bergamot oil | 17199204        | 5       |
| Caelo                | Bergamot oil | 19068105        | 4       |
| Caelo                | Bergamot oil | 305910          | 1       |
| Caeolo / Phönix      | Bergamot oil | 17199204        | 1       |
| Caesar & Loretz GmbH | Bergamot oil | 18020710        | 1       |
| Ebert                | Bergamot oil | 297727          | 1       |
| Fagron               | Bergamot oil | 17199205        | 3       |
| Fagron               | Bergamot oil | D01BE14M-12143B | 1       |
| Primavera/Direkt     | Bergamot oil | 892H24          | 1       |
| Caelo                | Bergamot oil | 18020711        | 1       |
| Caelo                | Bergamot oil | 192330002       | 1       |
| Taoasis              | Bergamot oil | 19821-122171    | 1       |
| Taoasis              | Bergamot oil | 53731-127819    | 1       |
| Taoasis              | Bergamot oil | 1700901-4097    | 1       |
| Taoasis              | Bergamot oil | 5836            | 1       |

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| Supplier | Substance    | Batch      | Spectra |
|----------|--------------|------------|---------|
| Taoasis  | Bergamot oil | 19045-8439 | 1       |
|          | Bergamot oil | 18020710   | 1       |
| Caelo    | Bergamot oil | 15042001   | 3       |
| Caelo    | Bergamot oil | 16083611   | 1       |

- 241 262 spectra from 1121 *Apo-Ident* customers from a total of 46 969 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Bergamot oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Bergamot oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 280           | 0              | 63 659        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 101           | 0              | 241 262       |

The substance/substance group *Bergamot oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.8571 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 100.0000 % (> 94.0594 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Bergamot oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Caraway oil       | 47.77                  | —                              |
| Bitter orange oil | 47.80                  | —                              |
| Dwarf pine oil    | 48.85                  | —                              |
| Spearmint oil     | 49.78                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Bergamot oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31678     | 31678               | 0.00                         | 61.49                           |
| 31696     | 31678               | 1.53                         | 61.93                           |
| 33497     | 31678               | 9.07                         | 63.24                           |
| 33655     | 31678               | 11.60                        | 62.64                           |
| 34445     | 34445               | 0.00                         | 51.42                           |
| 34705     | 34705               | 0.00                         | 53.16                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Bitter-fennel fruit oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30398-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Bitter-fennel fruit oil; Foeniculi amari fructus aetheroleum

### Special notes

When selecting the *Bitter-fennel fruit oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Bitter-fennel fruit oil   | 5      | 3      | 30     |



## Second-stage model

For differentiation of the substance/substance group *Bitter-fennel fruit oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Bitter-fennel fruit oil*:

| Supplier  | Substance           | Batch    | Sample ID | Spectra | Certificate |
|-----------|---------------------|----------|-----------|---------|-------------|
| Bombastus | Bitter-fennel fr... | 295236   | 32922     | 40      | 1704221     |
| Bombastus | Bitter-fennel fr... | 18003219 | 34520     | 40      | 125095      |
| Bombastus | Bitter-fennel fr... | 20004137 | 35263     | 40      | 20200911    |
| Caelo     | Bitter-fennel fr... | 14190402 | 31706     | 60      | 20140625    |
| Caelo     | Bitter-fennel fr... | 15160103 | 31805     | 60      | 1703170     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 240 spectra of 5 reference samples from the substance/substance group *Bitter-fennel fruit oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 699 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Bitter-fennel fruit oil*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance               | Batch    | Sample ID | Spectra |
|----------|-------------------------|----------|-----------|---------|
| Caelo    | Bitter-fennel fruit oil | 16008606 | 32961     | 40      |
| Caelo    | Bitter-fennel fruit oil | 171809   | 33680     | 40      |
| Caelo    | Bitter-fennel fruit oil | 191763   | 34650     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 74 spectra from 48 *Apo-Ident* customers from 32 batches from the substance/substance group *Bitter-fennel fruit oil*.
- Among them are spectra of independent samples from 30 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance               | Batch    | Spectra |
|----------------------|-------------------------|----------|---------|
| Caelo                | Bitter-fennel fruit oil | 12370312 | 1       |
| Bombastus            | Bitter-fennel fruit oil | 278909   | 2       |
| Bombastus            | Bitter-fennel fruit oil | 274253   | 1       |
| Bombastus            | Bitter-fennel fruit oil | 281715   | 1       |
| Bombastus            | Bitter-fennel fruit oil | 285544   | 1       |
| Bombastus            | Bitter-fennel fruit oil | 291598   | 1       |
| Bombastus            | Bitter-fennel fruit oil | 289232   | 1       |
| Caelo                | Bitter-fennel fruit oil | 12218104 | 4       |
| Caelo                | Bitter-fennel fruit oil | 12370303 | 1       |
| Caelo                | Bitter-fennel fruit oil | 12061412 | 1       |
| Caelo                | Bitter-fennel fruit oil | 24101403 | 1       |
| Caelo                | Bitter-fennel fruit oil | 14190401 | 1       |
| Caelo                | Bitter-fennel fruit oil | 16008608 | 3       |
| Caelo                | Bitter-fennel fruit oil | 17180901 | 6       |
| Caelo                | Bitter-fennel fruit oil | 17337608 | 1       |
| Caelo                | Bitter-fennel fruit oil | 268017   | 1       |
| Caelo                | Bitter-fennel fruit oil | 11079207 | 1       |
| Caelo                | Bitter-fennel fruit oil | 16008606 | 7       |
| Caelo                | Bitter-fennel fruit oil | 12370306 | 4       |
| Caelo                | Bitter-fennel fruit oil | 12218103 | 1       |
| Caelo                | Bitter-fennel fruit oil | 15160101 | 2       |
| Caelo                | Bitter-fennel fruit oil | 15160106 | 2       |
| Caelo                | Bitter-fennel fruit oil | 16008601 | 3       |
| Caelo                | Bitter-fennel fruit oil | 18277905 | 2       |
| Caelo                | Bitter-fennel fruit oil | 18277907 | 1       |
| Caelo                | Bitter-fennel fruit oil | 17337606 | 3       |
| Caelo                | Bitter-fennel fruit oil | 19176301 | 1       |
| Caesar & Loretz GmbH | Bitter-fennel fruit oil | 18277902 | 1       |
| Celo / Kehr          | Bitter-fennel fruit oil | 12370314 | 1       |
| Gehe                 | Bitter-fennel fruit oil | 291598   | 1       |
| Gehe                 | Bitter-fennel fruit oil | 16008601 | 1       |
| Noweda               | Bitter-fennel fruit oil | 18277902 | 1       |
| Phönix               | Bitter-fennel fruit oil | 17180901 | 1       |
| Sanacorp             | Bitter-fennel fruit oil | 278909   | 1       |
| Sanacorp             | Bitter-fennel fruit oil | 16008606 | 1       |

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| Supplier  | Substance               | Batch    | Spectra |
|-----------|-------------------------|----------|---------|
| Sanacorp  | Bitter-fennel fruit oil | 17337601 | 1       |
| Caelo     | Bitter-fennel fruit oil | 17337601 | 7       |
| Bombastus | Bitter-fennel fruit oil | 18003219 | 1       |
| Caelo     | Bitter-fennel fruit oil | 14190402 | 3       |

- 241 289 spectra from 1121 *Apo-Ident* customers from a total of 46 974 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Bitter-fennel fruit oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Bitter-fennel fruit oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 240           | 0              | 63 699        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 74            | 0              | 241 289       |

The substance/substance group *Bitter-fennel fruit oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 100.0000 % (> 91.8919 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Bitter-fennel fruit oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance      | Distance in main model | Distance in second-stage model |
|----------------|------------------------|--------------------------------|
| Star anise oil | 30.19                  | —                              |
| Anise oil      | 43.92                  | —                              |
| Wormwood oil   | 78.94                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Bitter-fennel fruit oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31706     | 31805               | 1.67                         | 66.63                           |
| 31805     | 31805               | 0.00                         | 65.90                           |
| 32922     | 32922               | 0.00                         | 48.87                           |
| 34520     | 32922               | 12.16                        | 49.28                           |
| 35263     | 32922               | 6.91                         | 47.87                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cajeput (essentiel oil)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31502-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cajeput (essentiel oil); Oleum Cajeputi artificiale

### Special notes

When selecting the *Cajeput (essentiel oil)* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Cajeput (essentiel oil)   | 2      | 3      | 11     |

## Second-stage model

For differentiation of the substance/substance group *Cajeput (essentiel oil)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cajeput (essentiel oil)*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Cajeput (essenti... | 13141409 | 31502     | 60      | 1412341     |
| Caelo    | Cajeput (essenti... | 14225206 | 31605     | 60      | 20140730    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 2 reference samples from the substance/substance group *Cajeput (essentiel oil)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 819 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Cajeput (essentiel oil)*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance               | Batch    | Sample ID | Spectra |
|----------|-------------------------|----------|-----------|---------|
| Caelo    | Cajeput (essentiel oil) | 162770   | 32688     | 40      |
| Caelo    | Cajeput (essentiel oil) | 16277003 | 33620     | 40      |
| Caelo    | Cajeput (essentiel oil) | 172410   | 33910     | 40      |



- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 20 spectra from 8 *Apo-Ident* customers from 11 batches from the substance/substance group *Cajeput (essentiell oil)*.
- Among them are spectra of independent samples from 11 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier               | Substance                | Batch          | Spectra |
|------------------------|--------------------------|----------------|---------|
| Caelo                  | Cajeput (essentiell oil) | 17241002       | 7       |
| Caelo                  | Cajeput (essentiell oil) | 21111818       | 1       |
| Caelo                  | Cajeput (essentiell oil) | 17241004       | 2       |
| Caelo                  | Cajeput (essentiell oil) | 17241008       | 1       |
| Caelo                  | Cajeput (essentiell oil) | 15063501       | 2       |
| Caelo                  | Cajeput (essentiell oil) | 16277004       | 1       |
| Caesar & Loretz/Noweda | Cajeput (essentiell oil) | 14225210       | 1       |
| Fagron                 | Cajeput (essentiell oil) | 15063511       | 1       |
| Noweda                 | Cajeput (essentiell oil) | 17241008       | 1       |
| Taoasis                | Cajeput (essentiell oil) | 6781012-119058 | 1       |
| Taoasis                | Cajeput (essentiell oil) | 6781010-120111 | 1       |
| Taoasis                | Cajeput (essentiell oil) | 1518-122595    | 1       |

- 241 343 spectra from 1121 *Apo-Ident* customers from a total of 46 995 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cajeput (essentiell oil)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cajeput (essentiell oil)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 19            | 1              | 241 343       |

The substance/substance group *Cajeput (essentiell oil)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6853 %) | 95.0000 % (> 80.0000 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cajeput (essentielle oil)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>              | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------------|-------------------------------|---------------------------------------|
| Myrtle oil                    | 17.92                         | —                                     |
| Eucalyptus oil                | 19.52                         | —                                     |
| Turpentine oil                | 21.08                         | —                                     |
| Rosemary oil                  | 21.42                         | —                                     |
| Juniper wood oil              | 22.68                         | —                                     |
| Cypress oil                   | 32.53                         | —                                     |
| Verbena oil, nature-identical | 42.30                         | —                                     |
| Cedar wood oil                | 46.33                         | —                                     |
| Peppermint oil                | 47.78                         | —                                     |
| Cineole                       | 47.88                         | —                                     |
| Acorus oil                    | 49.31                         | —                                     |
| Sage oil                      | 52.14                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cajeput (essentielle oil)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31502            | 31502                      | 0.00                                | 21.93                                  |
| 31605            | 31502                      | 10.02                               | 20.45                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by

laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Camphor oil 20%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30551-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Camphor oil 20%; Oleum camphoratum 20%

### Special notes

When selecting the *Camphor oil 20%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Camphor oil 20%           | 3      | 1      | 26     |

## Second-stage model

For differentiation of the substance/substance group *Camphor oil 20%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Camphor oil 20%*:

| Supplier | Substance       | Batch       | Sample ID | Spectra | Certificate |
|----------|-----------------|-------------|-----------|---------|-------------|
| Caelo    | Camphor oil 20% | 12261202    | 31154     | 40      | 1404534     |
| Caelo    | Camphor oil 20% | 13369902    | 31347     | 60      | 20131112    |
| Caelo    | Camphor oil 20% | 20003142002 | 35287     | 40      | 20201023    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Camphor oil 20%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 799 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Camphor oil 20%*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Camphor oil 20% | 17083502 | 33494     | 40      |
| Caelo    | Camphor oil 20% | 17083502 | 33495     | 40      |

- 91 411 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 98 spectra from 53 *Apo-Ident* customers from 27 batches from the substance/substance group *Camphor oil 20%*.
- Among them are spectra of independent samples from 26 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance       | Batch     | Spectra |
|----------------------------|-----------------|-----------|---------|
| ahd/lamotte                | Camphor oil 20% | 133699902 | 1       |
| Caelo                      | Camphor oil 20% | 9250001   | 2       |
| Caelo                      | Camphor oil 20% | 13039603  | 1       |
| Caelo                      | Camphor oil 20% | 12261203  | 2       |
| Caelo                      | Camphor oil 20% | 1226103   | 1       |
| Caelo                      | Camphor oil 20% | 14028202  | 2       |
| Caelo                      | Camphor oil 20% | 14147303  | 3       |
| Caelo                      | Camphor oil 20% | 15056907  | 12      |
| Caelo                      | Camphor oil 20% | 15246805  | 2       |
| Caelo                      | Camphor oil 20% | 15246809  | 7       |
| Caelo                      | Camphor oil 20% | 15056906  | 1       |
| Caelo                      | Camphor oil 20% | 16085301  | 3       |
| Caelo                      | Camphor oil 20% | 16316101  | 5       |
| Caelo                      | Camphor oil 20% | 16316102  | 1       |
| Caelo                      | Camphor oil 20% | 17301903  | 1       |
| Caelo                      | Camphor oil 20% | 18143008  | 3       |
| Caelo                      | Camphor oil 20% | 19141302  | 1       |
| Caelo                      | Camphor oil 20% | 17195105  | 2       |
| Caelo                      | Camphor oil 20% | 17083502  | 4       |
| Caelo                      | Camphor oil 20% | 18143002  | 2       |
| Caelo                      | Camphor oil 20% | 18143005  | 2       |
| Caelo                      | Camphor oil 20% | 12122502  | 6       |
| Caelo                      | Camphor oil 20% | 16085302  | 5       |
| Caelo                      | Camphor oil 20% | 17301902  | 6       |
| Caelo                      | Camphor oil 20% | 19141301  | 2       |
| Caesar & Loretz GmbH       | Camphor oil 20% | 18143002  | 1       |
| Caesar & Loretz GmbH       | Camphor oil 20% | 192358004 | 1       |
| Caesar & Loretz GmbH       | Camphor oil 20% | 18143008  | 1       |
| Caesar & Loretz GmbH       | Camphor oil 20% | 19141301  | 3       |
| Caesar & Loretz GmbH/ F... | Camphor oil 20% | 18143008  | 1       |
| Caesar & Loretz GmbH/ Ph   | Camphor oil 20% | 18143005  | 1       |
| Cealo/AHD                  | Camphor oil 20% | 16316101  | 1       |
| Fagron                     | Camphor oil 20% | 17301902  | 1       |
| Fiebig                     | Camphor oil 20% | 17301902  | 2       |
| gehe                       | Camphor oil 20% | 15246805  | 1       |
| Noweda                     | Camphor oil 20% | 14147303  | 1       |
| Phoenix                    | Camphor oil 20% | 16316101  | 1       |
| Phönix                     | Camphor oil 20% | 13039603  | 1       |
| Sanacorp                   | Camphor oil 20% | 13039603  | 1       |
| Caelo                      | Camphor oil 20% | 13369902  | 4       |



- 241 265 spectra from 1121 *Apo-Ident* customers from a total of 46 979 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Camphor oil 20%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Camphor oil 20%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 140           | 0              | 63 799        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 98            | 0              | 241 265       |

The substance/substance group *Camphor oil 20%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 100.0000 % (> 93.8776 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Camphor oil 20%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in main model | Distance in second-stage model |
|---------------------------------------|------------------------|--------------------------------|
| Petroleum oil, white, cohobated       | 27.08                  | —                              |
| All-rac-alpha-tocopheryl acetate      | 29.53                  | —                              |
| Guaiazulene 25%, water-soluble        | 41.60                  | —                              |
| Triglycerides, medium-chain           | 48.88                  | —                              |
| Metronidazole 25% in white petrolatum | 66.82                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Camphor oil 20%* is separated from critical neighbours in a second-stage

model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31154     | 31154               | 0.00                         | 29.79                           |
| 31347     | 31154               | 2.77                         | 29.13                           |
| 35287     | 31154               | 6.45                         | 27.99                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Camphor ointment**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 32515-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Camphor ointment; Unguentum camphoratum

### Special notes

When selecting the *Camphor ointment* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Camphor ointment          | 3      | 1      | 4      |

## Second-stage model

For differentiation of the substance/substance group *Camphor ointment* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Camphor ointment*:

| Supplier | Substance        | Batch    | Sample ID | Spectra | Certificate |
|----------|------------------|----------|-----------|---------|-------------|
| Caelo    | Camphor ointment | 161773   | 32515     | 40      | 20160711*   |
| Caelo    | Camphor ointment | 17045702 | 33224     | 40      | 20170214    |
| Caelo    | Camphor ointment | 192250   | 35267     | 40      | 20190927    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 3 reference samples from the substance/substance group *Camphor ointment*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 819 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Camphor ointment*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance        | Batch  | Sample ID | Spectra |
|----------|------------------|--------|-----------|---------|
| Caelo    | Camphor ointment | 180955 | 34159     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4 spectra from 2 *Apo-Ident* customers from 4 batches from the substance/substance group *Camphor ointment*.
- Among them are spectra of independent samples from 4 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance        | Batch       | Spectra |
|----------|------------------|-------------|---------|
| Caelo    | Camphor ointment | 1925003     | 1       |
| Caelo    | Camphor ointment | 2215Q-03370 | 1       |
| Caelo    | Camphor ointment | 4118I-03370 | 1       |
| Caelo    | Camphor ointment | 1319I-03370 | 1       |

- 241 359 spectra from 1121 *Apo-Ident* customers from a total of 47 002 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Camphor ointment* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Camphor ointment* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 4             | 0              | 241 359       |

The substance/substance group *Camphor ointment* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6871 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Camphor ointment* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in main model | Distance in second-stage model |
|---------------------------------------|------------------------|--------------------------------|
| Squalane                              | 24.39                  | —                              |
| Wool fat                              | 28.55                  | —                              |
| Triglycerides, medium-chain           | 32.21                  | —                              |
| Camphor oil 20%                       | 36.72                  | —                              |
| Isopropyl myristate                   | 40.74                  | —                              |
| Isopropyl palmitate                   | 42.13                  | —                              |
| Emulsifying hydrophobic base gel DAC  | 45.20                  | —                              |
| Pasta Cordes®                         | 49.21                  | —                              |
| Metronidazole 25% in white petrolatum | 51.14                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Camphor ointment* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 32515     | 32515               | 0.00                         | 22.80                           |
| 33224     | 32515               | 7.58                         | 28.01                           |
| 35267     | 32515               | 5.97                         | 22.75                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Camphor spirit</b>                                            |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30937-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Camphor spirit; Spiritus camphoratus

### Special notes

When selecting the *Camphor spirit* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Camphor spirit            | 6      | 2      | 52     |

## Second-stage model

For differentiation of the substance/substance group *Camphor spirit* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Camphor spirit*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate |
|----------|----------------|----------|-----------|---------|-------------|
| Caelo    | Camphor spirit | 12196804 | 30937     | 50      | 20120721    |
| Caelo    | Camphor spirit | 13354201 | 31389     | 40      | 1506005     |
| Caelo    | Camphor spirit | 16039501 | 32307     | 40      | 20160229    |
| Caelo    | Camphor spirit | 20002801 | 35254     | 40      | 20200922*   |
| Euro OTC | Camphor spirit | 1506006  | 31700     | 60      | 20150625*   |
| Euro OTC | Camphor spirit | 1506007  | 31701     | 60      | 20150625*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 290 spectra of 6 reference samples from the substance/substance group *Camphor spirit*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 649 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Camphor spirit*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch  | Sample ID | Spectra |
|----------|----------------|--------|-----------|---------|
| Caelo    | Camphor spirit | 170923 | 33327     | 40      |
| Caelo    | Camphor spirit | 182721 | 34328     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 125 spectra from 69 *Apo-Ident* customers from 55 batches from the substance/substance group *Camphor spirit*.
- Among them are spectra of independent samples from 52 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance      | Batch       | Spectra |
|----------------------------|----------------|-------------|---------|
| ANZAG                      | Camphor spirit | 121002801   | 1       |
| Anzag ek:13.14EUR 14.08.12 | Camphor spirit | 11347401    | 1       |
| Caela/ Noweda              | Camphor spirit | 17318502    | 1       |
| Caelo                      | Camphor spirit | 17318506    | 2       |
| Caelo                      | Camphor spirit | 11347401    | 1       |
| Caelo                      | Camphor spirit | 22101201    | 1       |
| Caelo                      | Camphor spirit | 10058403    | 1       |
| Caelo                      | Camphor spirit | 12196803    | 4       |
| Caelo                      | Camphor spirit | 30101309    | 1       |
| Caelo                      | Camphor spirit | 5031507     | 1       |
| Caelo                      | Camphor spirit | 62143436    | 1       |
| Caelo                      | Camphor spirit | 1872101     | 1       |
| Caelo                      | Camphor spirit | 18272104    | 2       |
| Caelo                      | Camphor spirit | 19139605    | 1       |
| Caelo                      | Camphor spirit | 17092302    | 3       |
| Caelo                      | Camphor spirit | 13354204    | 2       |
| Caelo                      | Camphor spirit | 16141105    | 3       |
| Caelo                      | Camphor spirit | 16141106    | 2       |
| Caelo                      | Camphor spirit | 16141101    | 1       |
| Caelo                      | Camphor spirit | 17092305    | 7       |
| Caelo                      | Camphor spirit | 20002801005 | 2       |
| Caelo                      | Camphor spirit | 13354206    | 1       |
| Caelo                      | Camphor spirit | 17092303    | 2       |
| Caelo                      | Camphor spirit | 17318502    | 5       |
| Caelo                      | Camphor spirit | 20002801003 | 1       |
| Caelo                      | Camphor spirit | 13354210    | 1       |
| Caelo                      | Camphor spirit | 20002801004 | 1       |
| Caelo                      | Camphor spirit | 19139601    | 3       |
| Caelo                      | Camphor spirit | 17318503    | 1       |
| Caelo                      | Camphor spirit | 10514C      | 1       |
| Caesar & Loretz GmbH       | Camphor spirit | 18272101    | 1       |
| Caesar & Loretz GmbH       | Camphor spirit | 19139605    | 1       |
| Caesar & Loretz GmbH       | Camphor spirit | 19139604    | 1       |
| Caesar & Loretz GmbH       | Camphor spirit | 19136002    | 1       |
| Caesar & Loretz GmbH       | Camphor spirit | 20002801005 | 1       |
| Caleo/ Anzag               | Camphor spirit | 11347401    | 1       |

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| Supplier                    | Substance      | Batch       | Spectra |
|-----------------------------|----------------|-------------|---------|
| Eigen                       | Camphor spirit | 5016E-02319 | 1       |
| Eu Rho                      | Camphor spirit | 1405029-01  | 1       |
| Euro OCT                    | Camphor spirit | 1210028-01  | 1       |
| Euro OTC                    | Camphor spirit | 110022-02   | 1       |
| Euro OTC                    | Camphor spirit | 1307040-01  | 2       |
| Euro OTC                    | Camphor spirit | 1108022-01  | 1       |
| Euro OTC                    | Camphor spirit | 19071208    | 1       |
| Euro OTC                    | Camphor spirit | 1210028-01  | 6       |
| Euro OTC                    | Camphor spirit | 1405030-01  | 3       |
| Euro OTC                    | Camphor spirit | 140503010   | 1       |
| Euro OTC                    | Camphor spirit | 1506006-01  | 6       |
| Euro OTC                    | Camphor spirit | 1108022-02  | 1       |
| Euro OTC                    | Camphor spirit | 121028-01   | 1       |
| Euro OTC                    | Camphor spirit | 1405030     | 1       |
| Euro OTC                    | Camphor spirit | 1307040     | 1       |
| Euro OTC                    | Camphor spirit | 1301024-02  | 2       |
| Euro OTC                    | Camphor spirit | 1405029-01  | 4       |
| Euro OTC                    | Camphor spirit | 1307039-01  | 4       |
| Fagron                      | Camphor spirit | 17092303    | 1       |
| GEHE                        | Camphor spirit | 1301024-02  | 1       |
| Caelo                       | Camphor spirit | 18272101    | 8       |
| Caelo                       | Camphor spirit | 19139602    | 2       |
| gepepharm/Gehe              | Camphor spirit | 17092303    | 3       |
| Caelo                       | Camphor spirit | 16039505    | 2       |
| Caelo                       | Camphor spirit | 18272105    | 1       |
| Phoenix 03.12.12            | Camphor spirit | 1307039-01  | 1       |
| PKH GmbH                    | Camphor spirit | 1405030-01  | 1       |
| Sanacorp                    | Camphor spirit | 1210026-01  | 1       |
| Spreewälder/AHD             | Camphor spirit | 1301024-02  | 1       |
| SpreewälderArzneimittel ... | Camphor spirit | 702110      | 1       |
| Caelo                       | Camphor spirit | 12196804    | 1       |
| Caelo                       | Camphor spirit | 16039501    | 1       |
| Caelo                       | Camphor spirit |             | 1       |

- 241 238 spectra from 1121 *Apo-Ident* customers from a total of 46 952 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Camphor spirit* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Camphor spirit* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 290           | 0              | 63 649        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 124           | 1              | 241 238       |

The substance/substance group *Camphor spirit* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.9310 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.2000 % (> 96.8000 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Camphor spirit* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance             | Distance in main model | Distance in second-stage model |
|-----------------------|------------------------|--------------------------------|
| Isopropyl alcohol 70% | 53.80                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Camphor spirit* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30937     | 31701               | 5.15                         | 61.07                           |
| 31389     | 31389               | 0.00                         | 62.26                           |
| 31700     | 31700               | 0.00                         | 58.80                           |
| 31701     | 31701               | 0.00                         | 59.53                           |
| 32307     | 31389               | 5.75                         | 63.40                           |
| 35254     | 35254               | 0.00                         | 61.01                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Caraway oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30876-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Caraway oil; Carvi aetheroleum

### Special notes

When selecting the *Caraway oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Caraway oil               | 3      | 2      | 101    |



## Second-stage model

For differentiation of the substance/substance group *Caraway oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Caraway oil*:

| Supplier | Substance   | Batch     | Sample ID | Spectra | Certificate        |
|----------|-------------|-----------|-----------|---------|--------------------|
| Caelo    | Caraway oil | 12043508  | 31024     | 40      | AR-14-FG-012307-01 |
| Caelo    | Caraway oil | 14166811  | 31666     | 60      | 20140604           |
| Fagron   | Caraway oil | 12J22-N03 | 30876     | 39      | 20121025           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 139 spectra of 3 reference samples from the substance/substance group *Caraway oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 800 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Caraway oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance   | Batch    | Sample ID | Spectra |
|----------|-------------|----------|-----------|---------|
| Caelo    | Caraway oil | 16252906 | 33252     | 40      |
| Caelo    | Caraway oil | 181649   | 34229     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 261 spectra from 129 *Apo-Ident* customers from 104 batches from the substance/substance group *Caraway oil*.
- Among them are spectra of independent samples from 101 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance   | Batch    | Spectra |
|-----------|-------------|----------|---------|
| Caelo     | Caraway oil | 1508506  | 1       |
| Bombastus | Caraway oil | 268955   | 1       |
| Bombastus | Caraway oil | 270424   | 3       |
| Bombastus | Caraway oil | 276856   | 3       |
| Bombastus | Caraway oil | 280523   | 1       |
| Bombastus | Caraway oil | 272320   | 1       |
| Bombastus | Caraway oil | 284758   | 4       |
| Bombastus | Caraway oil | 290759   | 1       |
| Bombastus | Caraway oil | 291934   | 5       |
| Bombastus | Caraway oil | 297505   | 3       |
| Bombastus | Caraway oil | 17001363 | 3       |
| Bombastus | Caraway oil | 308593   | 1       |
| Bombastus | Caraway oil | 18004843 | 4       |
| Bombastus | Caraway oil | 287889   | 1       |
| Bombastus | Caraway oil | 303305   | 8       |
| Bombastus | Caraway oil | 287725   | 1       |
| Bombastus | Caraway oil | 18001017 | 1       |
| Bombastus | Caraway oil | 299609   | 1       |
| Bombastus | Caraway oil | 295058   | 5       |
| Bombastus | Caraway oil | 308902   | 5       |
| Bombastus | Caraway oil | 17001364 | 1       |
| Bombastus | Caraway oil | 19006263 | 2       |
| Bombastus | Caraway oil | 300797   | 5       |
| Bombastus | Caraway oil | 295572   | 1       |
| Bombastus | Caraway oil | 274361   | 1       |
| Caelo     | Caraway oil | 10319115 | 2       |
| Caelo     | Caraway oil | 12043502 | 1       |
| Caelo     | Caraway oil | 12043503 | 4       |
| Caelo     | Caraway oil | 10319117 | 1       |
| Caelo     | Caraway oil | 28091205 | 1       |
| Caelo     | Caraway oil | 19121207 | 1       |
| Caelo     | Caraway oil | 10319120 | 2       |
| Caelo     | Caraway oil | 12013508 | 1       |
| Caelo     | Caraway oil | 10319116 | 1       |
| Caelo     | Caraway oil | 22051306 | 1       |
| Caelo     | Caraway oil | 10319108 | 1       |
| Caelo     | Caraway oil | 17101301 | 1       |
| Caelo     | Caraway oil | 12043516 | 1       |
| Caelo     | Caraway oil | 12043518 | 1       |
| Caelo     | Caraway oil | 5091402  | 1       |
| Caelo     | Caraway oil | 6091401  | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caelo                      | Caraway oil      | 14166803     | 3              |
| Caelo                      | Caraway oil      | 14166806     | 2              |
| Caelo                      | Caraway oil      | 15085709     | 3              |
| Caelo                      | Caraway oil      | 14166807     | 1              |
| Caelo                      | Caraway oil      | 2031504      | 1              |
| Caelo                      | Caraway oil      | 291934       | 5              |
| Caelo                      | Caraway oil      | 27041503     | 1              |
| Caelo                      | Caraway oil      | 15085714     | 1              |
| Caelo                      | Caraway oil      | 300797       | 1              |
| Caelo                      | Caraway oil      | 1041705      | 1              |
| Caelo                      | Caraway oil      | 16252910     | 5              |
| Caelo                      | Caraway oil      | 16252909     | 2              |
| Caelo                      | Caraway oil      | 16252918     | 2              |
| Caelo                      | Caraway oil      | 18164901     | 8              |
| Caelo                      | Caraway oil      | 17001363     | 3              |
| Caelo                      | Caraway oil      | 2011903      | 1              |
| Caelo                      | Caraway oil      | 18164905     | 2              |
| Caelo                      | Caraway oil      | 18164907     | 1              |
| Caelo                      | Caraway oil      | 18164914     | 1              |
| Caelo                      | Caraway oil      | 20001729003  | 1              |
| Caelo                      | Caraway oil      | 20004511003  | 1              |
| Caelo                      | Caraway oil      | 15085704     | 4              |
| Caelo                      | Caraway oil      | 14166802     | 4              |
| Caelo                      | Caraway oil      | 15085703     | 1              |
| Caelo                      | Caraway oil      | 10319118     | 4              |
| Caelo                      | Caraway oil      | 18164913     | 2              |
| Caelo                      | Caraway oil      | 12043513     | 9              |
| Caelo                      | Caraway oil      | 15085710     | 5              |
| Caelo                      | Caraway oil      | 20001729001  | 1              |
| Caelo                      | Caraway oil      | 20004511001  | 1              |
| Caelo                      | Caraway oil      | 12043512     | 1              |
| Caelo                      | Caraway oil      | 15085706     | 2              |
| Caelo                      | Caraway oil      | 12043507     | 3              |
| Caelo                      | Caraway oil      | 16252917     | 4              |
| Caelo                      | Caraway oil      | 12043511     | 8              |
| Caelo                      | Caraway oil      | 14166812     | 1              |
| Caelo                      | Caraway oil      | 18164902     | 3              |
| Caelo                      | Caraway oil      | 15085707     | 4              |
| Caelo                      | Caraway oil      | 16252902     | 6              |
| Caelo                      | Caraway oil      | 1625903      | 1              |
| Caelo                      | Caraway oil      | 297505       | 1              |
| Caelo                      | Caraway oil      | 18164090     | 1              |
| Caelo                      | Caraway oil      | 14166810     | 3              |
| Caelo                      | Caraway oil      | 16252903     | 4              |
| Caesar & Loretz GmbH       | Caraway oil      | 18164901     | 1              |
| Caesar & Loretz GmbH       | Caraway oil      | 18164910     | 1              |
| Caesar & Loretz GmbH/No... | Caraway oil      | 18164902     | 1              |
| Caesar/Noweda              | Caraway oil      | 712Q-01968   | 2              |
| Cealo/Gehe                 | Caraway oil      | 16252909     | 1              |
| Euro OTC                   | Caraway oil      | 17001363     | 1              |
| Fagron                     | Caraway oil      | 11/13-N03    | 2              |
| Fagron                     | Caraway oil      | 11L13-N03    | 2              |
| Fagron                     | Caraway oil      | 13c08-N08    | 1              |
| Fagron                     | Caraway oil      | 6999440      | 1              |
| Fagron                     | Caraway oil      | 11A19-N08    | 1              |
| Fagron                     | Caraway oil      | 13E06-N13    | 1              |
| Fagron                     | Caraway oil      | 295058       | 1              |
| Fagron                     | Caraway oil      | 287725       | 1              |
| Fagron                     | Caraway oil      | 12J2-N03     | 1              |
| Fagron                     | Caraway oil      | 13C08-N03    | 3              |

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| Supplier    | Substance   | Batch       | Spectra |
|-------------|-------------|-------------|---------|
| Fagron      | Caraway oil | 12J22N03    | 2       |
| Fiebig      | Caraway oil | 15085707    | 1       |
| Fiebig      | Caraway oil | 308902      | 1       |
| Caelo       | Caraway oil | 15085713    | 2       |
| Gatt-Koller | Caraway oil | 1801492     | 2       |
| Gehe        | Caraway oil | 14166811    | 1       |
| GEHE        | Caraway oil | 18164901    | 1       |
| Kögl        | Caraway oil | 49303162716 | 1       |
| Kögl        | Caraway oil | 49303161217 | 1       |
| L12         | Caraway oil | 16252903    | 1       |
| Nachprüfung | Caraway oil | 15085713    | 1       |
| Noweda      | Caraway oil | 18164905    | 1       |
| Noweda      | Caraway oil | 18164909    | 1       |
| Phönix      | Caraway oil | 12J22-N03   | 1       |
| Phönix      | Caraway oil | 276856      | 1       |
| Phönix      | Caraway oil | 12043511    | 1       |
| Phönix      | Caraway oil | 16252909    | 1       |
| Klenk       | Caraway oil | 274361      | 1       |
| Bombastus   | Caraway oil | 19002890    | 1       |
| Caelo       | Caraway oil | 16252906    | 4       |
| Caelo       | Caraway oil | 18164909    | 4       |
| Schubert    | Caraway oil | 1031E0-801  | 1       |
| Caelo       | Caraway oil | 12043508    | 3       |
| Fagron      | Caraway oil | 12J22-N03   | 1       |
| Caelo       | Caraway oil | 14166811    | 1       |
|             | Caraway oil | 81816288    | 1       |

- 241 102 spectra from 1121 *Apo-Ident* customers from a total of 46 903 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Caraway oil* can be clearly distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Caraway oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 139           | 0              | 63 800        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 257           | 4              | 241 102       |

The substance/substance group *Caraway oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.6835 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.4674 % (> 97.3180 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Caraway oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------|---------------------------|-----------------------------------|
| Citric oil        | 32.80                     | —                                 |
| Spearmint oil     | 33.31                     | —                                 |
| Bitter orange oil | 34.64                     | —                                 |
| Grapefruit oil    | 39.94                     | —                                 |
| Dwarf pine oil    | 44.87                     | —                                 |
| Sweet orange oil  | 46.19                     | —                                 |
| Bergamot oil      | 51.73                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Caraway oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30876     | 31024                  | 7.75                            | 33.09                              |
| 31024     | 31024                  | 0.00                            | 35.91                              |
| 31666     | 31024                  | 11.58                           | 33.31                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Castor oil, virgin / Sorbitan- and glycerol monooleate           |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30741-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Castor oil, virgin / Sorbitan- and glycerol monooleate; Castor oil; Ricini oleum; Sorbitan- and glycerol monooleate

### Special notes

When selecting the *Castor oil, virgin / Sorbitan- and glycerol monooleate* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                              | Type A | Type B | Type C |
|--------------------------------------------------------|--------|--------|--------|
| Castor oil, virgin / Sorbitan- and glycerol monooleate | 15     | 28     | 582    |

## Second-stage model

For differentiation of the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|----------|---------------------|------------------|-----------|---------|--------------------|
| Caelo    | Castor oil          | 12114603         | 30741     | 40      | 20120504           |
| Caelo    | Castor oil          | 14020104         | 31343     | 40      | AR-15-FG-005211-01 |
| Caelo    | Castor oil          | 14304807         | 31751     | 60      | 20141106           |
| Caelo    | Castor oil          | 21000493         | 35273     | 40      | 20210203*          |
| Caelo    | Castor oil          | 21000100         | 35296     | 40      | 20210122*          |
| Caelo    | Castor oil          | 21001404         | 35549     | 50      | 20210429*          |
| Euro OTC | Castor oil          | 1509003          | 31739     | 60      | 20150918*          |
| Euro OTC | Castor oil          | 1512024          | 31845     | 60      | 20160111*          |
| Fagron   | Castor oil          | 15D02-B02-314240 | 31824     | 60      | 20150410           |
| Fagron   | Castor oil          | 16J12-B01-328159 | 32943     | 40      | 20161121           |
| Caelo    | Sorbitan- and gl... | 14202402         | 31574     | 60      | AR-15-FG-009320-01 |
| Caelo    | Sorbitan- and gl... | 15122301         | 31726     | 60      | 20150420           |
| Caelo    | Sorbitan- and gl... | 16234301         | 33454     | 40      | 20160829           |
| Caelo    | Sorbitan- and gl... | 16234301         | 33455     | 40      | 20160829           |
| Caelo    | Sorbitan- and gl... | 190802           | 34534     | 40      | 20190411*          |
| Caelo    | Sorbitan- and gl... | 192210           | 34771     | 40      | 20190909*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 770 spectra of 16 reference samples from the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 15 different batches.
- 63 169 spectra from a total of 1292 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



*Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 1120 spectra of 28 reference samples from the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate*.
- Among them are spectra of independent samples from 28 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch      | Sample ID | Spectra |
|----------|---------------------------------|------------|-----------|---------|
| Caelo    | Castor oil                      | 12149306   | 30776     | 40      |
| Caelo    | Castor oil                      | 161028     | 32201     | 40      |
| Caelo    | Castor oil                      | 160922     | 32207     | 40      |
| Caelo    | Castor oil                      | 162000     | 32311     | 40      |
| Caelo    | Castor oil                      | 161672     | 32312     | 40      |
| Caelo    | Castor oil                      | 162362     | 32344     | 40      |
| Caelo    | Castor oil                      | 162731     | 32681     | 40      |
| Caelo    | Castor oil                      | 170272     | 33071     | 40      |
| Caelo    | Castor oil                      | 163146     | 33072     | 40      |
| Caelo    | Castor oil                      | 170271     | 33073     | 40      |
| Caelo    | Castor oil                      | 171899     | 33678     | 40      |
| Caelo    | Castor oil                      | 191326     | 34603     | 40      |
| Caelo    | Castor oil                      | 191970     | 34665     | 40      |
| Caelo    | Castor oil                      | 192511     | 34732     | 40      |
| Caelo    | Castor oil                      | 192831     | 34738     | 40      |
| Caelo    | Castor oil                      | 20000498   | 35027     | 40      |
| Caelo    | Castor oil                      | 20001240   | 35028     | 40      |
| Caelo    | Castor oil                      | 20001513   | 35029     | 40      |
| Caelo    | Castor oil                      | 20002353   | 35067     | 40      |
| Caelo    | Castor oil                      | 21000789   | 35284     | 40      |
| Euro OTC | Castor oil                      | 1604019    | 32192     | 40      |
| Euro OTC | Castor oil                      | 1611005    | 32858     | 40      |
| Euro OTC | Castor oil                      | 1705035    | 33596     | 40      |
| Euro OTC | Castor oil                      | 1801007    | 34004     | 40      |
| Euro OTC | Castor oil                      | 1807003-01 | 34211     | 40      |
| Euro OTC | Castor oil                      | 1902019    | 34428     | 40      |
| Caelo    | Sorbitan- and glycerol monoo... | 17132202   | 33936     | 40      |
| Caelo    | Sorbitan- and glycerol monoo... | 182151     | 34252     | 40      |

- 90 371 spectra from a total of 1988 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3492 spectra from 716 *Apo-Ident* customers from 592 batches from the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate*.
- Among them are spectra of independent samples from 582 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance  | Batch            | Spectra |
|----------------------------|------------|------------------|---------|
| 13.10.2016 Phoenix 3,77EUR | Castor oil | 1512024-02       | 1       |
| ACM                        | Castor oil | KNC0899J15       | 1       |
| AHD                        | Castor oil | 14199604         | 2       |
| AHD                        | Castor oil | 1000005818       | 1       |
| Fagron                     | Castor oil | 14c17-b01-293832 | 1       |
| AHD 27.11.14 EK 2,53       | Castor oil | 1407053-01       | 1       |
| AHD/Caealo 15.08.14        | Castor oil | 14020109         | 1       |
| Caelo                      | Castor oil | 15067306         | 1       |
| AHD/Lamotte                | Castor oil | 1000009899       | 1       |
| ALH                        | Castor oil | 1000002766       | 1       |
| ALH                        | Castor oil | 1000004198       | 2       |
| Alliance                   | Castor oil | 300629           | 1       |
| Alliance Healthcare        | Castor oil | 1512024-02       | 1       |
| Caelo                      | Castor oil | 18295702         | 11      |
| Caelo                      | Castor oil | 19251102         | 7       |
| Caelo                      | Castor oil | 20002353001      | 13      |
| AllianceHealthcare         | Castor oil | 15144304         | 1       |
| Allianz                    | Castor oil | 18001340         | 1       |
| Allianz Healthcare         | Castor oil | 16102804         | 1       |
| Alte Apotheke              | Castor oil | 1000002384       | 1       |
| antares-apotheke Ler       | Castor oil | 17H22-B01-341158 | 1       |
| antares-apotheke Ler       | Castor oil | 17K27-B01-352719 | 1       |
| Anzag                      | Castor oil | 5334001          | 4       |
| Anzag                      | Castor oil | 292409           | 1       |
| Anzag                      | Castor oil | 16016207         | 1       |
| Anzag                      | Castor oil | 305230           | 1       |
| Anzag                      | Castor oil | 19132603         | 1       |
| Anzag                      | Castor oil | 19251102         | 1       |
| Anzag 04.03.2014           | Castor oil | 1308019-02       | 1       |
| Caelo                      | Castor oil | 1412006-02       | 2       |
| Anzag/Henry Lamotte        | Castor oil | 1504006-02       | 1       |
| apoident                   | Castor oil | 1807003-01       | 1       |
| apo-ident/Gehe             | Castor oil | 1801007-01       | 1       |
| Apomix                     | Castor oil | 3A150518         | 1       |
| Apomix                     | Castor oil | 1A170321         | 1       |
| Apomix / Phönix            | Castor oil | 1A160119         | 1       |
| Apomix / Phönix            | Castor oil | 6A250719         | 1       |
| Aponorm                    | Castor oil | 17H22-B01-341047 | 1       |
| Bären Apotheke             | Castor oil | 1611005-01       | 1       |
| Bom                        | Castor oil | 280791           | 1       |
| Bomastus                   | Castor oil | 297429           | 5       |
| Bomastus AHD               | Castor oil | 19002830         | 2       |
| Bomastus-Werke AG          | Castor oil | 307456           | 1       |
| Bomastus-Werke/Phönix      | Castor oil | 300629           | 1       |
| Bombas                     | Castor oil | 278660           | 1       |
| Bombastus                  | Castor oil | 278660           | 3       |
| Bombastus                  | Castor oil | 271753           | 2       |
| Bombastus                  | Castor oil | 273881           | 2       |
| Bombastus                  | Castor oil | 281943           | 15      |
| Bombastus                  | Castor oil | 283620           | 7       |
| Bombastus                  | Castor oil | 281944           | 7       |
| Bombastus                  | Castor oil | 285801           | 12      |
| Bombastus                  | Castor oil | 288126           | 16      |
| Bombastus                  | Castor oil | 290213           | 16      |
| Bombastus                  | Castor oil | 291722           | 17      |
| Bombastus                  | Castor oil | 91696            | 1       |
| Bombastus                  | Castor oil | 1412006-01       | 1       |
| Bombastus                  | Castor oil | 294668           | 14      |
| Bombastus                  | Castor oil | 294667           | 6       |
| Bombastus                  | Castor oil | 29730            | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|-----------------|------------------|----------------|----------------|
| Bombastus       | Castor oil       | 297430         | 11             |
| Bombastus       | Castor oil       | 297429         | 2              |
| Bombastus       | Castor oil       | 300628         | 2              |
| Bombastus       | Castor oil       | 110816-3       | 1              |
| Bombastus       | Castor oil       | 303857         | 3              |
| Bombastus       | Castor oil       | 3888           | 1              |
| Bombastus       | Castor oil       | 307457         | 21             |
| Bombastus       | Castor oil       | 308825         | 45             |
| Bombastus       | Castor oil       | 311684         | 33             |
| Bombastus       | Castor oil       | 18001340       | 61             |
| Bombastus       | Castor oil       | 18003728       | 1              |
| Bombastus       | Castor oil       | 18006815       | 27             |
| Bombastus       | Castor oil       | 18006813       | 2              |
| Bombastus       | Castor oil       | 19006127       | 2              |
| Bombastus       | Castor oil       | 19006128       | 7              |
| Bombastus       | Castor oil       | 60082102       | 1              |
| Bombastus       | Castor oil       | 17002280       | 13             |
| Bombastus       | Castor oil       | 20005112       | 1              |
| Bombastus       | Castor oil       | 17001710       | 3              |
| Bombastus       | Castor oil       | 18003730       | 32             |
| Bombastus       | Castor oil       | 280791         | 17             |
| Bombastus       | Castor oil       | 284505         | 7              |
| Bombastus       | Castor oil       | 6861795        | 2              |
| Bombastus       | Castor oil       | 305229         | 6              |
| Bombastus       | Castor oil       | 307456         | 10             |
| Bombastus       | Castor oil       | 308824         | 5              |
| Bombastus       | Castor oil       | 288639         | 16             |
| Bombastus       | Castor oil       | 415Q-02009     | 1              |
| Bombastus       | Castor oil       | 301591         | 27             |
| Bombastus       | Castor oil       | 190002830      | 1              |
| Bombastus       | Castor oil       | 30825          | 1              |
| Bombastus       | Castor oil       | 275938         | 12             |
| Bombastus       | Castor oil       | 161101R/301591 | 1              |
| Bombastus       | Castor oil       | 270580         | 1              |
| Bombastus       | Castor oil       | 273390         | 5              |
| Bombastus       | Castor oil       | 180306R/311684 | 1              |
| Bombastus       | Castor oil       | 60082103       | 4              |
| Bombastus       | Castor oil       | 292409         | 15             |
| Bombastus       | Castor oil       | 295412         | 24             |
| Bombastus       | Castor oil       | 296751         | 18             |
| Bombastus       | Castor oil       | 1700228        | 1              |
| Bombastus       | Castor oil       | 190061795      | 1              |
| Bombastus       | Castor oil       | 275937         | 10             |
| Bombastus       | Castor oil       | 301587         | 6              |
| Bombastus       | Castor oil       | 18006814       | 4              |
| Bombastus       | Castor oil       | 20005113       | 3              |
| Bombastus       | Castor oil       | 19002829       | 5              |
| Bombastus       | Castor oil       | 18003729       | 5              |
| Bombastus       | Castor oil       | 17002279       | 2              |
| Bombastus       | Castor oil       | 17001711       | 26             |
| Bombastus       | Castor oil       | 288638         | 6              |
| Bombastus       | Castor oil       | 290212         | 4              |
| Bombastus       | Castor oil       | 298698         | 8              |
| Bombastus       | Castor oil       | 268699         | 1              |
| Bombastus       | Castor oil       | 303858         | 28             |
| Bombastus       | Castor oil       | 20002401       | 20             |
| Bombastus       | Castor oil       | 285757         | 3              |
| Bombastus       | Castor oil       | 287167         | 10             |
| Bombastus       | Castor oil       | 278661         | 12             |
| Bombastus       | Castor oil       | 19002830       | 44             |

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| Supplier               | Substance  | Batch         | Spectra |
|------------------------|------------|---------------|---------|
| Bombastus              | Castor oil | 301590        | 5       |
| Bombastus              | Castor oil | 305230        | 34      |
| Bombastus              | Castor oil | 311683        | 2       |
| Bombastus              | Castor oil | 298699        | 28      |
| Bombastus              | Castor oil | 300629        | 29      |
| Bombastus              | Castor oil | 104356        | 1       |
| Bombastus              | Castor oil | 6861789       | 1       |
| Bombastus              | Castor oil | 18001339      | 12      |
| Bombastus              | Castor oil | 18007370      | 1       |
| Bombastus              | Castor oil | 273882        | 9       |
| Bombastus              | Castor oil | 19006129      | 22      |
| Bombastus              | Castor oil | 290714a       | 1       |
| Bombastu-Werke AG/Gehe | Castor oil | 278660        | 1       |
| Bombastu-Werke AG/Gehe | Castor oil | 281944        | 1       |
| Bombasus/ Anzag        | Castor oil | 288126        | 1       |
| Caeleo/ Noweda         | Castor oil | 18238102      | 1       |
| Caelo                  | Castor oil | 1407053-02man | 1       |
| Caelo                  | Castor oil | 20161102-3    | 1       |
| Caelo                  | Castor oil | 1620007       | 1       |
| Caelo                  | Castor oil | 272591        | 1       |
| Caelo                  | Castor oil | 30031302      | 1       |
| Caelo                  | Castor oil | 22051303      | 1       |
| Caelo                  | Castor oil | 12318204      | 1       |
| Caelo                  | Castor oil | 12318207      | 1       |
| Caelo                  | Castor oil | 22071302      | 1       |
| Caelo                  | Castor oil | 13065401      | 1       |
| Caelo                  | Castor oil | 13134608      | 6       |
| Caelo                  | Castor oil | 12121307      | 1       |
| Caelo                  | Castor oil | 10021402      | 1       |
| Caelo                  | Castor oil | 131344604     | 1       |
| Caelo                  | Castor oil | 13196313      | 13      |
| Caelo                  | Castor oil | 1319609       | 1       |
| Caelo                  | Castor oil | 26041403      | 1       |
| Caelo                  | Castor oil | 13174505      | 2       |
| Caelo                  | Castor oil | 13357506      | 1       |
| Caelo                  | Castor oil | 14020105      | 5       |
| Caelo                  | Castor oil | 6051411       | 1       |
| Caelo                  | Castor oil | 13174507      | 1       |
| Caelo                  | Castor oil | 287167        | 2       |
| Caelo                  | Castor oil | 1403024-02    | 2       |
| Caelo                  | Castor oil | 14058810      | 4       |
| Caelo                  | Castor oil | 14181102      | 1       |
| Caelo                  | Castor oil | 14058809      | 1       |
| Caelo                  | Castor oil | 14199502      | 3       |
| Caelo                  | Castor oil | 24101402      | 1       |
| Caelo                  | Castor oil | 14058808      | 1       |
| Caelo                  | Castor oil | 6861795       | 1       |
| Caelo                  | Castor oil | 14199605      | 8       |
| Caelo                  | Castor oil | 14199609      | 9       |
| Caelo                  | Castor oil | 18021505      | 1       |
| Caelo                  | Castor oil | 14304806      | 1       |
| Caelo                  | Castor oil | 30031504      | 1       |
| Caelo                  | Castor oil | 14330604      | 9       |
| Caelo                  | Castor oil | 14330605      | 6       |
| Caelo                  | Castor oil | 28051512      | 1       |
| Caelo                  | Castor oil | 14304803      | 5       |
| Caelo                  | Castor oil | 15144302      | 8       |
| Caelo                  | Castor oil | 15145101      | 7       |
| Caelo                  | Castor oil | 1091505       | 1       |
| Caelo                  | Castor oil | 14144305      | 2       |

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| Supplier | Substance  | Batch       | Spectra |
|----------|------------|-------------|---------|
| Caelo    | Castor oil | 15253404    | 5       |
| Caelo    | Castor oil | 15144305    | 2       |
| Caelo    | Castor oil | 4614M-02009 | 1       |
| Caelo    | Castor oil | 15145104    | 2       |
| Caelo    | Castor oil | 15012016    | 1       |
| Caelo    | Castor oil | 16016206    | 7       |
| Caelo    | Castor oil | 297430      | 1       |
| Caelo    | Castor oil | 298699      | 4       |
| Caelo    | Castor oil | 300629      | 3       |
| Caelo    | Castor oil | 16017102    | 1       |
| Caelo    | Castor oil | 16016203    | 8       |
| Caelo    | Castor oil | 16092203    | 1       |
| Caelo    | Castor oil | 16102804    | 14      |
| Caelo    | Castor oil | 15392005    | 1       |
| Caelo    | Castor oil | 301587      | 2       |
| Caelo    | Castor oil | 303857      | 3       |
| Caelo    | Castor oil | 16017101    | 1       |
| Caelo    | Castor oil | 303858      | 1       |
| Caelo    | Castor oil | 1000003564  | 8       |
| Caelo    | Castor oil | 16102802    | 9       |
| Caelo    | Castor oil | 16273105    | 1       |
| Caelo    | Castor oil | 1000004198  | 4       |
| Caelo    | Castor oil | 16273101    | 2       |
| Caelo    | Castor oil | 16296301    | 1       |
| Caelo    | Castor oil | 16200007    | 19      |
| Caelo    | Castor oil | 8041711     | 1       |
| Caelo    | Castor oil | 17027201    | 1       |
| Caelo    | Castor oil | 17015501    | 3       |
| Caelo    | Castor oil | 17027206    | 2       |
| Caelo    | Castor oil | 3071713     | 1       |
| Caelo    | Castor oil | 1000004554  | 3       |
| Caelo    | Castor oil | 1611005-02  | 3       |
| Caelo    | Castor oil | 307429      | 1       |
| Caelo    | Castor oil | 1707403     | 1       |
| Caelo    | Castor oil | 16091703    | 1       |
| Caelo    | Castor oil | 135277      | 1       |
| Caelo    | Castor oil | 17027204    | 2       |
| Caelo    | Castor oil | 11173803    | 1       |
| Caelo    | Castor oil | 17107506    | 1       |
| Caelo    | Castor oil | 18121704    | 1       |
| Caelo    | Castor oil | 1705035-01  | 9       |
| Caelo    | Castor oil | 17251901    | 29      |
| Caelo    | Castor oil | 17001711    | 6       |
| Caelo    | Castor oil | 17002280    | 3       |
| Caelo    | Castor oil | 17189906    | 1       |
| Caelo    | Castor oil | 13041803    | 1       |
| Caelo    | Castor oil | 30041808    | 1       |
| Caelo    | Castor oil | 17273906    | 1       |
| Caelo    | Castor oil | 9061817     | 1       |
| Caelo    | Castor oil | 17273905    | 1       |
| Caelo    | Castor oil | 18154902    | 2       |
| Caelo    | Castor oil | 17359304    | 1       |
| Caelo    | Castor oil | 19091802    | 1       |
| Caelo    | Castor oil | 311683      | 1       |
| Caelo    | Castor oil | 18154907    | 1       |
| Caelo    | Castor oil | 5121809     | 1       |
| Caelo    | Castor oil | 18003729    | 3       |
| Caelo    | Castor oil | 18233501    | 1       |
| Caelo    | Castor oil | 18155804    | 1       |
| Caelo    | Castor oil | 18295701    | 2       |

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| Supplier | Substance  | Batch              | Spectra |
|----------|------------|--------------------|---------|
| Caelo    | Castor oil | 18224107           | 1       |
| Caelo    | Castor oil | 19080701           | 8       |
| Caelo    | Castor oil | 19080706           | 5       |
| Caelo    | Castor oil | 19132601           | 1       |
| Caelo    | Castor oil | 1980706            | 1       |
| Caelo    | Castor oil | 19222501           | 5       |
| Caelo    | Castor oil | 19251101           | 1       |
| Caelo    | Castor oil | 11359507           | 1       |
| Caelo    | Castor oil | 12270111           | 5       |
| Caelo    | Castor oil | 13096304           | 9       |
| Caelo    | Castor oil | 13134609           | 14      |
| Caelo    | Castor oil | 192831006          | 2       |
| Caelo    | Castor oil | 16016207           | 8       |
| Caelo    | Castor oil | 60082103           | 1       |
| Caelo    | Castor oil | 14020109           | 6       |
| Caelo    | Castor oil | 124637             | 1       |
| Caelo    | Castor oil | 15392003           | 7       |
| Caelo    | Castor oil | 17107504           | 2       |
| Caelo    | Castor oil | 0PW001382          | 1       |
| Caelo    | Castor oil | 1801007-01         | 9       |
| Caelo    | Castor oil | 305230             | 2       |
| Caelo    | Castor oil | 18224103           | 1       |
| Caelo    | Castor oil | 1912705            | 1       |
| Caelo    | Castor oil | 19132603           | 25      |
| Caelo    | Castor oil | 20000498004        | 1       |
| Caelo    | Castor oil | 17251906           | 8       |
| Caelo    | Castor oil | 1206039-01         | 1       |
| Caelo    | Castor oil | 14020108           | 11      |
| Caelo    | Castor oil | 1304013-01         | 2       |
| Caelo    | Castor oil | 16273103           | 2       |
| Caelo    | Castor oil | 12270108           | 3       |
| Caelo    | Castor oil | 5334001            | 1       |
| Caelo    | Castor oil | 5899201            | 1       |
| Caelo    | Castor oil | 15144303           | 7       |
| Caelo    | Castor oil | 18224106           | 1       |
| Caelo    | Castor oil | 14199604           | 5       |
| Caelo    | Castor oil | 15144307           | 3       |
| Caelo    | Castor oil | 124189             | 3       |
| Caelo    | Castor oil | 18114502           | 15      |
| Caelo    | Castor oil | 19020702           | 1       |
| Caelo    | Castor oil | 19080707           | 4       |
| Caelo    | Castor oil | 17307702           | 3       |
| Caelo    | Castor oil | 278661             | 3       |
| Caelo    | Castor oil | 16236205           | 1       |
| Caelo    | Castor oil | 3791723            | 1       |
| Caelo    | Castor oil | 16016202           | 6       |
| Caelo    | Castor oil | 17107403           | 15      |
| Caelo    | Castor oil | 18001340           | 8       |
| Caelo    | Castor oil | 294667             | 1       |
| Caelo    | Castor oil | 15144306           | 1       |
| Caelo    | Castor oil | 15392002           | 4       |
| Caelo    | Castor oil | 19012707           | 2       |
| Caelo    | Castor oil | 18114503           | 1       |
| Caelo    | Castor oil | 18295703           | 2       |
| Caelo    | Castor oil | 17113801           | 2       |
| Caelo    | Castor oil | Fertigarzneimittel | 1       |
| Caelo    | Castor oil | 18224104           | 3       |
| Caelo    | Castor oil | 17K27-B01-352719   | 1       |
| Caelo    | Castor oil | 19012706           | 1       |
| Caelo    | Castor oil | 14199603           | 7       |

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| Supplier | Substance  | Batch            | Spectra |
|----------|------------|------------------|---------|
| Caelo    | Castor oil | 1604019-02       | 3       |
| Caelo    | Castor oil | 308824           | 4       |
| Caelo    | Castor oil | 17107501         | 2       |
| Caelo    | Castor oil | 14181103         | 9       |
| Caelo    | Castor oil | 1512024-01       | 1       |
| Caelo    | Castor oil | 294668           | 3       |
| Caelo    | Castor oil | 16314604         | 2       |
| Caelo    | Castor oil | 311684           | 3       |
| Caelo    | Castor oil | 18033501         | 44      |
| Caelo    | Castor oil | 20000498008      | 1       |
| Caelo    | Castor oil | 12071107         | 1       |
| Caelo    | Castor oil | 12149306         | 4       |
| Caelo    | Castor oil | 5450801          | 4       |
| Caelo    | Castor oil | 13I27-B01-287858 | 1       |
| Caelo    | Castor oil | 13196308         | 1       |
| Caelo    | Castor oil | 14199501         | 12      |
| Caelo    | Castor oil | 1418103          | 1       |
| Caelo    | Castor oil | 1420106          | 1       |
| Caelo    | Castor oil | 1407053-01       | 1       |
| Caelo    | Castor oil | 14199602         | 1       |
| Caelo    | Castor oil | 1525w3404        | 1       |
| Caelo    | Castor oil | 16/081/R         | 1       |
| Caelo    | Castor oil | 15399802         | 2       |
| Caelo    | Castor oil | 15399806         | 1       |
| Caelo    | Castor oil | 16167203         | 1       |
| Caelo    | Castor oil | 16102801         | 20      |
| Caelo    | Castor oil | 16016204         | 1       |
| Caelo    | Castor oil | 1673101          | 1       |
| Caelo    | Castor oil | 16102803         | 2       |
| Caelo    | Castor oil | 307457           | 3       |
| Caelo    | Castor oil | 1713803          | 1       |
| Caelo    | Castor oil | 18154904         | 1       |
| Caelo    | Castor oil | 18083605         | 3       |
| Caelo    | Castor oil | 18238102         | 23      |
| Caelo    | Castor oil | 12114606         | 2       |
| Caelo    | Castor oil | 13134603         | 3       |
| Caelo    | Castor oil | 13134604         | 20      |
| Caelo    | Castor oil | 12114605         | 10      |
| Caelo    | Castor oil | 13196309         | 10      |
| Caelo    | Castor oil | 301591           | 6       |
| Caelo    | Castor oil | 17107407         | 17      |
| Caelo    | Castor oil | 17359306         | 1       |
| Caelo    | Castor oil | 14330606         | 10      |
| Caelo    | Castor oil | P161/14          | 1       |
| Caelo    | Castor oil | 13G29-B01        | 1       |
| Caelo    | Castor oil | 11359508         | 1       |
| Caelo    | Castor oil | 14115405         | 1       |
| Caelo    | Castor oil | 1504006-02       | 3       |
| Caelo    | Castor oil | 150400602        | 1       |
| Caelo    | Castor oil | 296751           | 5       |
| Caelo    | Castor oil | 15383201         | 1       |
| Caelo    | Castor oil | 1000002384       | 1       |
| Caelo    | Castor oil | 16314602         | 1       |
| Caelo    | Castor oil | 17113802         | 3       |
| Caelo    | Castor oil | 17107402         | 4       |
| Caelo    | Castor oil | 1611005-01       | 1       |
| Caelo    | Castor oil | 17251902         | 1       |
| Caelo    | Castor oil | 17359301         | 1       |
| Caelo    | Castor oil | 18224101         | 1       |
| Caelo    | Castor oil | 18155801         | 1       |

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| Supplier                   | Substance  | Batch               | Spectra |
|----------------------------|------------|---------------------|---------|
| Caelo                      | Castor oil | 18154905            | 1       |
| Caelo                      | Castor oil | 19012705            | 9       |
| Caelo                      | Castor oil | 19197001            | 1       |
| Caelo                      | Castor oil | 420301113           | 1       |
| Caelo                      | Castor oil | 12270106            | 10      |
| Fagron                     | Castor oil | 18003730            | 3       |
| Caelo                      | Castor oil | 11359502            | 1       |
| Caelo                      | Castor oil | 13043601            | 10      |
| Caelo                      | Castor oil | 292409              | 1       |
| Caelo                      | Castor oil | 295412              | 2       |
| Caelo                      | Castor oil | 1509003-01          | 10      |
| Caelo                      | Castor oil | 15J15-B08-318730    | 1       |
| Caelo                      | Castor oil | 1611005-012x        | 1       |
| Caelo                      | Castor oil | 1000005818          | 6       |
| Caelo                      | Castor oil | 1800134006861795    | 1       |
| Caelo                      | Castor oil | 19012709            | 1       |
| Caelo                      | Castor oil | 1807003-01          | 1       |
| Caelo                      | Castor oil | 1000013797          | 1       |
| Caelo                      | Castor oil | 275938              | 3       |
| Caelo                      | Castor oil | 288126              | 1       |
| Caelo                      | Castor oil | 1412006-01          | 2       |
| Caelo                      | Castor oil | 14122006-01         | 1       |
| Caelo                      | Castor oil | 15/355/Ri           | 1       |
| Caelo                      | Castor oil | 1509003-001         | 1       |
| Caelo                      | Castor oil | 15392001            | 14      |
| Caelo                      | Castor oil | 16314603            | 2       |
| Caelo                      | Castor oil | 100004198           | 1       |
| Caelo                      | Castor oil | 17107503            | 2       |
| Caelo                      | Castor oil | 308825              | 3       |
| Caelo                      | Castor oil | 17273902            | 2       |
| Caelo                      | Castor oil | 18003730            | 3       |
| Caelo                      | Castor oil | 8003726002          | 2       |
| Caelo                      | Castor oil | 192831001           | 1       |
| Caelo                      | Castor oil | 15145105            | 1       |
| Caelo                      | Castor oil | 15253403            | 1       |
| Caelo                      | Castor oil | 20000498002         | 19      |
| Caelo                      | Castor oil | 171707402           | 1       |
| Caelo                      | Castor oil | 13065405            | 20      |
| Caelo                      | Castor oil | 13134603-3417310103 | 1       |
| Caelo                      | Castor oil | 13134608-3438311151 | 1       |
| Caelo                      | Castor oil | 284505              | 1       |
| Caelo                      | Castor oil | 15067302            | 1       |
| Caelo                      | Castor oil | 298698              | 1       |
| Caelo                      | Castor oil | 15392007            | 6       |
| Caelo                      | Castor oil | 17107401            | 5       |
| Caelo                      | Castor oil | 17189909            | 1       |
| Caelo                      | Castor oil | 2000498002          | 2       |
| Caelo                      | Castor oil | 2000049002          | 1       |
| Caelo                      | Castor oil | 20004358003         | 2       |
| Caelo                      | Castor oil | 290212              | 6       |
| Caelo                      | Castor oil | 17113803            | 37      |
| Caelo                      | Castor oil | 1913A-02009         | 1       |
| Caelo                      | Castor oil | 8003726001          | 6       |
| Caeolo/Phoenix             | Castor oil | 8003726002          | 1       |
| Caesa / Alliance Health... | Castor oil | 18238102            | 1       |
| Caelo                      | Castor oil | 15145106            | 1       |
| Caesar & Loretz GmbH       | Castor oil | 16102802            | 1       |
| Caesar & Loretz GmbH       | Castor oil | 16236202            | 1       |
| Caesar & Loretz GmbH       | Castor oil | 16273105            | 1       |
| Caesar & Loretz GmbH       | Castor oil | 17113803            | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Castor oil       | 18114503     | 1              |
| Caesar & Loretz GmbH       | Castor oil       | 19080701     | 2              |
| Caesar & Loretz GmbH       | Castor oil       | 19132603     | 9              |
| Caesar & Loretz GmbH       | Castor oil       | 19222501     | 1              |
| Caesar & Loretz GmbH       | Castor oil       | 20000498002  | 3              |
| Caesar & Loretz GmbH       | Castor oil       | 192831010    | 1              |
| Caesar & Loretz GmbH       | Castor oil       | 20000292005  | 1              |
| Caesar & Loretz GmbH       | Castor oil       | 20002399     | 2              |
| Caesar & Loretz GmbH       | Castor oil       | 20002353001  | 1              |
| Caesar & Loretz GmbH / ... | Castor oil       | 18295703     | 3              |
| Caesar & Loretz GmbH/Je... | Castor oil       | 20004358003  | 1              |
| Caesar & Loretz GmbH/Sa... | Castor oil       | 20000498002  | 4              |
| Caesar & Loretz GmbH/Sa... | Castor oil       | 20002353001  | 2              |
| Caesar&Loretz/Caesar&Lo... | Castor oil       | 15144304     | 1              |
| Caesar-Loretz/Sanacorp     | Castor oil       | 17251901     | 1              |
| Calo/Sanacorp              | Castor oil       | 16102802     | 2              |
| castor Products company    | Castor oil       | 136225       | 1              |
| Castor Pruducts Company... | Castor oil       | 1407053-02   | 1              |
| Castor Pruducts Company... | Castor oil       | 1512024-01   | 1              |
| Castor Pruducts Company... | Castor oil       | 1512024-02   | 1              |
| Castor/Phoenix             | Castor oil       | 142862       | 1              |
| Castor/Phönix              | Castor oil       | 1509003-02   | 1              |
| Cealo                      | Castor oil       | 14199609     | 1              |
| Cealo                      | Castor oil       | 16102801     | 1              |
| Cealo                      | Castor oil       | 1000004198   | 1              |
| Cealo                      | Castor oil       | 20002353001  | 1              |
| Cealo                      | Castor oil       | 13096304     | 1              |
| Cealo/AHD                  | Castor oil       | 16102804     | 1              |
| Defektur                   | Castor oil       | 5052         | 3              |
| Defektur                   | Castor oil       | 5196         | 1              |
| Defektur                   | Castor oil       | 5253         | 2              |
| Defektur                   | Castor oil       | 5334         | 3              |
| Defektur                   | Castor oil       | 5408         | 2              |
| Defektur                   | Castor oil       | 5775         | 1              |
| Defektur                   | Castor oil       | 6442         | 1              |
| Defektur Abfüllung         | Castor oil       | 5945         | 1              |
| Defektur Abfüllung         | Castor oil       | 6001         | 2              |
| Defektur Abfüllung         | Castor oil       | 6081         | 1              |
| Defektur Abfüllung         | Castor oil       | 6189         | 1              |
| Defektur Abfüllung         | Castor oil       | 6260         | 1              |
| Defektur Abfüllung         | Castor oil       | 6333         | 1              |
| Defektur Abfüllung         | Castor oil       | 6414         | 1              |
| Delta                      | Castor oil       | 17251906     | 1              |
| Ebert-Jacobi               | Castor oil       | 6861795      | 1              |
| entspricht                 | Castor oil       | 18295702     | 1              |
| Eur                        | Castor oil       | 1407053-01   | 1              |
| EuRho                      | Castor oil       | 1206039-02   | 1              |
| EuRho                      | Castor oil       | 1304013-02   | 1              |
| EuRho                      | Castor oil       | 141-2006-02  | 1              |
| EuRho                      | Castor oil       | 1509003-01   | 1              |
| EuRho                      | Castor oil       | 1512024-01   | 2              |
| EuRho                      | Castor oil       | 161100501    | 1              |
| EuRho                      | Castor oil       | 1212008-01   | 3              |
| EuRho                      | Castor oil       | 1212008-02   | 1              |
| EuRho / 11                 | Castor oil       | 1504006-02   | 2              |
| Eurho / Sanacorp           | Castor oil       | 121008-02    | 1              |
| EuRho AHC                  | Castor oil       | 1611005-01   | 1              |
| Euro OTC                   | Castor oil       | 136225       | 1              |
| EuRho/GEHE                 | Castor oil       | 136225       | 1              |
| EuRho/GEHE                 | Castor oil       | 1705035      | 1              |

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| Supplier            | Substance  | Batch        | Spectra |
|---------------------|------------|--------------|---------|
| EuRho/GEHE          | Castor oil | 1705035-01   | 2       |
| EuRho/Geilenkirchen | Castor oil | 1304013-02   | 1       |
| Euro OCT            | Castor oil | 14112006-02  | 1       |
| Euro OTC            | Castor oil | 1304013-02   | 11      |
| Euro OTC            | Castor oil | 130801902    | 1       |
| Euro OTC            | Castor oil | 130401313-02 | 1       |
| Euro OTC            | Castor oil | 1308019-02   | 3       |
| Euro OTC            | Castor oil | 1403024-02   | 9       |
| Euro OTC            | Castor oil | ChB120115    | 1       |
| Euro OTC            | Castor oil | 1407053-01   | 4       |
| Euro OTC            | Castor oil | 141200601    | 1       |
| Euro OTC            | Castor oil | 141200602    | 2       |
| Euro OTC            | Castor oil | 150400602    | 1       |
| Euro OTC            | Castor oil | 1509003-02   | 23      |
| Euro OTC            | Castor oil | 1512024-014  | 1       |
| Euro OTC            | Castor oil | 303858       | 1       |
| Euro OTC            | Castor oil | 1611005-01   | 26      |
| Euro OTC            | Castor oil | 161100501    | 2       |
| Euro OTC            | Castor oil | 170503501    | 4       |
| Euro OTC            | Castor oil | 180107-01    | 1       |
| Euro OTC            | Castor oil | 18001340     | 1       |
| Euro OTC            | Castor oil | 1807003-01   | 37      |
| Euro OTC            | Castor oil | 180700301    | 4       |
| Euro OTC            | Castor oil | 15943        | 1       |
| Euro OTC            | Castor oil | 1513A03553   | 2       |
| Euro OTC            | Castor oil | 121008-01    | 1       |
| Euro OTC            | Castor oil | 1212008-01   | 4       |
| Euro OTC            | Castor oil | 3313U-03553  | 1       |
| Euro OTC            | Castor oil | 3513I-03553  | 1       |
| Euro OTC            | Castor oil | 1504006-02   | 9       |
| Euro OTC            | Castor oil | 151202401    | 1       |
| Euro OTC            | Castor oil | 1902019-01   | 16      |
| Euro OTC            | Castor oil | 1604019-01   | 34      |
| Euro OTC            | Castor oil | 16040019-02  | 1       |
| Euro OTC            | Castor oil | 150900301    | 1       |
| Euro OTC            | Castor oil | 13071301     | 2       |
| Euro OTC            | Castor oil | 1112013C     | 1       |
| Euro OTC            | Castor oil | 15072014B    | 1       |
| Euro OTC            | Castor oil | 290714b      | 1       |
| Euro OTC            | Castor oil | 2022015C     | 1       |
| Euro OTC            | Castor oil | 10022015D    | 1       |
| Euro OTC            | Castor oil | 60082103     | 1       |
| Euro OTC            | Castor oil | 31032015A    | 1       |
| Euro OTC            | Castor oil | 1509003-01   | 27      |
| Euro OTC            | Castor oil | 1512004-02   | 1       |
| Euro OTC            | Castor oil | 1705035-01   | 52      |
| Euro OTC            | Castor oil | 1212008-02   | 9       |
| Euro OTC            | Castor oil | 126279       | 1       |
| Euro OTC            | Castor oil | 1206039-01   | 2       |
| Euro OTC            | Castor oil | 160401902    | 1       |
| Euro OTC            | Castor oil | 705035-01    | 1       |
| Euro OTC            | Castor oil | 145943       | 2       |
| Euro OTC            | Castor oil | 1902019-03   | 12      |
| Euro OTC            | Castor oil | 180100701    | 9       |
| Euro OTC            | Castor oil | 135277       | 1       |
| Euro OTC            | Castor oil | 170503-01    | 1       |
| Euro OTC            | Castor oil | 140302402    | 2       |
| Euro OTC            | Castor oil | 1304013-01   | 7       |
| Euro OTC            | Castor oil | 128224       | 1       |
| Euro OTC            | Castor oil | 142862       | 3       |

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| Supplier    | Substance  | Batch                  | Spectra |
|-------------|------------|------------------------|---------|
| Euro OTC    | Castor oil | 131(1801007-01)        | 1       |
| Euro OTC    | Castor oil | 18033501               | 1       |
| Euro OTC    | Castor oil | 1014A03553             | 1       |
| Euro OTC    | Castor oil | 3413U03553             | 1       |
| Euro OTC    | Castor oil | 151204-02              | 1       |
| Euro OTC    | Castor oil | 129(1705035-01)        | 1       |
| Euro OTC    | Castor oil | 130(1801007-01)        | 1       |
| Euro OTC    | Castor oil | 10000005818            | 1       |
| Euro OTC    | Castor oil | 1512024-01             | 18      |
| Euro OTC    | Castor oil | 1504006-01             | 11      |
| Euro OTC    | Castor oil | 1801007-01             | 47      |
| Euro OTC    | Castor oil | 1220616                | 1       |
| Euro OTC    | Castor oil | 1801007                | 1       |
| Euro OTC    | Castor oil | 1604019-02             | 10      |
| Euro OTC    | Castor oil | 1611005                | 1       |
| Euro OTC    | Castor oil | 140705301              | 2       |
| Euro OTC    | Castor oil | 301591                 | 2       |
| Euro OTC    | Castor oil | 1902019-02             | 1       |
| Euro OTC    | Castor oil | 1202041-01             | 1       |
| Euro OTC    | Castor oil | 154006-02              | 1       |
| Euro/Noweda | Castor oil | 1412006-02             | 1       |
| Euro/Noweda | Castor oil | 1604019-02             | 1       |
| Euro/Noweda | Castor oil | 1604019-01             | 2       |
| Euro OTC    | Castor oil | 1407053-02             | 9       |
| Euro OTC    | Castor oil | 1412006-02             | 13      |
| Euro OTC    | Castor oil | 5581                   | 1       |
| Euro OTC    | Castor oil | 8004605002             | 1       |
| Euro OTC    | Castor oil | 140302401              | 1       |
| Euro OTC    | Castor oil | 1611005-02             | 9       |
| Euro OTC    | Castor oil | 1504006-06             | 1       |
| Euro OTC    | Castor oil | 1308019-01             | 11      |
| Euro OTC    | Castor oil | 1403024-01             | 9       |
| Euro OTC    | Castor oil | 150900302              | 1       |
| Fagron      | Castor oil | 12H29-N04              | 2       |
| Fagron      | Castor oil | 12D04-N09              | 2       |
| Fagron      | Castor oil | 13G29-B01-285422       | 1       |
| Fagron      | Castor oil | 13134609               | 1       |
| Fagron      | Castor oil | 13/27-B01-287857       | 1       |
| Fagron      | Castor oil | 13/27-B01-287858       | 1       |
| Fagron      | Castor oil | 13G29B01               | 1       |
| Fagron      | Castor oil | 14020108               | 1       |
| Fagron      | Castor oil | 14330601               | 1       |
| Fagron      | Castor oil | 15A28-B07-304816       | 2       |
| Fagron      | Castor oil | 1528-B07-3048          | 1       |
| Fagron      | Castor oil | 15A28B07               | 1       |
| Fagron      | Castor oil | 15A28-B07-304818       | 1       |
| Fagron      | Castor oil | 15J15-B08              | 4       |
| Fagron      | Castor oil | 16C29-B01              | 1       |
| Fagron      | Castor oil | 16C29-B01-322133       | 2       |
| Fagron      | Castor oil | 126F07-B06-324379      | 1       |
| Fagron      | Castor oil | 16H05-B03              | 3       |
| Fagron      | Castor oil | 16J12-B01-328160       | 1       |
| Fagron      | Castor oil | 16J12-B01              | 1       |
| Fagron      | Castor oil | 16J12-B328159          | 1       |
| Fagron      | Castor oil | OPW001871              | 2       |
| Fagron      | Castor oil | 19H13-B04-191756       | 2       |
| Fagron      | Castor oil | 19H13-B04-191756211713 | 1       |
| Fagron      | Castor oil | 19H13-B04-191757       | 2       |
| Fagron      | Castor oil | 16J12-B01-329507       | 2       |
| Fagron      | Castor oil | 14C17-B01-293834       | 1       |

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| Supplier                   | Substance  | Batch            | Spectra |
|----------------------------|------------|------------------|---------|
| Fagron                     | Castor oil | 16H05-B03-326864 | 11      |
| Fagron                     | Castor oil | 16C29-B01-320886 | 1       |
| Fagron                     | Castor oil | 17A19-B06-335016 | 1       |
| Fagron                     | Castor oil | 13I27-B01-287857 | 1       |
| Fagron                     | Castor oil | 16F07-B06        | 1       |
| Fagron                     | Castor oil | 13065405         | 1       |
| Fagron                     | Castor oil | 17H22-B01-341158 | 2       |
| Fagron                     | Castor oil | 150383           | 1       |
| Fagron                     | Castor oil | 127170           | 1       |
| Fagron                     | Castor oil | 13C08-N08        | 2       |
| Fagron                     | Castor oil | 15J15-B08-318730 | 1       |
| Fagron                     | Castor oil | 301591           | 1       |
| Fagron                     | Castor oil | 20D09-T09-080454 | 3       |
| Fagron                     | Castor oil | 20J08-T05-084215 | 1       |
| Fagron                     | Castor oil | 133085           | 1       |
| Fagron                     | Castor oil | 14A28-B07-304816 | 1       |
| Fagron                     | Castor oil | 19H13-B04        | 1       |
| Fagron                     | Castor oil | 810201818C       | 1       |
| Fagron                     | Castor oil | 13I27-B01-287858 | 1       |
| Fagron                     | Castor oil | 14C17-B01-293833 | 2       |
| Fagron                     | Castor oil | 15J15-B08-316099 | 1       |
| Fagron                     | Castor oil | 1705035-01       | 1       |
| Fagron                     | Castor oil | 15A28-B07-304817 | 2       |
| Fagron                     | Castor oil | 16h05-b03-326864 | 2       |
| Fagron                     | Castor oil | 5450801          | 1       |
| Fagron                     | Castor oil | 15D02-B02-311714 | 1       |
| Fagron                     | Castor oil | 16F07-B06-324379 | 4       |
| Fagron                     | Castor oil | 303858           | 1       |
| Fagron                     | Castor oil | 1801007-01       | 1       |
| Fagron                     | Castor oil | 13D29-N01        | 1       |
| Fagron                     | Castor oil | 14C17-B01        | 3       |
| Fagron                     | Castor oil | 17H22-B01-341047 | 2       |
| Fagron                     | Castor oil | 18033501         | 1       |
| Fagron                     | Castor oil | 17K27-B01-352719 | 1       |
| Fargon /12.07.2013 / No... | Castor oil | 13D29-N01        | 1       |
| Fiebig                     | Castor oil | 294668           | 1       |
| Fiebig                     | Castor oil | 1000004554       | 3       |
| Fiebig                     | Castor oil | 8003726001       | 5       |
| Fiebig                     | Castor oil | 8003726002       | 5       |
| Fiebig                     | Castor oil | 1000009899       | 4       |
| Fiebig/Lamotte             | Castor oil | 1000010810       | 3       |
| Finteler Apotheke          | Castor oil | 1611005-01       | 1       |
| Gatt-Koller                | Castor oil | 1803582          | 2       |
| Gatt-Koller                | Castor oil | 1900038          | 2       |
| Gehe                       | Castor oil | 275937           | 1       |
| Gehe                       | Castor oil | 283620           | 3       |
| Gehe                       | Castor oil | 14058808         | 1       |
| Gehe                       | Castor oil | 1412006-02       | 2       |
| Gehe                       | Castor oil | 1412006/02       | 1       |
| Gehe                       | Castor oil | 1512024-01       | 1       |
| Gehe                       | Castor oil | 1604019-01       | 2       |
| Gehe                       | Castor oil | 305229           | 1       |
| Gehe                       | Castor oil | 1611005-01       | 2       |
| Gehe                       | Castor oil | 136225           | 1       |
| Gehe                       | Castor oil | 17001711         | 1       |
| Gehe                       | Castor oil | 18001340         | 1       |
| Gehe                       | Castor oil | 18003730         | 1       |
| Gehe                       | Castor oil | 1807003-01       | 2       |
| Gehe                       | Castor oil | 18295702         | 1       |
| Gehe                       | Castor oil | 18006815         | 2       |

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| Supplier               | Substance  | Batch            | Spectra |
|------------------------|------------|------------------|---------|
| Gehe                   | Castor oil | 19251102         | 1       |
| Gehe                   | Castor oil | 19002830         | 1       |
| Gehe                   | Castor oil | 19006129         | 1       |
| Gehe                   | Castor oil | 1304013-01       | 2       |
| GEHE                   | Castor oil | 17107506         | 1       |
| GEHE                   | Castor oil | 18003730         | 2       |
| GEHE                   | Castor oil | 19002829         | 1       |
| GEHE                   | Castor oil | 11359507         | 1       |
| Gehe 05.03.2014        | Castor oil | 278660           | 1       |
| GEHE 17.07.2014        | Castor oil | 285757           | 1       |
| Gehe Kassel            | Castor oil | 288638           | 2       |
| Gehe Kassel 06.06.2015 | Castor oil | 290212           | 1       |
| GEHE Kassel 13.02.2019 | Castor oil | 18003729         | 1       |
| Bombastus              | Castor oil | 1902019-01       | 1       |
| Caelo                  | Castor oil | 17K27-B01        | 1       |
| Caelo                  | Castor oil | 269565           | 1       |
| Caelo                  | Castor oil | 4330605          | 1       |
| Caelo                  | Castor oil | 17027203         | 1       |
| Caelo                  | Castor oil | 1140318/17113803 | 1       |
| Gehe/Lamotte           | Castor oil | 1000004198       | 1       |
| Gehe/Lamotte           | Castor oil | 1000004554       | 1       |
| Gehe/Lamotte           | Castor oil | 1000005199       | 1       |
| Caelo                  | Castor oil | 17027101         | 1       |
| Caelo                  | Castor oil | 17273903         | 2       |
| Euro OTC               | Castor oil | 8003726001       | 3       |
| Geilenkirchen          | Castor oil | 1509003-01       | 2       |
| Geo-Chem/sanacorp      | Castor oil | 1206039-01       | 1       |
| Geo-Chem/sanacorp      | Castor oil | 1212008-01       | 1       |
| GMP-konform            | Castor oil | 8003726001       | 1       |
| H.Lamotte              | Castor oil | 1000004554       | 2       |
| H.Lamotte/Noweda       | Castor oil | 123812           | 1       |
| H.Lamotte/Noweda       | Castor oil | 125162           | 2       |
| H.Lamotte/Noweda       | Castor oil | 1000001914       | 1       |
| harn                   | Castor oil | 17002280         | 1       |
| Hedinger / Noweda      | Castor oil | 1407053-02       | 3       |
| Hedinger/Phönix        | Castor oil | 8007232001       | 1       |
| Hedinger/Sanacorp      | Castor oil | 290213           | 1       |
| Henning/ Phoenix       | Castor oil | 5899201          | 2       |
| henry                  | Castor oil | 1000009899       | 1       |
| Henry la Motte         | Castor oil | 125162           | 1       |
| Henry la Motte         | Castor oil | 5899201          | 1       |
| Henry la Motte         | Castor oil | 1000005818       | 1       |
| Henry Lam.             | Castor oil | 5334001          | 2       |
| Henry Lamotte          | Castor oil | 1000007717L100   | 1       |
| henry Lamotte          | Castor oil | 1000009899       | 1       |
| Henry Lamotte          | Castor oil | 5334001          | 1       |
| Henry Lamotte          | Castor oil | 5450801          | 1       |
| Henry Lamotte          | Castor oil | 123812           | 1       |
| Henry Lamotte          | Castor oil | 125473           | 3       |
| Henry Lamotte          | Castor oil | 125162           | 1       |
| Henry Lamotte          | Castor oil | 1000000714       | 1       |
| Henry Lamotte          | Castor oil | 1000001128       | 4       |
| Henry Lamotte          | Castor oil | 1000001914       | 10      |
| Henry Lamotte          | Castor oil | 1000002766       | 3       |
| Henry Lamotte          | Castor oil | 1000002384       | 6       |
| Henry Lamotte          | Castor oil | 1000003564       | 11      |
| Henry Lamotte          | Castor oil | 1000004198       | 1       |
| Henry Lamotte          | Castor oil | 2X1000004554     | 1       |
| Henry Lamotte          | Castor oil | 10000005818      | 1       |
| Henry Lamotte          | Castor oil | 1000005818L102   | 1       |

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| Supplier                   | Substance  | Batch          | Spectra |
|----------------------------|------------|----------------|---------|
| Henry Lamotte              | Castor oil | 1000005818     | 2       |
| Henry Lamotte              | Castor oil | 1000004553L100 | 1       |
| Henry Lamotte              | Castor oil | 1000007724     | 2       |
| Henry Lamotte              | Castor oil | 8003726002     | 2       |
| Henry Lamotte              | Castor oil | 1000011593     | 1       |
| Henry Lamotte              | Castor oil | 8006040001     | 1       |
| Henry Lamotte              | Castor oil | 8005323001     | 1       |
| Henry Lamotte              | Castor oil | 8006040002     | 1       |
| Henry Lamotte              | Castor oil | 1000014634     | 1       |
| Henry Lamotte / AHD        | Castor oil | 8005323001     | 1       |
| Henry Lamotte / Anzag      | Castor oil | 1000009899     | 1       |
| Henry Lamotte / Kehr       | Castor oil | 1000000714     | 1       |
| Henry Lamotte / Noweda     | Castor oil | 5450801        | 2       |
| Henry Lamotte / Noweda     | Castor oil | 123384         | 1       |
| Henry Lamotte OHLS GMBH... | Castor oil | 8005323001     | 1       |
| Henry Lamotte oils         | Castor oil | 1000010810     | 1       |
| Henry Lamotte Oils         | Castor oil | 5334001        | 1       |
| Henry Lamotte Oils         | Castor oil | 5450801        | 2       |
| Henry Lamotte Oils         | Castor oil | 123812         | 1       |
| Henry Lamotte Oils         | Castor oil | 5899201        | 1       |
| Henry Lamotte Oils         | Castor oil | 1000001128     | 2       |
| Henry Lamotte Oils         | Castor oil | 10000001128    | 1       |
| Henry Lamotte Oils         | Castor oil | 1000001914     | 1       |
| Henry Lamotte Oils         | Castor oil | 1000002384     | 4       |
| Henry Lamotte Oils         | Castor oil | 1000004198     | 4       |
| Henry Lamotte Oils         | Castor oil | 100004198      | 1       |
| Henry Lamotte Oils         | Castor oil | 1000004198L101 | 1       |
| Henry Lamotte Oils         | Castor oil | 8003726001     | 1       |
| Henry Lamotte Oils         | Castor oil | 1000009899     | 2       |
| Henry Lamotte Oils GmbH    | Castor oil | 5450801        | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 123812         | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 124637         | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000000714     | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000001914     | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000002384     | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000002766     | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000005199     | 2       |
| Henry Lamotte Oils GmbH    | Castor oil | 8003726001     | 1       |
| Henry Lamotte Oils GmbH    | Castor oil | 1000010810     | 1       |
| Henry Lamotte oils GmbH... | Castor oil | 10000000714    | 1       |
| Henry Lamotte oils GmbH... | Castor oil | 1000001128     | 1       |
| henry lamotte oils gmbh... | Castor oil | 1000004198     | 1       |
| Henry Lamotte Oils GmbH... | Castor oil | 123384         | 1       |
| Henry Lamotte Oils GmbH... | Castor oil | 124189         | 1       |
| Henry Lamotte Oils GmbH... | Castor oil | 123812         | 2       |
| henry lamotte oils gmbh... | Castor oil | 1000002384     | 1       |
| Henry Lamotte Oils, Gehe   | Castor oil | 5450801        | 1       |
| Henry Lamotte Oils/ San... | Castor oil | 16102804       | 1       |
| Henry Lamotte Oils/Ebert   | Castor oil | 1000004554     | 1       |
| Henry Lamotte Oils/Gehe    | Castor oil | 5334001        | 1       |
| Henry Lamotte Oils/Gehe    | Castor oil | 123384         | 1       |
| Henry Lamotte Oils/GEHE    | Castor oil | 124637         | 1       |
| Henry Lamotte Oils/GEHE    | Castor oil | 5899201        | 1       |
| Henry Lamotte Oils/Noweda  | Castor oil | 123812         | 1       |
| Henry Lamotte Oils/Noweda  | Castor oil | 1000005818     | 1       |
| Henry Lamotte Oils/Noweda  | Castor oil | 8003726001     | 8       |
| Henry Lamotte Oils/Nowe... | Castor oil | 1000005199     | 1       |
| Henry Lamotte/ Alliance    | Castor oil | 1000005818     | 2       |
| Henry Lamotte/ Alliance    | Castor oil | 1000009899     | 1       |
| Henry Lamotte/ Alliance... | Castor oil | 1000004554     | 1       |

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| Supplier                    | Substance  | Batch            | Spectra |
|-----------------------------|------------|------------------|---------|
| Henry Lamotte/ Alliance...  | Castor oil | 8003726002       | 1       |
| Henry Lamotte/ Anzag        | Castor oil | 1000004554       | 1       |
| Henry Lamotte/ Phönix       | Castor oil | 1000003564       | 1       |
| Henry Lamotte/ Phönix       | Castor oil | 1000004198       | 3       |
| Henry Lamotte/AHD           | Castor oil | 1000001128       | 2       |
| Henry Lamotte/Ebert         | Castor oil | 5450801          | 3       |
| Henry Lamotte/Fiebig        | Castor oil | 1000005818       | 4       |
| Henry Lamotte/Gehe          | Castor oil | 5450801          | 2       |
| Henry Lamotte/Gehe          | Castor oil | 1000001128       | 1       |
| Henry Lamotte/Noewda        | Castor oil | 100000238        | 1       |
| Henry Lamotte/Noewda        | Castor oil | 1000004198       | 1       |
| Henry Lamotte/Noweda        | Castor oil | 123812           | 1       |
| Henry Lamotte/Noweda        | Castor oil | 124637           | 1       |
| Henry Lamotte/Noweda        | Castor oil | 1000001914       | 1       |
| Henry Lamotte/Noweda        | Castor oil | 1000002384       | 1       |
| Henry Lamotte/Noweda        | Castor oil | 1000004554       | 3       |
| Henry Lamotte/Phoenix       | Castor oil | 125473           | 2       |
| Henry Lamotte/Phoenix       | Castor oil | 1000000714       | 1       |
| Henry Lamotte/Phoenix       | Castor oil | 1000001914       | 3       |
| Henry Lamotte/Sanacorp      | Castor oil | 123384           | 3       |
| Henry Lamotte/Sanacorp      | Castor oil | 124189           | 1       |
| Henry Lamotte/Sanacorp      | Castor oil | 5899201          | 2       |
| Henry Lamotte/Sanacorp      | Castor oil | 1000001914       | 3       |
| Henry Lamotten Oils GmbH    | Castor oil | 8003726002       | 4       |
| Henry Lamotte-Phönix        | Castor oil | 1000005818       | 1       |
| Henry Lamotte-Phönix        | Castor oil | 1000005199       | 1       |
| Henry/Alliance              | Castor oil | 1000005199       | 1       |
| Henry/Phoenix               | Castor oil | 1000004554       | 1       |
| HenryLamotte                | Castor oil | 5899201          | 1       |
| HenryLamotte                | Castor oil | 1914             | 1       |
| HenryLamotte/Anzag          | Castor oil | 2114I-02009      | 1       |
| HenryLamotte/Phoenix        | Castor oil | 5280301          | 1       |
| Henry Lamotte/Phönix        | Castor oil | 1000010810       | 2       |
| Henry Lamotte/Phönix        | Castor oil | 8005323001       | 3       |
| Hubertus Apotheke           | Castor oil | 16J12-B01-328159 | 1       |
| Ichthyol-Gesellschaft, ...  | Castor oil | 306532           | 1       |
| Jenne                       | Castor oil | 20002353001      | 1       |
| Jenne,Lamotte               | Castor oil | 123384           | 1       |
| Kehr                        | Castor oil | 308824           | 5       |
| Kehr                        | Castor oil | 311683           | 3       |
| Kehr                        | Castor oil | 18001339         | 1       |
| Kehr/Henry Lamotte          | Castor oil | 1000005818       | 1       |
| Kögl                        | Castor oil | 254508163316     | 1       |
| Kögl                        | Castor oil | 404411164916     | 2       |
| Kögl                        | Castor oil | 36102170817      | 1       |
| Kögl                        | Castor oil | 36102171217      | 1       |
| Kögl                        | Castor oil | 112304172017     | 3       |
| Kögl                        | Castor oil | 20172348         | 2       |
| Kögl                        | Castor oil | 1701849          | 3       |
| Kögl                        | Castor oil | 1801521          | 2       |
| Kögl                        | Castor oil | 1802385          | 1       |
| KÖGL                        | Castor oil | 1900992          | 1       |
| Krieger/Lamotte             | Castor oil | 1000001128       | 1       |
| L10                         | Castor oil | 17015501         | 1       |
| Caelo                       | Castor oil | 16016210         | 2       |
| Caelo                       | Castor oil | 17107404         | 1       |
| Caelo                       | Castor oil | 18083604         | 3       |
| Laborchemie Apolida GmbH... | Castor oil | 17107407         | 1       |
| lamotte                     | Castor oil | 5450801          | 1       |
| lamotte                     | Castor oil | 1000004198       | 1       |

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| Supplier                   | Substance  | Batch          | Spectra |
|----------------------------|------------|----------------|---------|
| Lamotte                    | Castor oil | 5188401        | 1       |
| Lamotte                    | Castor oil | 5334001        | 3       |
| Lamotte                    | Castor oil | 5450801        | 4       |
| Lamotte                    | Castor oil | 123812         | 2       |
| Lamotte                    | Castor oil | 124189         | 2       |
| Lamotte                    | Castor oil | 1000000714     | 1       |
| Lamotte                    | Castor oil | 1000004198     | 1       |
| Lamotte                    | Castor oil | 5199           | 1       |
| Lamotte                    | Castor oil | 10000045545455 | 1       |
| Lamotte                    | Castor oil | 8003726001     | 2       |
| Lamotte                    | Castor oil | 1000007724L100 | 1       |
| Lamotte                    | Castor oil | 1000007717     | 1       |
| Lamotte                    | Castor oil | 1000009899     | 1       |
| Lamotte                    | Castor oil | 800532001      | 1       |
| Lamotte                    | Castor oil | 8005323001     | 2       |
| Lamotte / Sanacorp         | Castor oil | 10000051995648 | 1       |
| Lamotte Jenne              | Castor oil | 1000004554     | 2       |
| Lamotte Jenne              | Castor oil | 1000005818     | 1       |
| Lamotte / AHC              | Castor oil | 8003726002     | 3       |
| Lamotte / AHC              | Castor oil | 1000009899     | 1       |
| Lamotte / Anzag            | Castor oil | 8003726002     | 2       |
| Lamotte / Gehe             | Castor oil | 5334001        | 1       |
| Lamotte / Gehe             | Castor oil | 123384         | 2       |
| Lamotte / Gehe             | Castor oil | 8003726001     | 2       |
| Lamotte / Gehe             | Castor oil | 1000010810     | 2       |
| Lamotte / Noweda           | Castor oil | 125162         | 1       |
| LaMotte / Phoenix          | Castor oil | 1000001128     | 3       |
| LaMotte / Phoenix          | Castor oil | 1000002766     | 2       |
| LaMotte / Phoenix          | Castor oil | 1000002384     | 1       |
| lamotte Phoenix            | Castor oil | 288721         | 1       |
| lamotte phönix             | Castor oil | 125162         | 1       |
| Lamotte Phönix             | Castor oil | 5450801        | 2       |
| Lamotte Spangro Juni 2014  | Castor oil | 123384         | 1       |
| Lamotte/ Alliance Healt... | Castor oil | 8003726002     | 2       |
| lamotte/ Phoenix           | Castor oil | 1000003564     | 1       |
| lamotte/ Phoenix           | Castor oil | 1000004198     | 1       |
| lamotte/ Phoenix           | Castor oil | 1000004554     | 1       |
| Lamotte/ Sanacorp          | Castor oil | 1000001128     | 1       |
| Lamotte/ Sanacorp          | Castor oil | 1000002384     | 2       |
| Lamotte/ Sanacorp          | Castor oil | 1000004554     | 1       |
| Lamotte/ Sanacorp          | Castor oil | 1000005199     | 1       |
| Lamotte/ Sanacorp          | Castor oil | 1000010810     | 1       |
| Lamotte/4                  | Castor oil | 125473         | 1       |
| Lamotte/4                  | Castor oil | 10000010810    | 1       |
| Lamotte/Alliance           | Castor oil | 5450801        | 1       |
| Lamotte/Alliance           | Castor oil | 124637         | 2       |
| Lamotte/Alliance Health... | Castor oil | 8003726001     | 1       |
| lamotte/anzag              | Castor oil | 5334001        | 1       |
| Lamotte/Anzag              | Castor oil | 123812         | 1       |
| Lamotte/Anzag              | Castor oil | 1000001914     | 2       |
| Lamotte/Anzag              | Castor oil | 1000002384     | 1       |
| Lamotte/Anzag              | Castor oil | 1000004554     | 2       |
| Lamotte/Anzag              | Castor oil | 1000005818     | 3       |
| Lamotte/Anzag              | Castor oil | 800372602      | 1       |
| Lamotte/Anzag              | Castor oil | 1000009899     | 2       |
| Lamotte/Anzag              | Castor oil | 1000010810     | 2       |
| Lamotte/Anzag              | Castor oil | 8005323001     | 1       |
| Caelo                      | Castor oil | 123384         | 2       |
| lamotte/Gehe               | Castor oil | 124189         | 2       |
| lamotte/Gehe               | Castor oil | 124637         | 1       |

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| Supplier                   | Substance  | Batch           | Spectra |
|----------------------------|------------|-----------------|---------|
| Lamotte/gehe               | Castor oil | 1241892         | 1       |
| Lamotte/gehe               | Castor oil | 125162          | 1       |
| Lamotte/gehe               | Castor oil | 125473          | 1       |
| Lamotte/Gehe               | Castor oil | 1914            | 2       |
| Lamotte/Gehe               | Castor oil | 4198            | 1       |
| Lamotte/Gehe               | Castor oil | 8003726002      | 1       |
| Lamotte/Krieger            | Castor oil | 1000001128      | 1       |
| Lamotte/L3                 | Castor oil | 5450801         | 1       |
| Lamotte/N/04.06.13/PZN:... | Castor oil | 123384          | 1       |
| Lamotte/Noweda             | Castor oil | 124189          | 1       |
| Lamotte/Noweda             | Castor oil | 1000004198      | 2       |
| Lamotte/Noweda             | Castor oil | 1000005199      | 2       |
| Lamotte/Ph                 | Castor oil | 10000009899     | 1       |
| Lamotte/Phoenix            | Castor oil | 1000005818      | 1       |
| Lamotte/Phoenix            | Castor oil | 1000005199      | 1       |
| Lamotte/Phoenix            | Castor oil | 8003726001      | 2       |
| Lamotte/Phoenix            | Castor oil | 1000009899      | 3       |
| Lamotte/Phoenix            | Castor oil | 10000010335L101 | 1       |
| Lamotte/Phoenix            | Castor oil | 1000010810      | 3       |
| Lamotte/Phoenix            | Castor oil | 8005323001      | 2       |
| lamotte/Phönix             | Castor oil | 5899201         | 1       |
| Lamotte/Phönix             | Castor oil | 1128            | 1       |
| Lamotte/Phönix             | Castor oil | 1000003564      | 7       |
| Lamotte/Phönix             | Castor oil | 1000004198      | 2       |
| Lamotte/Phönix             | Castor oil | 1000005199      | 2       |
| Lamotte/Phönix             | Castor oil | 1000005818      | 2       |
| Lamotte/Phönix             | Castor oil | 8003726001      | 1       |
| Lamotte/Phönix             | Castor oil | 8003726002      | 1       |
| Lamotte/Phönix             | Castor oil | 1000009899      | 1       |
| Lamotte/Phönix             | Castor oil | 8005323001      | 1       |
| Lamotte/Sanacorp           | Castor oil | 123812          | 1       |
| Lamotte/Sanacorp           | Castor oil | 124189          | 3       |
| Lamotte/Sanacorp           | Castor oil | 125162          | 1       |
| Lamotte/Sanacorp           | Castor oil | 125473          | 3       |
| Lamotte/Sanacorp           | Castor oil | 5899201         | 1       |
| Lamotte/Sanacorp           | Castor oil | 1000001128      | 2       |
| Lamotte/Sanacorp           | Castor oil | 1000002384      | 2       |
| Lamotte/Sanacorp           | Castor oil | 1000004198      | 1       |
| Lamotte/Sanacorp           | Castor oil | 1000003888L101  | 1       |
| Lamotte/Sanacorp           | Castor oil | 8003726001      | 1       |
| Lamotte/Sanacorp           | Castor oil | 1000009899      | 1       |
| LaMotte/Spangro            | Castor oil | 1000004554      | 2       |
| LaMotte/Spangro            | Castor oil | 8003726001      | 1       |
| Marktapotheke              | Castor oil | 1512024-02      | 1       |
| Now/Cael030.12.16 EUR2,25  | Castor oil | 16236202        | 1       |
| Noweda                     | Castor oil | 273390          | 1       |
| Noweda                     | Castor oil | 1304013-01      | 1       |
| Noweda                     | Castor oil | 1308019-01      | 1       |
| Noweda                     | Castor oil | 13196313        | 1       |
| Noweda                     | Castor oil | 16167202        | 1       |
| Noweda                     | Castor oil | 1000003564      | 1       |
| Noweda                     | Castor oil | 1000004554      | 1       |
| Noweda                     | Castor oil | 8003726002      | 2       |
| Noweda                     | Castor oil | 8004605002      | 1       |
| Noweda                     | Castor oil | 1902019-01      | 2       |
| Noweda                     | Castor oil | 19080701        | 1       |
| Noweda                     | Castor oil | 19002830        | 1       |
| Noweda                     | Castor oil | 192831005       | 1       |
| Noweda                     | Castor oil | 19006129        | 2       |
| Noweda / H. Lamotte        | Castor oil | 1000004198      | 1       |

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| Supplier                   | Substance  | Batch            | Spectra |
|----------------------------|------------|------------------|---------|
| Noweda / Henry Lamotte     | Castor oil | 5280301          | 1       |
| Noweda / Henry Lamotte     | Castor oil | 5334001          | 2       |
| Noweda / Henry Lamotte     | Castor oil | 123384           | 2       |
| Noweda 21.10.2019          | Castor oil | 18006815         | 1       |
| Noweda/ Bombatus           | Castor oil | 305230           | 1       |
| Bombastus                  | Castor oil | 4958             | 2       |
| Caelo                      | Castor oil | 14330601         | 4       |
| Caelo                      | Castor oil | 1512024-02       | 1       |
| Caelo                      | Castor oil | 1604019-01       | 1       |
| Caelo                      | Castor oil | 19251103         | 1       |
| Noweda/Euro                | Castor oil | 1611005-02       | 1       |
| Euro OTC                   | Castor oil | 1512024-02       | 22      |
| Fagron                     | Castor oil | 294668           | 1       |
| Noweda/Henry Lamotte       | Castor oil | 123812           | 4       |
| Noweda/Henry Lamotte       | Castor oil | 124637           | 1       |
| Noweda/Henry Lamotte       | Castor oil | 125473           | 1       |
| Noweda/Henry Lamotte       | Castor oil | 5899201          | 2       |
| Noweda/Henry Lamotte       | Castor oil | 1000001914       | 1       |
| Euro OTC                   | Castor oil | 1412006-01       | 6       |
| Otto Fischar               | Castor oil | 1000001914       | 1       |
| Otto Fischar Gmbh          | Castor oil | 5334001          | 1       |
| Ph.Eur.                    | Castor oil | 6861795          | 1       |
| Ph.Eur.8.0                 | Castor oil | 140705301        | 1       |
| phö                        | Castor oil | 5450801          | 1       |
| Phoenix                    | Castor oil | 308825           | 1       |
| Phoenix                    | Castor oil | 1705035-01       | 1       |
| Phoenix                    | Castor oil | 17107407         | 1       |
| Phoenix                    | Castor oil | 17359304         | 1       |
| Phoenix                    | Castor oil | 1000006447       | 1       |
| Phoenix                    | Castor oil | 18003730         | 1       |
| Phoenix                    | Castor oil | 180100-01        | 1       |
| Phoenix                    | Castor oil | 18003729         | 1       |
| Phoenix                    | Castor oil | 19002830         | 1       |
| Phoenix                    | Castor oil | 20001513002      | 1       |
| Phoenix 06.09.2018 2,99EUR | Castor oil | 1801007-01       | 4       |
| Phoenix 14.09.18           | Castor oil | 18001340         | 1       |
| Phoenix 15.08.2017 3,67EUR | Castor oil | 1611005-02       | 1       |
| Phoenix/ Bombatus-Werke... | Castor oil | 17002280         | 1       |
| Caelo                      | Castor oil | 151202402        | 2       |
| Phoenix/ Henry Lamotte     | Castor oil | 125162           | 1       |
| Phoenix/Lamotte            | Castor oil | 123812           | 2       |
| Phonix                     | Castor oil | 1807003-01       | 1       |
| phönix                     | Castor oil | 305230           | 2       |
| phönix                     | Castor oil | 17h22-b01-341158 | 1       |
| Phönix                     | Castor oil | 123384           | 1       |
| Phönix                     | Castor oil | 13043601         | 1       |
| Phönix                     | Castor oil | 1308019-01       | 1       |
| Phönix                     | Castor oil | 1403024-01       | 1       |
| Phönix                     | Castor oil | 1512024-02       | 1       |
| Phönix                     | Castor oil | 1611005-01       | 1       |
| Phönix                     | Castor oil | 17251901         | 1       |
| Phönix                     | Castor oil | 17251906         | 1       |
| Phönix                     | Castor oil | 1902019-01       | 1       |
| Phönix                     | Castor oil | 20002401         | 1       |
| Phönix                     | Castor oil | 1212008-01       | 1       |
| PHÖNIX                     | Castor oil | 308825           | 1       |
| Phönix Gotha               | Castor oil | 1509003-01       | 1       |
| Caelo                      | Castor oil | 1308019-02       | 1       |
| Fagron                     | Castor oil | 1407053-02       | 1       |
| Fagron                     | Castor oil | T09-0742207      | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Phönix/Fischar             | Castor oil                      | 17002280         | 1       |
| Phönix/Henry Lamotte       | Castor oil                      | 1000005199       | 1       |
| Phönix/Henry Lamotte       | Castor oil                      | 1000009899       | 1       |
| PKH GmbH Apomix            | Castor oil                      | 8A281220         | 1       |
| PKH GmbH Apomix / Phönix   | Castor oil                      | 7A090919         | 1       |
| PKH GmbH Apomix / Phönix   | Castor oil                      | 2A180320         | 1       |
| PKH GmbH Apomix / Phönix   | Castor oil                      | 5A020920         | 2       |
| PKH GmbH Apomix / Phönix   | Castor oil                      | 6A081020         | 2       |
| Products Company           | Castor oil                      | 1604019-02       | 1       |
| Rez                        | Castor oil                      | 5519             | 2       |
| Rondell Apotheke           | Castor oil                      | 15145101         | 1       |
| Sana 10.02.15 EK 2,57      | Castor oil                      | 1407053-02       | 1       |
| sanacorp                   | Castor oil                      | 15144302         | 2       |
| Sanacorp                   | Castor oil                      | 12149306         | 1       |
| Sanacorp                   | Castor oil                      | 128224           | 1       |
| Sanacorp                   | Castor oil                      | 281943           | 1       |
| Sanacorp                   | Castor oil                      | 123812           | 3       |
| Sanacorp                   | Castor oil                      | 13196308         | 1       |
| Sanacorp                   | Castor oil                      | 14020105         | 1       |
| Sanacorp                   | Castor oil                      | 130260           | 1       |
| Sanacorp                   | Castor oil                      | 14330601         | 1       |
| Sanacorp                   | Castor oil                      | 1504006-01       | 1       |
| Sanacorp                   | Castor oil                      | 1509003-01       | 1       |
| Sanacorp                   | Castor oil                      | 15D02-Bo2-311714 | 1       |
| Sanacorp                   | Castor oil                      | 307459           | 1       |
| Sanacorp                   | Castor oil                      | 17107403         | 1       |
| Sanacorp                   | Castor oil                      | 1705035-01       | 1       |
| Sanacorp                   | Castor oil                      | 308824           | 1       |
| Sanacorp                   | Castor oil                      | 1000005199       | 1       |
| Sanacorp                   | Castor oil                      | 17002279         | 1       |
| Sanacorp                   | Castor oil                      | 18001340         | 1       |
| Sanacorp                   | Castor oil                      | 18003730         | 1       |
| Sanacorp                   | Castor oil                      | 19080706         | 2       |
| Sanacorp                   | Castor oil                      | 1902019-01       | 1       |
| Sanacorp                   | Castor oil                      | 19132603         | 2       |
| Sanacorp                   | Castor oil                      | 19006129         | 1       |
| Sanacorp                   | Castor oil                      | 12270111         | 1       |
| Caelo                      | Castor oil                      | 15144304         | 9       |
| Sanacorp, 9,48EUR, 17.1.17 | Castor oil                      | 301587           | 1       |
| Sanacorp/ Lamotte          | Castor oil                      | 1000010810       | 2       |
| Bombastus                  | Castor oil                      | 273389           | 2       |
| Caelo                      | Castor oil                      | 1/AKD1           | 1       |
| Fagron                     | Castor oil                      | 1504006-01       | 1       |
| Sanacorp;09.04.15; 3,33EUR | Castor oil                      | 291722           | 1       |
| Spinnrad                   | Castor oil                      | 31730112         | 1       |
| Spinnrad                   | Castor oil                      | 1218301118       | 1       |
| Stumpf/Henry Lamotte       | Castor oil                      | 124189           | 4       |
| Stumpf/Henry Lamotte       | Castor oil                      | 125162           | 1       |
| Unisan                     | Castor oil                      | 1504006-02       | 1       |
| VDL                        | Castor oil                      | 290213           | 1       |
| VDL; 9.58EUR; 6.10.2015    | Castor oil                      | 294667           | 2       |
| VDL;17.10.14.3,96EUR       | Castor oil                      | 288639           | 1       |
| apomix                     | Sorbitan- and glycerol monoo... | 11116            | 1       |
| apomix                     | Sorbitan- and glycerol monoo... | 10118            | 1       |
| Apomix                     | Sorbitan- and glycerol monoo... | 20515            | 3       |
| Apomix                     | Sorbitan- and glycerol monoo... | 11116            | 2       |
| Apomix                     | Sorbitan- and glycerol monoo... | 21115            | 1       |
| Apomix                     | Sorbitan- and glycerol monoo... | 10118            | 2       |
| Apomix                     | Sorbitan- and glycerol monoo... | 10719            | 4       |
| apomix/ Noweda             | Sorbitan- and glycerol monoo... | 11116            | 3       |

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| Supplier                | Substance                       | Batch            | Spectra |
|-------------------------|---------------------------------|------------------|---------|
| apomix/ Noweda          | Sorbitan- and glycerol monoo... | 21115            | 1       |
| Apomix/Gehe             | Sorbitan- and glycerol monoo... | 11116            | 1       |
| Apomix/Noweda           | Sorbitan- and glycerol monoo... | 21115            | 1       |
| Apomix/Noweda           | Sorbitan- and glycerol monoo... | 10118            | 1       |
| Caelo                   | Sorbitan- and glycerol monoo... | 17132201         | 1       |
| Pharmachem              | Sorbitan- and glycerol monoo... | 280617           | 1       |
| Pharmachem              | Sorbitan- and glycerol monoo... | 231017           | 1       |
| Phönix                  | Sorbitan- and glycerol monoo... | 21115            | 2       |
| Phönix/apomix PKH Halle | Sorbitan- and glycerol monoo... | 10118            | 1       |
|                         | Castor oil                      | 288126           | 1       |
| Caelo                   | Castor oil                      | 14304807         | 3       |
| Caelo                   | Castor oil                      | 12114603         | 2       |
| Caelo                   | Castor oil                      | 14020104         | 2       |
| Euro OTC                | Castor oil                      | 1512024          | 1       |
| Fagron                  | Castor oil                      |                  | 1       |
| Fagron                  | Castor oil                      | 16J12-B01-328159 | 3       |
| Fagron                  | Castor oil                      | 15D02-B02-314240 | 1       |
|                         | Castor oil                      | 13341606         | 1       |
| Caelo                   | Sorbitan- and glycerol monoo... | 16234301         | 12      |

- 237 871 spectra from 1121 *Apo-Ident* customers from a total of 46 449 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Castor oil, virgin / Sorbitan- and glycerol monooleate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 770           | 0              | 63 169        |
| <b>Type B</b> | 0              | 1120          | 0              | 90 371        |
| <b>Type C</b> | 0              | 3489          | 3              | 237 775       |

The substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.2208 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.4643 %) |
| <b>Type C</b> | 100.0000 % (> 99.6837 %) | 99.9141 % (> 99.8282 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to

exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.  
Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                 | Distance in main model | Distance in second-stage model |
|---------------------------|------------------------|--------------------------------|
| Triglycerol diisostearate | 36.98                  | —                              |
| Soy lecithin, liquid      | 44.33                  | —                              |
| Sorbitan trioleate        | 46.93                  | —                              |
| Shea butter, refined      | 58.22                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Castor oil, virgin / Sorbitan- and glycerol monooleate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30741     | 31343               | 2.05                         | 64.06                           |
| 31343     | 31343               | 0.00                         | 67.62                           |
| 31574     | 31574               | 0.00                         | 50.58                           |
| 31726     | 31574               | 6.11                         | 61.29                           |
| 31739     | 31739               | 0.00                         | 68.63                           |
| 31751     | 31739               | 1.42                         | 67.24                           |
| 31824     | 31739               | 0.66                         | 68.34                           |
| 31845     | 31845               | 0.00                         | 70.53                           |
| 32943     | 31739               | 3.52                         | 71.45                           |
| 33454     | 34534               | 5.33                         | 55.12                           |
| 33455     | 31574               | 5.33                         | 54.51                           |
| 34534     | 34534               | 0.00                         | 61.02                           |
| 34771     | 34771               | 0.00                         | 63.62                           |
| 35273     | 35273               | 0.00                         | 62.15                           |
| 35296     | 35296               | 0.00                         | 67.77                           |
| 35549     | 35549               | 0.00                         | 69.17                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances,



thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cedar leaf oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31106-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cedar leaf oil; Oleum cedri e fol. aether.

### Special notes

When selecting the *Cedar leaf oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Cedar leaf oil            | 2      | 1      | 1      |

## Second-stage model

For differentiation of the substance/substance group *Cedar leaf oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cedar leaf oil*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate |
|----------|----------------|----------|-----------|---------|-------------|
| Caelo    | Cedar leaf oil | 13337901 | 31106     | 40      | 1404622     |
| Caelo    | Cedar leaf oil | 13337901 | 31200     | 40      | 20131011    |
| Caelo    | Cedar leaf oil | 13337902 | 31421     | 60      | 20131011    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Cedar leaf oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 799 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Cedar leaf oil*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Cedar leaf oil | 15305207 | 33607     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 12 spectra from 4 *Apo-Ident* customers from 1 batches from the substance/substance group *Cedar leaf oil*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance      | Batch    | Spectra |
|----------|----------------|----------|---------|
| Caelo    | Cedar leaf oil | 15305206 | 12      |

- 241 351 spectra from 1121 *Apo-Ident* customers from a total of 47 005 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cedar leaf oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cedar leaf oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 140           | 0              | 63 799        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 12            | 0              | 241 351       |

The substance/substance group *Cedar leaf oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6856 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cedar leaf oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in<br>main model | Distance in<br>second-stage model |
|--------------|---------------------------|-----------------------------------|
| Wormwood oil | 67.02                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cedar leaf oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31106     | 31106                  | 0.00                            | 88.98                              |
| 31200     | 31106                  | 1.45                            | 90.46                              |
| 31421     | 31106                  | 2.30                            | 90.69                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cedar wood oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30938-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cedar wood oil; Oleum cedri ligni aether.

### Special notes

When selecting the *Cedar wood oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Cedar wood oil            | 6      | 2      | 13     |

## Second-stage model

For differentiation of the substance/substance group *Cedar wood oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cedar wood oil*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate |
|----------|----------------|----------|-----------|---------|-------------|
| Caelo    | Cedar wood oil | 12180708 | 30938     | 50      | 1404506     |
| Caelo    | Cedar wood oil | 12180710 | 31267     | 40      | 20120628    |
| Caelo    | Cedar wood oil | 14230204 | 32455     | 40      | 1610271     |
| Caelo    | Cedar wood oil | 181579   | 34444     | 40      | 20180605*   |
| Caelo    | Cedar wood oil | 181983   | 34453     | 40      | 20180718*   |
| Caelo    | Cedar wood oil | 191665   | 34622     | 40      | 20190624*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 250 spectra of 6 reference samples from the substance/substance group *Cedar wood oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 689 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Cedar wood oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Cedar wood oil | 14230211 | 32748     | 40      |
| Caelo    | Cedar wood oil | 16028815 | 33785     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 16 spectra from 13 *Apo-Ident* customers from 14 batches from the substance/substance group *Cedar wood oil*.
- Among them are spectra of independent samples from 13 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance      | Batch    | Spectra |
|-----------|----------------|----------|---------|
| Bombastus | Cedar wood oil | 18004870 | 1       |
| Caelo     | Cedar wood oil | 16028804 | 1       |
| Caelo     | Cedar wood oil | 16028815 | 1       |
| Caelo     | Cedar wood oil | 18198313 | 1       |
| Caelo     | Cedar wood oil | 16028805 | 1       |
| Caelo     | Cedar wood oil | 12180703 | 1       |
| Caelo     | Cedar wood oil | 12180715 | 1       |
| Caelo     | Cedar wood oil | 12180709 | 1       |
| Caelo     | Cedar wood oil | 14230211 | 3       |
| Caelo     | Cedar wood oil | 1218718  | 1       |
| L12       | Cedar wood oil | 18157901 | 1       |
| Caelo     | Cedar wood oil | 16028812 | 1       |
| Phönix    | Cedar wood oil | 308062   | 1       |
| Caelo     | Cedar wood oil | 12180710 | 1       |

- 241 347 spectra from 1121 *Apo-Ident* customers from a total of 46 992 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cedar wood oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cedar wood oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 250           | 0              | 63 689        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 16            | 0              | 241 347       |

The substance/substance group *Cedar wood oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6854 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cedar wood oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>              | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------------|-------------------------------|---------------------------------------|
| Acorus oil                    | 12.33                         | —                                     |
| Dwarf pine oil                | 23.26                         | —                                     |
| Verbena oil, nature-identical | 23.88                         | —                                     |
| Juniper oil                   | 26.68                         | —                                     |
| Cypress oil                   | 29.14                         | —                                     |
| Bergamot oil                  | 35.53                         | —                                     |
| Peppermint oil                | 36.42                         | —                                     |
| Myrtle oil                    | 36.45                         | —                                     |
| Turpentine oil                | 40.67                         | —                                     |
| Bitter orange oil             | 43.69                         | —                                     |
| Citric oil                    | 45.12                         | —                                     |
| Caraway oil                   | 46.82                         | —                                     |
| Eucalyptus oil                | 48.39                         | —                                     |
| Tea tree oil                  | 49.66                         | —                                     |
| Geranium oil, genuine         | 51.41                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cedar wood oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30938     | 30938               | 0.00                         | 26.16                           |
| 31267     | 30938               | 1.93                         | 25.04                           |
| 32455     | 32455               | 0.00                         | 26.21                           |
| 34444     | 34444               | 0.00                         | 29.44                           |
| 34453     | 34453               | 0.00                         | 25.27                           |
| 34622     | 34622               | 0.00                         | 25.03                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cineole**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 33897-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cineole; Cineolum

### Special notes

When selecting the *Cineole* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Cineole                   | 2      | 1      | 0      |

### Second-stage model

For differentiation of the substance/substance group *Cineole* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cineole*:

| Supplier | Substance | Batch  | Sample ID | Spectra | Certificate |
|----------|-----------|--------|-----------|---------|-------------|
| Caelo    | Cineole   | 173099 | 33897     | 40      | 20171205*   |
| Caelo    | Cineole   | 191846 | 34616     | 40      | 20190722*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 80 spectra of 2 reference samples from the substance/substance group *Cineole*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 859 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Cineole*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Cineole   | 20001181 | 35024     | 40      |

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Cineole*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cineole* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cineole* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 80            | 0              | 63 859        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Cineole* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9800 %) | 100.0000 % (> 92.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cineole* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.



| Substance      | Distance in<br>main model | Distance in<br>second-stage model |
|----------------|---------------------------|-----------------------------------|
| Eucalyptus oil | 27.07                     | —                                 |
| Turpentine oil | 49.26                     | —                                 |
| Rosemary oil   | 49.86                     | —                                 |
| Sage oil       | 54.32                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cineole* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 33897     | 33897                  | 0.00                            | 34.80                              |
| 34616     | 34616                  | 0.00                            | 37.64                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cinnamon bark oil, artificial**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30605-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cinnamon bark oil, artificial; Oleum Cinnamomi artificiale

### Special notes

When selecting the *Cinnamon bark oil, artificial* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group     | Type A | Type B | Type C |
|-------------------------------|--------|--------|--------|
| Cinnamon bark oil, artificial | 2      | 2      | 9      |

## Second-stage model

For differentiation of the substance/substance group *Cinnamon bark oil, artificial* the following second-stage model is used:

- [Submodel 16](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cinnamon bark oil, artificial*:

| Supplier | Substance             | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------------|----------|-----------|---------|-------------|
| Caelo    | Cinnamon bark oi. . . | 14377301 | 31617     | 60      | 20150107    |
| Caelo    | Cinnamon bark oi. . . | 180217   | 34057     | 40      | 20180124*   |
| Caelo    | Cinnamon bark oi. . . | 180217   | 34625     | 40      | 20180124*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Cinnamon bark oil, artificial*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 799 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Cinnamon bark oil, artificial*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                     | Batch    | Sample ID | Spectra |
|----------|-------------------------------|----------|-----------|---------|
| Caelo    | Cinnamon bark oil, artificial | 16026505 | 33609     | 40      |
| Caelo    | Cinnamon bark oil, artificial | 20001053 | 34989     | 40      |
| Caelo    | Cinnamon bark oil, artificial | 16026505 | 33610     | 40      |

- 91 371 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 9 spectra from 7 *Apo-Ident* customers from 9 batches from the substance/substance group *Cinnamon bark oil, artificial*.
- Among them are spectra of independent samples from 9 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                     | Batch    | Spectra |
|----------|-------------------------------|----------|---------|
| Caelo    | Cinnamon bark oil, artificial | 10112014 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 11275903 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 2031501  | 1       |
| Caelo    | Cinnamon bark oil, artificial | 14377304 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 14377307 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 12019604 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 16026509 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 18021710 | 1       |
| Caelo    | Cinnamon bark oil, artificial | 18021701 | 1       |

- 241 354 spectra from 1121 *Apo-Ident* customers from a total of 46 997 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cinnamon bark oil, artificial* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cinnamon bark oil, artificial* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 140           | 0              | 63 799        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 9             | 0              | 241 354       |

The substance/substance group *Cinnamon bark oil, artificial* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6859 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cinnamon bark oil, artificial* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                 | Distance in main model | Distance in second-stage model |
|---------------------------|------------------------|--------------------------------|
| Cinnamon bark oil, Ceylon | 6.91                   | 10.23                          |
| Benzyl nicotinate         | 95.30                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cinnamon bark oil, artificial* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31617     | 34057               | 2.73                         | 17.51                           |
| 34057     | 34057               | 0.00                         | 17.79                           |
| 34625     | 34625               | 0.00                         | 19.37                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Cinnamon bark oil, Ceylon**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30251-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Cinnamon bark oil, Ceylon; Oleum cinnamomi ceylanici

### Special notes

When selecting the *Cinnamon bark oil, Ceylon* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Cinnamon bark oil, Ceylon | 4      | 3      | 31     |

## Second-stage model

For differentiation of the substance/substance group *Cinnamon bark oil, Ceylon* the following second-stage model is used:

- [Submodel 16](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cinnamon bark oil, Ceylon*:

| Supplier | Substance             | Batch    | Sample ID | Spectra | Certificate        |
|----------|-----------------------|----------|-----------|---------|--------------------|
| Caelo    | Cinnamon bark oi. . . | 14092802 | 31560     | 60      | AR-15-FG-001171-01 |
| Caelo    | Cinnamon bark oi. . . | 163243   | 33091     | 40      | 20161129*          |
| Caelo    | Cinnamon bark oi. . . | 20002260 | 34990     | 40      | 20200721*          |
| Caelo    | Cinnamon bark oi. . . | 21000324 | 35279     | 40      | 20210204*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Cinnamon bark oil, Ceylon*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Cinnamon bark oil, Ceylon*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



| Supplier | Substance                 | Batch    | Sample ID | Spectra |
|----------|---------------------------|----------|-----------|---------|
| Caelo    | Cinnamon bark oil, Ceylon | 15278210 | 33480     | 40      |
| Caelo    | Cinnamon bark oil, Ceylon | 15278218 | 33783     | 40      |
| Caelo    | Cinnamon bark oil, Ceylon | 180130   | 34992     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 64 spectra from 38 *Apo-Ident* customers from 33 batches from the substance/substance group *Cinnamon bark oil, Ceylon*.
- Among them are spectra of independent samples from 31 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                 | Batch       | Spectra |
|----------------------------|---------------------------|-------------|---------|
| /Noweda                    | Cinnamon bark oil, Ceylon | 13044802    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 14092806    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 14071203    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 13044802    | 4       |
| Caelo                      | Cinnamon bark oil, Ceylon | 12181403    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 13044809    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 13044808    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 15151106    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 24061703    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 24061702    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 16324307    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 180096801   | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 16324308    | 3       |
| Caelo                      | Cinnamon bark oil, Ceylon | 18013004    | 3       |
| Caelo                      | Cinnamon bark oil, Ceylon | 20004169005 | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 14092805    | 5       |
| Caelo                      | Cinnamon bark oil, Ceylon | 12181408    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 15278210    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 18009801    | 3       |
| Caelo                      | Cinnamon bark oil, Ceylon | 15278206    | 3       |
| Caelo                      | Cinnamon bark oil, Ceylon | 18013015    | 2       |
| Caelo                      | Cinnamon bark oil, Ceylon | 13044810    | 3       |
| Caelo                      | Cinnamon bark oil, Ceylon | 20002514007 | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 18013019    | 1       |
| Caelo                      | Cinnamon bark oil, Ceylon | 18013005    | 1       |
| Caesar & Loretz GmbH       | Cinnamon bark oil, Ceylon | 18013004    | 1       |
| Caesar & Loretz GmbH       | Cinnamon bark oil, Ceylon | 18013010    | 1       |
| Caesar & Loretz GmbH/No... | Cinnamon bark oil, Ceylon | 18013010    | 1       |
| Caesar & Loretz GmbH/No... | Cinnamon bark oil, Ceylon | 18013004    | 1       |
| Dr.Schlegels Resana/NOW    | Cinnamon bark oil, Ceylon | 1407-4584   | 1       |
| Dr.Schlegels Resana/NOW    | Cinnamon bark oil, Ceylon | 1205-3566   | 1       |
| Kögl                       | Cinnamon bark oil, Ceylon | 20170928    | 1       |
| L12                        | Cinnamon bark oil, Ceylon | 18013004    | 1       |
| Now                        | Cinnamon bark oil, Ceylon | 15278210    | 1       |
| Ölbaum / Anzag             | Cinnamon bark oil, Ceylon | 10220032803 | 1       |

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| Supplier     | Substance                 | Batch         | Spectra |
|--------------|---------------------------|---------------|---------|
| Taoasis      | Cinnamon bark oil, Ceylon | 130111-110762 | 1       |
| Taoasis GmbH | Cinnamon bark oil, Ceylon | 130111-110345 | 1       |
| Caelo        | Cinnamon bark oil, Ceylon | 14092802      | 3       |
| Caelo        | Cinnamon bark oil, Ceylon |               | 1       |

- 241 299 spectra from 1121 *Apo-Ident* customers from a total of 46 973 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cinnamon bark oil, Ceylon* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cinnamon bark oil, Ceylon* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 62            | 2              | 241 299       |

The substance/substance group *Cinnamon bark oil, Ceylon* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 96.8750 % (> 92.1875 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cinnamon bark oil, Ceylon* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Cinnamon bark oil, artificial | 11.75                  | 12.36                          |
| Benzyl nicotinate             | 89.25                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cinnamon bark oil, Ceylon* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31560     | 31560               | 0.00                         | 32.99                           |
| 33091     | 33091               | 0.00                         | 29.25                           |
| 34990     | 34990               | 0.00                         | 18.60                           |
| 35279     | 35279               | 0.00                         | 15.26                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Citronella oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30208-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Citronella oil; Oleum cymbopogon winterianus

### Special notes

When selecting the *Citronella oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Citronella oil            | 4      | 3      | 63     |

## Second-stage model

For differentiation of the substance/substance group *Citronella oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Citronella oil*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate |
|----------|----------------|----------|-----------|---------|-------------|
| Caelo    | Citronella oil | 12359903 | 31251     | 40      | 1405526     |
| Caelo    | Citronella oil | 13287808 | 31408     | 40      | 20130827    |
| Caelo    | Citronella oil | 14229803 | 31631     | 60      | 20140825    |
| Caelo    | Citronella oil | 190590   | 34645     | 40      | 20190307*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Citronella oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Citronella oil*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Citronella oil | 162791   | 32692     | 40      |
| Caelo    | Citronella oil | 172831   | 33675     | 40      |
| Caelo    | Citronella oil | 20002042 | 35036     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 98 spectra from 64 *Apo-Ident* customers from 65 batches from the substance/substance group *Citronella oil*.
- Among them are spectra of independent samples from 63 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier    | Substance      | Batch       | Spectra |
|-------------|----------------|-------------|---------|
| ASAV/Noweda | Citronella oil | 10507031858 | 1       |
| Bergland    | Citronella oil | C400822     | 1       |
| Bombastus   | Citronella oil | 276241      | 1       |
| Bombastus   | Citronella oil | 286270      | 2       |
| Bombastus   | Citronella oil | 289426      | 2       |
| Bombastus   | Citronella oil | 297194      | 1       |
| Bombastus   | Citronella oil | 303977      | 2       |
| Bombastus   | Citronella oil | 19001887    | 4       |
| Bombastus   | Citronella oil | 20002737    | 2       |
| Bombastus   | Citronella oil | 302910      | 1       |
| Bombastus   | Citronella oil | 280657      | 1       |
| Bombastus   | Citronella oil | 269807      | 1       |
| Bombastus   | Citronella oil | 297193      | 1       |
| Bombastus   | Citronella oil | 310645      | 3       |
| Bombastus   | Citronella oil | 302908      | 1       |
| Bombastus   | Citronella oil | 18004736    | 5       |
| Caelo       | Citronella oil | 11074201    | 1       |
| Caelo       | Citronella oil | 10193312    | 1       |
| Caelo       | Citronella oil | 12359902    | 1       |
| Caelo       | Citronella oil | 11101301    | 1       |
| Caelo       | Citronella oil | 13287809    | 1       |
| Caelo       | Citronella oil | 15257304    | 4       |
| Caelo       | Citronella oil | 17283102    | 2       |
| Caelo       | Citronella oil | 286270      | 1       |
| Caelo       | Citronella oil | 15222302    | 1       |
| Caelo       | Citronella oil | 11074203    | 1       |
| Caelo       | Citronella oil | 3216M-01974 | 1       |
| Caelo       | Citronella oil | 18084105    | 2       |
| Caelo       | Citronella oil | 5117E-01974 | 1       |
| Caelo       | Citronella oil | 14229805    | 1       |
| Caelo       | Citronella oil | 310645      | 1       |
| Caelo       | Citronella oil | 19059006    | 1       |
| Caelo       | Citronella oil | 12359909    | 1       |
| Caelo       | Citronella oil | 15257309    | 3       |
| Caelo       | Citronella oil | 276241      | 1       |

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| Supplier       | Substance      | Batch            | Spectra |
|----------------|----------------|------------------|---------|
| Caelo          | Citronella oil | 13287804         | 1       |
| Caelo          | Citronella oil | 13287802         | 1       |
| Caelo          | Citronella oil | 12359907         | 1       |
| Caelo          | Citronella oil | 1328780          | 1       |
| Caelo          | Citronella oil | 13287807         | 2       |
| Caelo          | Citronella oil | 14229806         | 2       |
| Caelo          | Citronella oil | 15257305         | 1       |
| Caelo          | Citronella oil | 15222303         | 1       |
| Caelo          | Citronella oil | 15257308         | 1       |
| Caelo          | Citronella oil | 16014103         | 1       |
| Caelo          | Citronella oil | 18084103         | 2       |
| Caelo          | Citronella oil | 17364801         | 2       |
| Caelo          | Citronella oil | 18325201         | 1       |
| Caelo          | Citronella oil | 19059001         | 1       |
| Caelo          | Citronella oil | 9208297          | 1       |
| Caesar/Lorenz  | Citronella oil | 12224603         | 1       |
| Fiebig         | Citronella oil | 17364801         | 1       |
| Bombastus      | Citronella oil | 19004993         | 1       |
| Kaders         | Citronella oil | 131097           | 1       |
| Kögl           | Citronella oil | 228107163916     | 1       |
| Kögl           | Citronella oil | 1701478          | 1       |
| Caelo          | Citronella oil | 303977           | 2       |
| Noweda         | Citronella oil | 17283102         | 1       |
| Phoenix        | Citronella oil | 16279106         | 1       |
| Phoenix        | Citronella oil | 305282           | 1       |
| Phoenix        | Citronella oil | 19003198         | 1       |
| Caelo          | Citronella oil | 16279105         | 3       |
| Phönix Gotha   | Citronella oil | 288826           | 1       |
| Bombastus      | Citronella oil | 1213A-01974      | 1       |
| Resana         | Citronella oil | 1701-5627        | 1       |
| Bombastus      | Citronella oil | 309032           | 1       |
| Taoasis        | Citronella oil | 104719-125577    | 1       |
| Taoasis        | Citronella oil | 104719-124702106 | 1       |
| Taoasis/Noweda | Citronella oil | 4025121016491    | 1       |
| Caelo          | Citronella oil | 14229803         | 1       |
| Caelo          | Citronella oil | 12359903         | 1       |

- 241 265 spectra from 1121 *Apo-Ident* customers from a total of 46 942 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Citronella oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Citronella oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 180           | 0              | 63 759        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 96            | 2              | 241 265       |

The substance/substance group *Citronella oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 97.9592 % (> 94.8980 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Citronella oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                          | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------------------------|-------------------------------|---------------------------------------|
| Melissa oil                               | 38.15                         | —                                     |
| Rose oil (genuine / artificial)           | 39.47                         | —                                     |
| Geranium oil, genuine                     | 42.15                         | —                                     |
| Tea tree oil                              | 45.96                         | —                                     |
| Matricaria oil, rich in (-)-alpha-bisa... | 50.35                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Citronella oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31251            | 31251                      | 0.00                                | 40.87                                  |
| 31408            | 31251                      | 7.13                                | 40.75                                  |
| 31631            | 31251                      | 2.64                                | 42.62                                  |
| 34645            | 34645                      | 0.00                                | 41.58                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by

laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Citrus oils**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31017-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Citrus oils; Bitter orange oil; Citric oil; Grapefruit oil; Oleum aurantii dulcis; Oleum aurantii pericarpium; Oleum citri; Oleum citri paradisi artificiale; Sweet orange oil

### Special notes

When selecting the *Citrus oils* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Citrus oils               | 19     | 10     | 289    |

## Second-stage model

For differentiation of the substance/substance group *Citrus oils* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Citrus oils*:

| Supplier | Substance         | Batch            | Sample ID | Spectra | Certificate |
|----------|-------------------|------------------|-----------|---------|-------------|
| Caelo    | Bitter orange oil | 13303803         | 31861     | 60      | 1606482     |
| Caelo    | Bitter orange oil | 15397901         | 32181     | 40      | 20151125    |
| Caelo    | Bitter orange oil | 170369           | 33062     | 30      | 20170224*   |
| Caelo    | Bitter orange oil | 191187           | 34601     | 40      | 20190503*   |
| Caelo    | Citric oil        | 13259522         | 31432     | 60      | 20130816    |
| Caelo    | Citric oil        | 183280           | 34627     | 40      | 20190122*   |
| Euro OTC | Citric oil        | 1202024-01       | 31524     | 60      | 20120312    |
| Fagron   | Citric oil        | 13E06-N10        | 31046     | 40      | 20130618    |
| Fagron   | Citric oil        | 12G13-B06-287454 | 31261     | 40      | 1407356     |
| Caelo    | Grapefruit oil    | 12367403         | 31017     | 40      | 1404621     |
| Caelo    | Grapefruit oil    | 13252306         | 31417     | 60      | 20130802    |
| Caelo    | Grapefruit oil    | 15429104         | 33630     | 40      | 20151222    |
| Caelo    | Grapefruit oil    | 191292           | 34606     | 40      | 20190508*   |
| Caelo    | Sweet orange oil  | 12043412         | 31164     | 40      | 1405105     |
| Caelo    | Sweet orange oil  | 13378901         | 31206     | 40      | 1405107     |
| Caelo    | Sweet orange oil  | 13024204         | 31273     | 40      | 20130124    |
| Caelo    | Sweet orange oil  | 13378906         | 31295     | 40      | 1407188     |
| Caelo    | Sweet orange oil  | 13401605         | 31297     | 40      | 20131220    |
| Caelo    | Sweet orange oil  | 13024204         | 31411     | 40      | 20130124    |
| Caelo    | Sweet orange oil  | 13378906         | 31418     | 60      | 20131127    |
| Caelo    | Sweet orange oil  | 191138           | 34438     | 40      | 20190430*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 930 spectra of 21 reference samples from the substance/substance group *Citrus oils*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 19 different batches.
- 63 009 spectra from a total of 1288 batches from further 220 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 440 spectra of 11 reference samples from the substance/substance group *Citrus oils*.
- Among them are spectra of independent samples from 10 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance         | Batch    | Sample ID | Spectra |
|----------|-------------------|----------|-----------|---------|
| Caelo    | Bitter orange oil | 180889   | 34078     | 40      |
| Caelo    | Bitter orange oil | 20000798 | 35032     | 40      |
| Caelo    | Citric oil        | 162752   | 32687     | 40      |
| Caelo    | Citric oil        | 171068   | 33305     | 40      |
| Caelo    | Citric oil        | 192813   | 34722     | 40      |
| Caelo    | Grapefruit oil    | 172307   | 34054     | 40      |
| Caelo    | Grapefruit oil    | 182318   | 34237     | 40      |
| Caelo    | Sweet orange oil  | 171596   | 33307     | 40      |
| Caelo    | Sweet orange oil  | 16015501 | 33467     | 40      |
| Caelo    | Sweet orange oil  | 192837   | 35033     | 40      |
| Caelo    | Bitter orange oil | 15397901 | 32351     | 40      |

- 91 051 spectra from a total of 2005 batches from further 342 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 726 spectra from 333 *Apo-Ident* customers from 299 batches from the substance/substance group *Citrus oils*.
- Among them are spectra of independent samples from 286 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                | Substance         | Batch        | Spectra |
|-------------------------|-------------------|--------------|---------|
| Caelo                   | Bitter orange oil | 15397903     | 1       |
| Caelo                   | Bitter orange oil | 15397905     | 2       |
| Caelo                   | Bitter orange oil | 170369035481 | 1       |
| Caelo                   | Bitter orange oil | 23061815     | 1       |
| Caelo                   | Bitter orange oil | 12121802     | 1       |
| Caelo                   | Bitter orange oil | 17036903     | 2       |
| Caelo                   | Bitter orange oil | 191187002    | 1       |
| Caesar & Loretz GmbH    | Bitter orange oil | 18088904     | 1       |
| Anzag 15.11.12 ek:17,18 | Citric oil        | 12040507     | 1       |
| Caelo                   | Citric oil        | 18092210     | 2       |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|------------------|------------------|------------------|----------------|
| Bergland         | Citric oil       | K501939          | 1              |
| Bergland/ Noweda | Citric oil       | K702513          | 1              |
| Bombastus        | Citric oil       | 256839           | 1              |
| Bombastus        | Citric oil       | 269281           | 1              |
| Bombastus        | Citric oil       | 266679           | 1              |
| Bombastus        | Citric oil       | 280999           | 4              |
| Bombastus        | Citric oil       | 284351           | 1              |
| Bombastus        | Citric oil       | 285568           | 1              |
| Bombastus        | Citric oil       | 289673           | 1              |
| Bombastus        | Citric oil       | 294337           | 2              |
| Bombastus        | Citric oil       | 297734           | 1              |
| Bombastus        | Citric oil       | 300294           | 1              |
| Bombastus        | Citric oil       | 308515           | 1              |
| Bombastus        | Citric oil       | 305855           | 1              |
| Bombastus        | Citric oil       | 307781           | 1              |
| Bombastus        | Citric oil       | 19005247         | 2              |
| Bombastus        | Citric oil       | 299753           | 1              |
| Bombastus        | Citric oil       | 19001156         | 1              |
| Bombastus        | Citric oil       | 294951           | 1              |
| Bombastus        | Citric oil       | 17000590         | 1              |
| Bombastus        | Citric oil       | 18092216         | 1              |
| Bombastus        | Citric oil       | 20001099         | 1              |
| Bombastus        | Citric oil       | 18003457         | 1              |
| Bombastus        | Citric oil       | 18002047         | 3              |
| Bombastus        | Citric oil       | 303673           | 1              |
| Caelo            | Citric oil       | 12360012x2       | 1              |
| Caelo            | Citric oil       | 24071801         | 1              |
| Caelo            | Citric oil       | 3710A-01973      | 1              |
| Caelo            | Citric oil       | 10375012         | 2              |
| Caelo            | Citric oil       | 9322802          | 1              |
| Caelo            | Citric oil       | 9322815          | 1              |
| Caelo            | Citric oil       | 12040504         | 9              |
| Caelo            | Citric oil       | 31121206         | 1              |
| Caelo            | Citric oil       | 12360002         | 6              |
| Caelo            | Citric oil       | 28051308         | 1              |
| Caelo            | Citric oil       | 15051314         | 1              |
| Caelo            | Citric oil       | 123600001        | 1              |
| Caelo            | Citric oil       | 20111307         | 1              |
| Caelo            | Citric oil       | 12360010c        | 1              |
| Caelo            | Citric oil       | 13259504         | 8              |
| Caelo            | Citric oil       | 13259512         | 1              |
| Caelo            | Citric oil       | 1325904          | 1              |
| Caelo            | Citric oil       | 1135408          | 1              |
| Caelo            | Citric oil       | 13259508         | 8              |
| Caelo            | Citric oil       | 14121807         | 4              |
| Caelo            | Citric oil       | 15121403         | 1              |
| Caelo            | Citric oil       | 14365212         | 16             |
| Caelo            | Citric oil       | 15182705         | 1              |
| Caelo            | Citric oil       | 15182721         | 1              |
| Caelo            | Citric oil       | 16028702         | 10             |
| Caelo            | Citric oil       | 15182718         | 3              |
| Caelo            | Citric oil       | 202170C16028702  | 1              |
| Caelo            | Citric oil       | 16028715         | 2              |
| Caelo            | Citric oil       | 16028703         | 1              |
| Caelo            | Citric oil       | 15F29-B04        | 1              |
| Caelo            | Citric oil       | 17B14-B04-334835 | 1              |
| Caelo            | Citric oil       | 17321103         | 1              |
| Caelo            | Citric oil       | 17106807         | 15             |
| Caelo            | Citric oil       | 17321101         | 1              |
| Caelo            | Citric oil       | 1706807          | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Citric oil       | 17321102         | 1              |
| Caelo           | Citric oil       | 18092204         | 1              |
| Caelo           | Citric oil       | 173201           | 1              |
| Caelo           | Citric oil       | 17106802         | 1              |
| Caelo           | Citric oil       | 18092215         | 1              |
| Caelo           | Citric oil       | 18092207         | 1              |
| Caelo           | Citric oil       | 17814-B04-350559 | 1              |
| Caelo           | Citric oil       | 18328001         | 1              |
| Caelo           | Citric oil       | 18328011         | 5              |
| Caelo           | Citric oil       | 18328008         | 8              |
| Caelo           | Citric oil       | 18382003         | 1              |
| Caelo           | Citric oil       | Caelo            | 1              |
| Caelo           | Citric oil       | 18328018         | 1              |
| Caelo           | Citric oil       | 18092211         | 1              |
| Caelo           | Citric oil       | 192813001        | 8              |
| Caelo           | Citric oil       | 192813005        | 3              |
| Caelo           | Citric oil       | 192813002        | 2              |
| Caelo           | Citric oil       | 1928132002       | 1              |
| Caelo           | Citric oil       | 20117            | 1              |
| Caelo           | Citric oil       | 192813004        | 1              |
| Caelo           | Citric oil       | 192813016        | 5              |
| Caelo           | Citric oil       | 17321104         | 1              |
| Caelo           | Citric oil       | 2004025008       | 1              |
| Caelo           | Citric oil       | 1832816          | 1              |
| Caelo           | Citric oil       | 15182702         | 1              |
| Caelo           | Citric oil       | 16028709         | 1              |
| Caelo           | Citric oil       | 15182703         | 13             |
| Caelo           | Citric oil       | 17B14-B04-341736 | 1              |
| Caelo           | Citric oil       | 14121815         | 5              |
| Caelo           | Citric oil       | 192813012        | 9              |
| Caelo           | Citric oil       | 170106807        | 1              |
| Caelo           | Citric oil       | 123600002        | 1              |
| Caelo           | Citric oil       | 90(16275216)     | 1              |
| Caelo           | Citric oil       | 18328003         | 17             |
| Caelo           | Citric oil       | 18328009         | 2              |
| Caelo           | Citric oil       | 16028719         | 7              |
| Caelo           | Citric oil       | 10375003         | 1              |
| Caelo           | Citric oil       | 2515I-01973      | 1              |
| Caelo           | Citric oil       | 16028712         | 1              |
| Caelo           | Citric oil       | 18092208         | 1              |
| Caelo           | Citric oil       | 18328006         | 5              |
| Caelo           | Citric oil       | 16275203         | 3              |
| Caelo           | Citric oil       | 619M-01973       | 1              |
| Caelo           | Citric oil       | 1359512          | 1              |
| Caelo           | Citric oil       | 14121808         | 2              |
| Caelo           | Citric oil       | 14365202         | 4              |
| Caelo           | Citric oil       | 14365201         | 3              |
| Caelo           | Citric oil       | 12360001         | 2              |
| Caelo           | Citric oil       | 11231807         | 1              |
| Caelo           | Citric oil       | 12040502         | 3              |
| Caelo           | Citric oil       | 132259504        | 1              |
| Caelo           | Citric oil       | 16275202         | 13             |
| Caelo           | Citric oil       | 20004025004      | 2              |
| Caelo           | Citric oil       | 308515           | 2              |
| Caelo           | Citric oil       | 14B14-B04-338799 | 1              |
| Caelo           | Citric oil       | 12360011         | 11             |
| Caelo           | Citric oil       | 12360012         | 7              |
| Caelo           | Citric oil       | 12367408         | 1              |
| Caelo           | Citric oil       | 15182711         | 6              |
| Caelo           | Citric oil       | 18092202         | 28             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|------------------|-------------------|----------------|
| Caelo                      | Citric oil       | 1716807           | 1              |
| Caelo                      | Citric oil       | 18092216          | 7              |
| Caelo                      | Citric oil       | 18328016          | 5              |
| Caesar & Loretz GmbH       | Citric oil       | 17106807          | 1              |
| Caesar & Loretz GmbH       | Citric oil       | 18328003          | 5              |
| Caesar & Loretz GmbH       | Citric oil       | 18328008          | 3              |
| Caesar & Loretz GmbH       | Citric oil       | 18328016          | 1              |
| Caesar & Loretz GmbH       | Citric oil       | 18328011          | 1              |
| Caesar & Loretz GmbH       | Citric oil       | 192813001         | 1              |
| Caesar & Loretz GmbH       | Citric oil       | 192813004         | 1              |
| Caesar & Loretz GmbH       | Citric oil       | 192813012         | 2              |
| Caesar & Loretz GmbH/ K... | Citric oil       | 18328003          | 1              |
| Caesar & Loretz GmbH/Gehe  | Citric oil       | 18092202          | 1              |
| Caesar & Loretz GmbH/Je... | Citric oil       | 18328003          | 1              |
| Cealo                      | Citric oil       | 12360002          | 1              |
| Cealo                      | Citric oil       | 20004025008       | 1              |
| Fagron/Gehe                | Citric oil       | 14H06-B02-299949  | 1              |
| Fagron                     | Citric oil       | 15F29-B04-328222  | 1              |
| Fagron                     | Citric oil       | 11I05-N13         | 1              |
| Fagron                     | Citric oil       | 268961            | 1              |
| Fagron                     | Citric oil       | 645920            | 3              |
| Fagron                     | Citric oil       | 13B01-N02         | 5              |
| Fagron                     | Citric oil       | 13B01N02          | 2              |
| Fagron                     | Citric oil       | 13b01-n02         | 1              |
| Fagron                     | Citric oil       | 12g13-b06-287454  | 1              |
| Fagron                     | Citric oil       | 13K14-B03-289819  | 1              |
| Fagron                     | Citric oil       | 709110            | 1              |
| Fagron                     | Citric oil       | 733117            | 1              |
| Fagron                     | Citric oil       | 14H06_B02_308273  | 1              |
| Fagron                     | Citric oil       | 14H06-B02         | 1              |
| Fagron                     | Citric oil       | 14H06-B02-308273  | 4              |
| Fagron                     | Citric oil       | 15F29-B04-322985  | 3              |
| Fagron                     | Citric oil       | 15F29-B04-327600  | 3              |
| Fagron                     | Citric oil       | 15F29-B04         | 2              |
| Fagron                     | Citric oil       | 17b14-b04-334835  | 1              |
| Fagron                     | Citric oil       | 17B14-B04         | 3              |
| Fagron                     | Citric oil       | 17B14-B04-350559  | 2              |
| Fagron                     | Citric oil       | 1198627           | 1              |
| Fagron                     | Citric oil       | 13K14-B03         | 1              |
| Fagron                     | Citric oil       | 14H06-B02-299949  | 5              |
| Fagron                     | Citric oil       | 19k11-F08-366883  | 2              |
| Fagron                     | Citric oil       | 19K11-F08-366883  | 2              |
| Fagron                     | Citric oil       | 11K28-N04         | 1              |
| Fagron                     | Citric oil       | 602796            | 1              |
| Fagron                     | Citric oil       | 11C28-N060363/440 | 2              |
| Fagron                     | Citric oil       | 17B14-B04-334835  | 2              |
| Fagron                     | Citric oil       | 13K14-B03-787033  | 1              |
| Fagron                     | Citric oil       | 17B14-B04-341736  | 2              |
| Fagron                     | Citric oil       | 12A23-N05         | 8              |
| Fagron                     | Citric oil       | 12A23-N05         | 1              |
| Fagron                     | Citric oil       | 13K14-B03-294706  | 5              |
| Fagron                     | Citric oil       | 881578            | 2              |
| Fagron                     | Citric oil       | 18092202          | 1              |
| Fagron                     | Citric oil       | 18328003          | 1              |
| Fagron                     | Citric oil       | 19K11-08-366883   | 1              |
| Fagron                     | Citric oil       | 17B14-B004        | 1              |
| Fagron                     | Citric oil       | 11B04-N02         | 1              |
| Fagron                     | Citric oil       | 12G04-N21         | 2              |
| Fagron                     | Citric oil       | 13K14-B03         | 2              |
| Fagron                     | Citric oil       | 14H06-B02-301947  | 1              |

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| Supplier                     | Substance      | Batch             | Spectra |
|------------------------------|----------------|-------------------|---------|
| Fagron                       | Citric oil     | 15F29-B04-309901  | 1       |
| Fagron                       | Citric oil     | 15F29-B04-325354  | 2       |
| Fagron                       | Citric oil     | 17B14-B04-352490  | 3       |
| Fagron                       | Citric oil     | 15F29-B04-330854  | 1       |
| Fagron                       | Citric oil     | 174B14-B04-352490 | 1       |
| Fagron                       | Citric oil     | 17B14-B04-349813  | 2       |
| Fargon                       | Citric oil     | 17B14-B04-349813  | 1       |
| Fiebig                       | Citric oil     | 17106802          | 2       |
| Fiebig                       | Citric oil     | 18092203          | 1       |
| Gatt-Koller                  | Citric oil     | 1800504           | 1       |
| Gehe                         | Citric oil     | 306549            | 1       |
| Gehe                         | Citric oil     | 17106807          | 1       |
| GEHE                         | Citric oil     | 16275216          | 1       |
| Bombastus                    | Citric oil     | 284045            | 1       |
| Caelo                        | Citric oil     | 10375014          | 1       |
| L12                          | Citric oil     | 17B14-B04-352490  | 1       |
| Noweda                       | Citric oil     | 12360002          | 1       |
| Noweda                       | Citric oil     | 192813012         | 1       |
| Caelo                        | Citric oil     | 13259523          | 6       |
| Phoenix                      | Citric oil     | 310806            | 1       |
| Phoenix Göttingen 07.01. ... | Citric oil     | 17B14-B04-350559  | 1       |
| Fagron                       | Citric oil     | 19K11-F08-366880  | 2       |
| Phönix                       | Citric oil     | 17B14-B04-341736  | 1       |
| Phönix                       | Citric oil     | 17B14-B04-352490  | 1       |
| Phönix                       | Citric oil     | 19K11-F08         | 1       |
| Phönix                       | Citric oil     | F08-3668803       | 1       |
| Primavera                    | Citric oil     | 154A26            | 1       |
| Sanacorp                     | Citric oil     | 12040504          | 1       |
| Sanacorp                     | Citric oil     | 13259504          | 1       |
| Sanacorp                     | Citric oil     | 5/AKD1            | 1       |
| Sanacorp                     | Citric oil     | 15182711          | 1       |
| Sanacorp                     | Citric oil     | 18092210          | 3       |
| Sanacorp                     | Citric oil     | 18328008          | 1       |
| Bombastus                    | Citric oil     | 18001850          | 8       |
| Caelo                        | Citric oil     | 16275216          | 15      |
| Sanacrop                     | Citric oil     | 18328016          | 1       |
| Spangro 7.11.18              | Citric oil     | 17321101          | 1       |
| Taoasis                      | Citric oil     | 2LI08M-73396      | 1       |
| Taoasis                      | Citric oil     | 3805201           | 1       |
| Taoasis                      | Citric oil     | 5LI12M-109229     | 1       |
| Taoasis                      | Citric oil     | 140116-115338     | 1       |
| Taoasis                      | Citric oil     | 4LI14M-118369     | 1       |
| Taoasis                      | Citric oil     | 122527-122620     | 1       |
| Taoasis                      | Citric oil     | 1401270-121612    | 1       |
| Taoasis                      | Citric oil     | 122650-123634     | 1       |
| Taoasis                      | Citric oil     | 3J16M-125453      | 1       |
| Taoasis                      | Citric oil     | 1786-125280       | 1       |
| Taoasis                      | Citric oil     | E200450-11318     | 1       |
| VDL;4,32EUR;25.04.15         | Citric oil     | 14121815          | 1       |
| Caelo                        | Grapefruit oil | 14107304          | 2       |
| Caelo                        | Grapefruit oil | 13252303          | 1       |
| Caelo                        | Grapefruit oil | 18231803          | 2       |
| Caelo                        | Grapefruit oil | 17230701          | 1       |
| Caelo                        | Grapefruit oil | 17072301          | 2       |
| Caelo                        | Grapefruit oil | 19129202          | 1       |
| Caelo                        | Grapefruit oil | 15429101          | 2       |
| Caelo                        | Grapefruit oil | 15171201          | 1       |
| Caelo                        | Grapefruit oil | 15429103          | 1       |
| Caelo                        | Grapefruit oil | 17072302          | 1       |
| Caelo                        | Grapefruit oil | 15429105          | 2       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>    | <b>Spectra</b> |
|-----------------|------------------|-----------------|----------------|
| Taoasis         | Grapefruit oil   | 333555-111392   | 1              |
| Taoasis         | Grapefruit oil   | 31564-120540    | 1              |
| Taoasis         | Grapefruit oil   | 44040A-124468   | 1              |
| Taoasis         | Grapefruit oil   | AR18-12022-3600 | 2              |
| Taoasis/Taoasis | Grapefruit oil   | 31564-118378    | 1              |
| Taoasis/Taoasis | Grapefruit oil   | 44040A-127409   | 1              |
| Anzag           | Sweet orange oil | 11310411        | 1              |
| Bombastus       | Sweet orange oil | 285361          | 1              |
| Bombastus       | Sweet orange oil | 19005887        | 1              |
| Bombastus       | Sweet orange oil | 18006507        | 1              |
| Bombastus       | Sweet orange oil | 271897          | 1              |
| Bombastus       | Sweet orange oil | 17001382        | 3              |
| Caelo           | Sweet orange oil | 8121204         | 1              |
| Caelo           | Sweet orange oil | 7051301         | 1              |
| Caelo           | Sweet orange oil | 10375113        | 1              |
| Caelo           | Sweet orange oil | 15051313        | 1              |
| Caelo           | Sweet orange oil | 120430103       | 1              |
| Caelo           | Sweet orange oil | 13389401        | 1              |
| Caelo           | Sweet orange oil | 13389407        | 1              |
| Caelo           | Sweet orange oil | 15182907        | 1              |
| Caelo           | Sweet orange oil | 14150105        | 2              |
| Caelo           | Sweet orange oil | 14133504        | 2              |
| Caelo           | Sweet orange oil | 15285           | 1              |
| Caelo           | Sweet orange oil | 15316601        | 3              |
| Caelo           | Sweet orange oil | 15402407        | 2              |
| Caelo           | Sweet orange oil | 16015501        | 1              |
| Caelo           | Sweet orange oil | 16083501        | 1              |
| Caelo           | Sweet orange oil | 26041703        | 1              |
| Caelo           | Sweet orange oil | 16083507        | 1              |
| Caelo           | Sweet orange oil | 4111710         | 1              |
| Caelo           | Sweet orange oil | 17159603        | 4              |
| Caelo           | Sweet orange oil | 17347513        | 3              |
| Caelo           | Sweet orange oil | 17347510        | 1              |
| Caelo           | Sweet orange oil | 18171601        | 4              |
| Caelo           | Sweet orange oil | 17001382        | 1              |
| Caelo           | Sweet orange oil | 19033311        | 1              |
| Caelo           | Sweet orange oil | 19113805        | 2              |
| Caelo           | Sweet orange oil | 19033302        | 1              |
| Caelo           | Sweet orange oil | 91138002        | 1              |
| Caelo           | Sweet orange oil | 14348803        | 3              |
| Caelo           | Sweet orange oil | 13389406        | 3              |
| Caelo           | Sweet orange oil | 14348809        | 1              |
| Caelo           | Sweet orange oil | 17347509        | 1              |
| Caelo           | Sweet orange oil | 15182904        | 1              |
| Caelo           | Sweet orange oil | 15051701        | 1              |
| Caelo           | Sweet orange oil | 12322603        | 1              |
| Caelo           | Sweet orange oil | 14133505        | 1              |
| Caelo           | Sweet orange oil | 12043403        | 4              |
| Caelo           | Sweet orange oil | 12043406        | 1              |
| Caelo           | Sweet orange oil | 17159602        | 1              |
| Caelo           | Sweet orange oil | 15402404        | 1              |
| Caelo           | Sweet orange oil | 18171603        | 1              |
| Caelo           | Sweet orange oil | 15402409        | 1              |
| Caelo           | Sweet orange oil | 18171610        | 1              |
| Caelo           | Sweet orange oil | 1418E-01959     | 1              |
| Caelo           | Sweet orange oil | 18171609        | 4              |
| Caelo           | Sweet orange oil | 19033301        | 5              |
| Caelo           | Sweet orange oil | 13024202        | 1              |
| Caelo           | Sweet orange oil | 15045101        | 7              |
| Caelo           | Sweet orange oil | 1302404         | 1              |

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| Supplier                  | Substance        | Batch            | Spectra |
|---------------------------|------------------|------------------|---------|
| Caelo                     | Sweet orange oil | 12043409         | 1       |
| Caelo                     | Sweet orange oil | 17347506         | 3       |
| Caelo                     | Sweet orange oil | 192837015        | 1       |
| Caelo                     | Sweet orange oil | 15045104         | 2       |
| Caelo                     | Sweet orange oil | 19113806         | 1       |
| Caelo                     | Sweet orange oil | 12043410         | 1       |
| Caelo                     | Sweet orange oil | 16083506         | 1       |
| Caecolo/Phoenix           | Sweet orange oil | 18171609         | 1       |
| Caesar & Loretz GmbH      | Sweet orange oil | 18171601         | 1       |
| Caesar & Loretz GmbH      | Sweet orange oil | 19113805         | 1       |
| Caesar & Loretz GmbH      | Sweet orange oil | 192837016        | 1       |
| Caesar & Loretz GmbH/gehe | Sweet orange oil | 19033307         | 1       |
| Calo                      | Sweet orange oil | 13024204         | 1       |
| Fiebig                    | Sweet orange oil | 17347510         | 1       |
| Fiebig                    | Sweet orange oil | 18171604         | 1       |
| Fiebig                    | Sweet orange oil | 18171610         | 1       |
| Fiebig 09.11.12 ek:6,92   | Sweet orange oil | 11031802         | 1       |
| Gehe                      | Sweet orange oil | 18171609         | 1       |
| Jenne                     | Sweet orange oil | 17347509         | 1       |
| Jenne/Phoenix             | Sweet orange oil | 191138002        | 1       |
| Nachprüfung               | Sweet orange oil | 12043403         | 1       |
| Ph.Eur.                   | Sweet orange oil | 17159602         | 1       |
| Phoenix                   | Sweet orange oil | 16015502         | 1       |
| Phoenix                   | Sweet orange oil | 16083506         | 1       |
| Phoenix                   | Sweet orange oil | 17159603         | 2       |
| Primavera                 | Sweet orange oil | 530914           | 1       |
| Caelo                     | Sweet orange oil | 16083508         | 1       |
| Taoasis                   | Sweet orange oil | 140129-115917    | 1       |
| Taoasis GmbH              | Sweet orange oil | 128129           | 1       |
| Fagron                    | Citric oil       | 13E06-N10        | 6       |
| Fagron                    | Citric oil       |                  | 1       |
| Fagron                    | Citric oil       | 12G13-B06-287454 | 1       |
| Sanacorp                  | Citric oil       |                  | 1       |
| Apotheker-Bauer           | Grapefruit oil   |                  | 1       |
| Caelo                     | Grapefruit oil   | 12367403         | 1       |
| Caelo                     | Grapefruit oil   | 13252306         | 1       |
| Caelo                     | Sweet orange oil | 13024204         | 4       |
| Caelo                     | Sweet orange oil | 13303803         | 1       |
| Caelo                     | Sweet orange oil | 13378906         | 1       |

- 240 637 spectra from 1121 *Apo-Ident* customers from a total of 46 709 batches from a further 339 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Citrus oils* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Citrus oils* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 930           | 0              | 63 009        |
| Type B | 0              | 440           | 0              | 91 051        |
| Type C | 0              | 718           | 8              | 240 637       |

The substance/substance group *Citrus oils* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.3548 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.6364 %) |
| Type C | 100.0000 % (> 99.6849 %) | 98.8981 % (> 98.4848 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Citrus oils* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in main model | Distance in second-stage model |
|--------------|------------------------|--------------------------------|
| Mandarin oil | 21.65                  | —                              |
| Caraway oil  | 25.28                  | —                              |
| Bergamot oil | 61.69                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Citrus oils* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31017     | 31017               | 0.00                         | 41.05                           |
| 31046     | 34627               | 7.98                         | 32.23                           |
| 31164     | 31164               | 0.00                         | 42.16                           |
| 31206     | 31206               | 0.00                         | 43.41                           |
| 31261     | 31261               | 0.00                         | 28.71                           |
| 31273     | 31206               | 2.68                         | 46.43                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31295            | 31295                      | 0.00                                | 42.65                                  |
| 31297            | 31295                      | 2.69                                | 43.98                                  |
| 31411            | 31295                      | 1.99                                | 44.03                                  |
| 31417            | 31164                      | 2.39                                | 41.16                                  |
| 31418            | 31295                      | 1.79                                | 42.19                                  |
| 31432            | 31261                      | 2.00                                | 27.78                                  |
| 31524            | 31261                      | 5.61                                | 29.68                                  |
| 31861            | 31861                      | 0.00                                | 28.12                                  |
| 32181            | 31861                      | 8.79                                | 36.25                                  |
| 33062            | 33062                      | 0.00                                | 34.33                                  |
| 33630            | 31164                      | 2.59                                | 40.06                                  |
| 34438            | 34438                      | 0.00                                | 40.80                                  |
| 34601            | 34601                      | 0.00                                | 32.89                                  |
| 34606            | 34606                      | 0.00                                | 41.98                                  |
| 34627            | 34627                      | 0.00                                | 30.73                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Clotrimazole 10% Cordes® RK                                      |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30213-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Clotrimazole 10% Cordes® RK

### Special notes

When selecting the *Clotrimazole 10% Cordes® RK* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group   | Type A | Type B | Type C |
|-----------------------------|--------|--------|--------|
| Clotrimazole 10% Cordes® RK | 4      | 1      | 14     |

## Second-stage model

For differentiation of the substance/substance group *Clotrimazole 10% Cordes® RK* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Clotrimazole 10% Cordes® RK*:

| Supplier | Substance           | Batch   | Sample ID | Spectra | Certificate |
|----------|---------------------|---------|-----------|---------|-------------|
| Ichthyol | Clotrimazole 10%... | 12D016  | 31101     | 40      | 1507525     |
| Ichthyol | Clotrimazole 10%... | 14D009  | 31806     | 60      | 20140606    |
| Ichthyol | Clotrimazole 10%... | 14D009  | 32950     | 40      | 20140606    |
| Ichthyol | Clotrimazole 10%... | 17D005  | 34483     | 40      | 20170915    |
| Ichthyol | Clotrimazole 10%... | 20D0009 | 34837     | 40      | 20200306    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Clotrimazole 10% Cordes® RK*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 719 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Clotrimazole 10% Cordes® RK*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                               | Batch  | Sample ID | Spectra |
|----------|-----------------------------------------|--------|-----------|---------|
| Ichthyol | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003 | 33498     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH, Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 306 spectra from 45 *Apo-Ident* customers from 19 batches from the substance/substance group *Clotrimazole 10% Cordes<sup>®</sup> RK*.
- Among them are spectra of independent samples from 14 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                               | Batch    | Spectra |
|----------------------------|-----------------------------------------|----------|---------|
| AHD/ichthyol               | Clotrimazole 10% Cordes <sup>®</sup> RK | 14D0089  | 1       |
| Bombastus                  | Clotrimazole 10% Cordes <sup>®</sup> RK | 19002830 | 1       |
| Caelo                      | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 17      |
| Caelo                      | Clotrimazole 10% Cordes <sup>®</sup> RK | 14D009   | 1       |
| Caelo                      | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 1       |
| Caelo                      | Clotrimazole 10% Cordes <sup>®</sup> RK | 12D016   | 11      |
| Caesar & Loretz GmbH/Je... | Clotrimazole 10% Cordes <sup>®</sup> RK | 18330004 | 2       |
| Cordes                     | Clotrimazole 10% Cordes <sup>®</sup> RK | 11D044   | 1       |
| Gehe/ Ichthyol Gesellsc... | Clotrimazole 10% Cordes <sup>®</sup> RK | 20D0009  | 1       |
| Ichthyol Gesellschaft      | Clotrimazole 10% Cordes <sup>®</sup> RK | 20D0009  | 2       |
| Ichthol/Jenne              | Clotrimazole 10% Cordes <sup>®</sup> RK | 20D0009  | 35      |
| Ichthol/Phönix             | Clotrimazole 10% Cordes <sup>®</sup> RK | 2D0009   | 1       |
| Ichthyol                   | Clotrimazole 10% Cordes <sup>®</sup> RK | 9D036    | 9       |
| Ichthyol                   | Clotrimazole 10% Cordes <sup>®</sup> RK | 11D044   | 25      |
| Ichthyol                   | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |
| Ichthyol Noweda            | Clotrimazole 10% Cordes <sup>®</sup> RK | 12D016   | 1       |
| ICHTHYOL / Noweda          | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |
| Ichthyol Gesellschaft C... | Clotrimazole 10% Cordes <sup>®</sup> RK | 11D044   | 1       |
| Ichthyol Gesellschaft/J... | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 2       |
| Ichthyol Gesellschaft/N... | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 1       |
| ICHTHYOL/1                 | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 1       |
| Ichthyol/AHCA              | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 1       |
| Ichthyol/AHD               | Clotrimazole 10% Cordes <sup>®</sup> RK | 12D016   | 1       |
| Ichthyol/AHD               | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 6       |
| Ichthyol/AHD               | Clotrimazole 10% Cordes <sup>®</sup> RK | 17DQ05   | 1       |
| Ichthyol/Alliance Healt... | Clotrimazole 10% Cordes <sup>®</sup> RK | 12D016   | 1       |
| Ichthyol/Anzag             | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 2       |
| Ichthyol/E&J               | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |
| Ichthyol/Gehe              | Clotrimazole 10% Cordes <sup>®</sup> RK | 14D009   | 2       |
| Ichthyol/Gehe              | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |
| Ichthyol/Gehe              | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 5       |
| Ichthyol/Jenne             | Clotrimazole 10% Cordes <sup>®</sup> RK | 11D044   | 1       |
| Ichthyol/Jenne             | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 119     |
| Ichthyol/Noweda            | Clotrimazole 10% Cordes <sup>®</sup> RK | 14D009   | 1       |
| Ichthyol/Noweda            | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |
| Ichthyol/Noweda            | Clotrimazole 10% Cordes <sup>®</sup> RK | 17D005   | 2       |
| Ichthyol/Phokd             | Clotrimazole 10% Cordes <sup>®</sup> RK | 16D003   | 1       |

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| Supplier                    | Substance                   | Batch   | Spectra |
|-----------------------------|-----------------------------|---------|---------|
| Ichthyol/Phönix             | Clotrimazole 10% Cordes® RK | 16D003  | 1       |
| Ichthyol/Phönix             | Clotrimazole 10% Cordes® RK | 17D005  | 2       |
| Ichthyol/Phönix             | Clotrimazole 10% Cordes® RK | 20D0009 | 1       |
| Ichthyol/Phönix             | Clotrimazole 10% Cordes® RK | 20d0009 | 1       |
| Ichthyol4D/ Noweda          | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Ichthyol-Ges. / G           | Clotrimazole 10% Cordes® RK | 17D005  | 1       |
| Ichthyol-Ges./Sanac.        | Clotrimazole 10% Cordes® RK | 16D003  | 1       |
| Ichthyol-Ges./Sanac.        | Clotrimazole 10% Cordes® RK | 17D005  | 1       |
| Ichthyol-Gesellschaft       | Clotrimazole 10% Cordes® RK | 12D016  | 2       |
| ICHTHYOL-GESELLSCHAFT       | Clotrimazole 10% Cordes® RK | 17D005  | 1       |
| Ichthyol-Gesellschaft / K   | Clotrimazole 10% Cordes® RK | 12D016  | 1       |
| Ichthyol-Gesellschaft /...  | Clotrimazole 10% Cordes® RK | 17D005  | 1       |
| ICHTHYOL-GESELLSCHAFT C...  | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Ichthyol-Gesellschaft/ ...  | Clotrimazole 10% Cordes® RK | 16D003  | 1       |
| Ichthyol-Gesellschaft/N...  | Clotrimazole 10% Cordes® RK | 110044  | 1       |
| Ichthyol-Gesellschaft/S...  | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Ichthyol-Gesellschaft/ N... | Clotrimazole 10% Cordes® RK | 14D009  | 2       |
| ichtiol gehe                | Clotrimazole 10% Cordes® RK | 16D03   | 1       |
| Ichtyol                     | Clotrimazole 10% Cordes® RK | 11D044  | 1       |
| ichtyol gesellschaft co...  | Clotrimazole 10% Cordes® RK | 17D005  | 2       |
| Noweda                      | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Noweda                      | Clotrimazole 10% Cordes® RK | 17D005  | 1       |
| Noweda/Ichthyol-Gesells...  | Clotrimazole 10% Cordes® RK | 12D016  | 3       |
| Sanacorp                    | Clotrimazole 10% Cordes® RK | 16D003  | 1       |
| THC/ Phönix Pharma Eink...  | Clotrimazole 10% Cordes® RK | 128843  | 1       |
| WE 29.11.16 Ichthyol/Sa...  | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Ichthyol                    | Clotrimazole 10% Cordes® RK | 12D016  | 8       |
| Ichthyol                    | Clotrimazole 10% Cordes® RK | 14D009  | 1       |
| Ichthyol                    | Clotrimazole 10% Cordes® RK | 17D005  | 3       |

- 241 057 spectra from 1121 *Apo-Ident* customers from a total of 46 991 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Clotrimazole 10% Cordes® RK* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Clotrimazole 10% Cordes® RK* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 304           | 2              | 241 057       |

The substance/substance group *Clotrimazole 10% Cordes® RK* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.3464 % (> 98.3660 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Clotrimazole 10% Cordes® RK* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------|---------------------------|-----------------------------------|
| Lanolin DAB       | 41.24                     | —                                 |
| Cooling cream DAB | 66.12                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Clotrimazole 10% Cordes® RK* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31101     | 31101                  | 0.00                            | 92.19                              |
| 31806     | 31101                  | 19.23                           | 111.01                             |
| 32950     | 31101                  | 22.54                           | 105.82                             |
| 34483     | 31101                  | 8.07                            | 99.06                              |
| 34837     | 31101                  | 6.82                            | 90.66                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Clove oil                                                        |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30858-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Clove oil; Caryophylli floris aetheroleum

### Special notes

When selecting the *Clove oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Clove oil                 | 6      | 5      | 175    |

## Second-stage model

For differentiation of the substance/substance group *Clove oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Clove oil*:

| Supplier | Substance | Batch      | Sample ID | Spectra | Certificate        |
|----------|-----------|------------|-----------|---------|--------------------|
| Caelo    | Clove oil | 12165905   | 30858     | 40      | 20120627           |
| Caelo    | Clove oil | 13334902   | 31299     | 40      | 20131009           |
| Caelo    | Clove oil | 13334902   | 31409     | 40      | 20131009           |
| Euro OTC | Clove oil | 1210057-01 | 31526     | 60      | AR-14-FG-013260-01 |
| Euro OTC | Clove oil | 1505022    | 31707     | 60      | 0000010252         |
| Euro OTC | Clove oil | 1912007    | 34805     | 40      | 20200203*          |
| Euro OTC | Clove oil | 2007038    | 35119     | 40      | 20201001*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 320 spectra of 7 reference samples from the substance/substance group *Clove oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 619 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 200 spectra of 5 reference samples from the substance/substance group *Clove oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 5 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Clove oil | 15402108 | 33299     | 40      |
| Caelo    | Clove oil | 171965   | 33683     | 40      |
| Euro OTC | Clove oil | 1710036  | 33847     | 40      |
| Euro OTC | Clove oil | 1802017  | 33999     | 40      |
| Euro OTC | Clove oil | 1906025  | 34658     | 40      |

- 91 291 spectra from a total of 2011 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 806 spectra from 243 *Apo-Ident* customers from 180 batches from the substance/substance group *Clove oil*.
- Among them are spectra of independent samples from 174 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance | Batch           | Spectra |
|----------------------------|-----------|-----------------|---------|
| AHD                        | Clove oil | 16131413        | 1       |
| Alliance Health 03.01.2... | Clove oil | 17354209        | 1       |
| Anzag                      | Clove oil | 10272002        | 3       |
| Bombastus                  | Clove oil | 267699          | 1       |
| Bombastus                  | Clove oil | 273027          | 1       |
| Bombastus                  | Clove oil | 265673          | 1       |
| Bombastus                  | Clove oil | 288875          | 2       |
| Bombastus                  | Clove oil | 294000          | 1       |
| Bombastus                  | Clove oil | 300899          | 1       |
| Bombastus                  | Clove oil | 296428          | 1       |
| Bombastus                  | Clove oil | 302858          | 2       |
| Bombastus                  | Clove oil | 295672          | 2       |
| Bombastus                  | Clove oil | 20002025        | 1       |
| Bombastus                  | Clove oil | 1612020C/296428 | 1       |
| Bombastus                  | Clove oil | 302351          | 1       |
| Bombastus                  | Clove oil | 296568          | 4       |
| Bombastus                  | Clove oil | 274829          | 1       |
| Bombastus                  | Clove oil | 308074          | 2       |
| Bombastus                  | Clove oil | 307074          | 1       |
| Bombastus                  | Clove oil | 279262          | 2       |
| Bombastus                  | Clove oil | 60010610        | 1       |
| Bombastus                  | Clove oil | 274495          | 1       |
| Bombastus                  | Clove oil | 300901          | 1       |
| Bombastus                  | Clove oil | 297263          | 2       |
| Bombastus                  | Clove oil | 310830          | 6       |
| Bombastus                  | Clove oil | 18000797        | 6       |
| Bombastus                  | Clove oil | 296979          | 1       |
| Bombastus                  | Clove oil | 308728          | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Clove oil        | 123806012x   | 1              |
| Caelo           | Clove oil        | 15101401     | 1              |
| Caelo           | Clove oil        | 15316103     | 19             |
| Caelo           | Clove oil        | 10272014     | 2              |
| Caelo           | Clove oil        | 10272012     | 3              |
| Caelo           | Clove oil        | 3512M-01969  | 1              |
| Caelo           | Clove oil        | 20021308     | 1              |
| Caelo           | Clove oil        | 11231704     | 3              |
| Caelo           | Clove oil        | 28051313     | 1              |
| Caelo           | Clove oil        | 0-130513-1   | 1              |
| Caelo           | Clove oil        | 18071302     | 1              |
| Caelo           | Clove oil        | 2091306      | 1              |
| Caelo           | Clove oil        | 13106501     | 12             |
| Caelo           | Clove oil        | 16121305     | 1              |
| Caelo           | Clove oil        | 30111304     | 1              |
| Caelo           | Clove oil        | 23041404     | 1              |
| Caelo           | Clove oil        | 23051405     | 1              |
| Caelo           | Clove oil        | 4061404      | 1              |
| Caelo           | Clove oil        | 17051402     | 1              |
| Caelo           | Clove oil        | 13334905     | 8              |
| Caelo           | Clove oil        | 12272004-1-0 | 1              |
| Caelo           | Clove oil        | 2081402      | 1              |
| Caelo           | Clove oil        | 23081402     | 1              |
| Caelo           | Clove oil        | 14243101     | 4              |
| Caelo           | Clove oil        | 14133608     | 9              |
| Caelo           | Clove oil        | 18121411     | 1              |
| Caelo           | Clove oil        | 12011502     | 1              |
| Caelo           | Clove oil        | 15316101     | 2              |
| Caelo           | Clove oil        | 15316012     | 1              |
| Caelo           | Clove oil        | 28051510     | 1              |
| Caelo           | Clove oil        | 15051508     | 1              |
| Caelo           | Clove oil        | 15119304     | 22             |
| Caelo           | Clove oil        | 6071501      | 1              |
| Caelo           | Clove oil        | 14133606     | 1              |
| Caelo           | Clove oil        | 15316403     | 1              |
| Caelo           | Clove oil        | 303337       | 1              |
| Caelo           | Clove oil        | 15402109     | 6              |
| Caelo           | Clove oil        | 15402120     | 1              |
| Caelo           | Clove oil        | 16131412     | 20             |
| Caelo           | Clove oil        | 19081706     | 1              |
| Caelo           | Clove oil        | 1540208      | 1              |
| Caelo           | Clove oil        | 7051806      | 1              |
| Caelo           | Clove oil        | 9308768      | 1              |
| Caelo           | Clove oil        | 17354203     | 10             |
| Caelo           | Clove oil        | 16081806     | 1              |
| Caelo           | Clove oil        | 21111817     | 1              |
| Caelo           | Clove oil        | 181780022    | 1              |
| Caelo           | Clove oil        | 1735403      | 1              |
| Caelo           | Clove oil        | 18178005     | 21             |
| Caelo           | Clove oil        | 19066809     | 1              |
| Caelo           | Clove oil        | 18178002     | 11             |
| Caelo           | Clove oil        | 15402101     | 9              |
| Caelo           | Clove oil        | 11231705     | 1              |
| Caelo           | Clove oil        | 12165904     | 1              |
| Caelo           | Clove oil        | 14243105     | 1              |
| Caelo           | Clove oil        | 15119303     | 2              |
| Caelo           | Clove oil        | 14243104     | 18             |
| Caelo           | Clove oil        | 297263       | 1              |
| Caelo           | Clove oil        | 11K17-No7    | 1              |
| Caelo           | Clove oil        | 14243103     | 12             |

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| Supplier                   | Substance | Batch               | Spectra |
|----------------------------|-----------|---------------------|---------|
| Caelo                      | Clove oil | 13106502            | 5       |
| Caelo                      | Clove oil | 13182301            | 18      |
| Caelo                      | Clove oil | 294000              | 2       |
| Caelo                      | Clove oil | 17354205            | 25      |
| Caelo                      | Clove oil | 11231702            | 8       |
| Caelo                      | Clove oil | 1735405             | 1       |
| Caelo                      | Clove oil | 14133602            | 8       |
| Caelo                      | Clove oil | 19066804            | 16      |
| Caelo                      | Clove oil | 11231703            | 4       |
| Caelo                      | Clove oil | 193031001           | 10      |
| Caelo                      | Clove oil | 1519304             | 1       |
| Caelo                      | Clove oil | 14133603            | 5       |
| Caelo                      | Clove oil | 17354209            | 36      |
| Caelo                      | Clove oil | 16131416            | 1       |
| Caelo                      | Clove oil | 193031006           | 9       |
| Caelo                      | Clove oil | 11231706            | 8       |
| Caelo                      | Clove oil | 15402108            | 30      |
| Caelo                      | Clove oil | 15402102            | 4       |
| Caelo                      | Clove oil | 18178013            | 1       |
| Caelo                      | Clove oil | 1912007-01          | 1       |
| Fagron                     | Clove oil | 18178002            | 1       |
| Caelo                      | Clove oil | 2965568             | 1       |
| Caelo                      | Clove oil | 20003989004         | 1       |
| Caelo                      | Clove oil | 302858              | 2       |
| Caelo                      | Clove oil | 16131401            | 16      |
| Caelo                      | Clove oil | 19066805            | 3       |
| Caelo                      | Clove oil | 193031005           | 3       |
| Caelo                      | Clove oil | 12380601            | 11      |
| Caelo                      | Clove oil | 13182301-3373319042 | 1       |
| Caelo                      | Clove oil | 15316102            | 56      |
| Caelo                      | Clove oil | 402109              | 1       |
| Caelo                      | Clove oil | 154021              | 1       |
| Caelo                      | Clove oil | 1809002-01          | 1       |
| Caelo                      | Clove oil | 3613Q01969          | 1       |
| Caesar & Loretz            | Clove oil | 15402102            | 1       |
| Caesar & Loretz GmbH       | Clove oil | 17354209            | 2       |
| Caesar & Loretz GmbH       | Clove oil | 18178005            | 1       |
| Caesar & Loretz GmbH       | Clove oil | 18178013            | 2       |
| Caesar & Loretz GmbH       | Clove oil | 19066805            | 1       |
| Caesar & Loretz GmbH       | Clove oil | 19066804            | 3       |
| Caesar & Loretz GmbH       | Clove oil | 19066809            | 1       |
| Caesar & Loretz GmbH       | Clove oil | 193031006           | 2       |
| Caesar & Loretz GmbH       | Clove oil | 20003989006         | 1       |
| Caesar & Loretz GmbH/No... | Clove oil | 193031001           | 3       |
| Caesar & Loretz GmbH/Ph... | Clove oil | 19066804            | 3       |
| Caesar & Loretz GmbH/Sa... | Clove oil | 19066805            | 1       |
| Caesar & Loretz GmbH/Sa... | Clove oil | 19066809            | 1       |
| Caesar & Loretz GmbH/Sa... | Clove oil | 20003989002         | 1       |
| Caesar/Noweda              | Clove oil | 12165902            | 1       |
| Caesar/Noweda              | Clove oil | 13334905            | 1       |
| Caesar-Loretz/Fiebig       | Clove oil | 16131413            | 1       |
| Calo                       | Clove oil | 13106501            | 1       |
| Cealo                      | Clove oil | 12165905            | 1       |
| EuRho                      | Clove oil | 1210057-01          | 2       |
| Euro OTC                   | Clove oil | 1505022-01          | 3       |
| Euro OTC                   | Clove oil | 1505022-02          | 1       |
| Euro OTC                   | Clove oil | 171003601           | 1       |
| Euro OTC                   | Clove oil | 1809002-01          | 2       |
| Euro/Gehe                  | Clove oil | 1210057-01          | 1       |
| Euro OTC                   | Clove oil | 1108015-01          | 2       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Euro OTC        | Clove oil        | 1206013-01       | 8              |
| Euro OTC        | Clove oil        | 1206012-01       | 1              |
| Euro OTC        | Clove oil        | 121005701        | 1              |
| Euro OTC        | Clove oil        | 5210A-01969      | 1              |
| Euro OTC        | Clove oil        | 274495           | 1              |
| Fagron          | Clove oil        | 12C27N04         | 3              |
| Fagron          | Clove oil        | 204211969        | 1              |
| Fagron          | Clove oil        | 208211969        | 1              |
| Fagron          | Clove oil        | 1512211969       | 1              |
| Fagron          | Clove oil        | 11L21-N07        | 1              |
| Fagron          | Clove oil        | 12F01-N01        | 5              |
| Fagron          | Clove oil        | 3113Q01969       | 1              |
| Fagron          | Clove oil        | 13L03-B01_294950 | 1              |
| Fagron          | Clove oil        | 13L03-B01        | 3              |
| Fagron          | Clove oil        | 792191           | 1              |
| Fagron          | Clove oil        | 826188           | 1              |
| Fagron          | Clove oil        | 3716Q-01969      | 1              |
| Fagron          | Clove oil        | 11K17-N07        | 3              |
| Fagron          | Clove oil        | 11L21-N07        | 2              |
| Fagron          | Clove oil        | 13L03-B01-292270 | 1              |
| Fagron          | Clove oil        | 12C27-N04        | 2              |
| Fagron          | Clove oil        | 14G11-B04-297218 | 3              |
| Fiebig          | Clove oil        | 18178002         | 1              |
| Fischar/Gehe    | Clove oil        | 13334905         | 1              |
| Gatt-Koller     | Clove oil        | 1900308          | 1              |
| Gehe            | Clove oil        | 13106501         | 1              |
| Gehe            | Clove oil        | 15316103         | 1              |
| Gehe            | Clove oil        | 303338           | 1              |
| GEHE            | Clove oil        | 15402108         | 1              |
| GEHE            | Clove oil        | 16131414         | 1              |
| GEHE            | Clove oil        | 17354205         | 1              |
| Gehe/ EuRho     | Clove oil        | 1906025-01       | 1              |
| Gehe/Lamotte    | Clove oil        | 16131401         | 1              |
| Jenne           | Clove oil        | 17354209         | 1              |
| Jenne           | Clove oil        | 18178005         | 1              |
| Bombastus       | Clove oil        | 18004278         | 2              |
| Kögl            | Clove oil        | 307209160217     | 1              |
| Kögl            | Clove oil        | 428812160317     | 1              |
| Kögl            | Clove oil        | 1700323          | 1              |
| Kögl            | Clove oil        | 102415           | 1              |
| L10             | Clove oil        | 16131413         | 1              |
| Euro OTC        | Clove oil        | 15402101         | 1              |
| L12             | Clove oil        | 15402108         | 2              |
| L12             | Clove oil        | 16131401         | 3              |
| L30             | Clove oil        | 17354205         | 2              |
| L30             | Clove oil        | 17354209         | 1              |
| Nachprüfung     | Clove oil        | 123456           | 1              |
| Noweda          | Clove oil        | 13334902         | 1              |
| Noweda          | Clove oil        | 1031374          | 1              |
| Noweda          | Clove oil        | 15316102         | 1              |
| Noweda          | Clove oil        | 18178005         | 2              |
| Noweda          | Clove oil        | 1066804          | 1              |
| Noweda          | Clove oil        | 19066804         | 1              |
| Noweda          | Clove oil        | 19066809         | 1              |
| Euro OTC        | Clove oil        | 725892           | 1              |
| Phoenix         | Clove oil        | 15316102         | 1              |
| Caelo           | Clove oil        | 16131413         | 34             |
| Phonix          | Clove oil        | 13334905         | 1              |
| phönix          | Clove oil        | 297263           | 1              |
| Phönix          | Clove oil        | 12165905         | 1              |

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| Supplier                  | Substance | Batch          | Spectra |
|---------------------------|-----------|----------------|---------|
| Phönix                    | Clove oil | 15402108       | 1       |
| Phönix                    | Clove oil | 18178013       | 2       |
| Caelo                     | Clove oil | 11231709       | 4       |
| Phönix/Kremer             | Clove oil | 15402108       | 1       |
| Primavera/Direkt          | Clove oil | 389D25         | 1       |
| Primavera/Sanacorp        | Clove oil | 356D25         | 1       |
| Sanacop/Taoasis           | Clove oil | 2352-6320      | 1       |
| Sanacorp                  | Clove oil | 12165905       | 1       |
| Sanacorp                  | Clove oil | 16131401       | 1       |
| Sanacorp                  | Clove oil | 16131410       | 1       |
| Sanacorp                  | Clove oil | 16131414       | 1       |
| Sanacorp                  | Clove oil | 17354204       | 1       |
| Sanacorp                  | Clove oil | 18178005       | 1       |
| Sanacorp EK:17,64 EU...   | Clove oil | 15402109       | 1       |
| Caelo                     | Clove oil | 265130         | 1       |
| Caelo                     | Clove oil | 267700         | 1       |
| Caelo                     | Clove oil | 272735         | 2       |
| Caelo                     | Clove oil | 12165902       | 6       |
| Taoasis                   | Clove oil | 130301-110695  | 2       |
| Taoasis                   | Clove oil | 97204          | 1       |
| Taoasis/ Sanacorp         | Clove oil | B130612-112414 | 1       |
| Vögele                    | Clove oil | 2017107539     | 1       |
| Vögele                    | Clove oil | 2018100124     | 1       |
| Vögele                    | Clove oil | 2018102519     | 1       |
| WE:Sanacorp 13.08.2016... | Clove oil | 15316103       | 1       |
| Wolf                      | Clove oil | 6811           | 1       |
| Bombastus                 | Clove oil |                | 1       |
| Caelo                     | Clove oil | 12165905       | 16      |
| Caelo                     | Clove oil | 13334902       | 14      |
| Caelo                     | Clove oil |                | 1       |
| Euro OTC                  | Clove oil | 1210057-01     | 1       |
| Kögl                      | Clove oil |                | 1       |

- 240 557 spectra from 1121 *Apo-Ident* customers from a total of 46 829 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Clove oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Clove oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 320           | 0              | 63 619        |
| <b>Type B</b> | 0              | 200           | 0              | 91 291        |
| <b>Type C</b> | 0              | 799           | 7              | 240 557       |

The substance/substance group *Clove oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:



|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.1250 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.1315 % (> 98.7593 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Clove oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance | Distance in main model | Distance in second-stage model |
|-----------|------------------------|--------------------------------|
| Eugenol   | 22.53                  | —                              |
| Pine tar  | 208.92                 | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Clove oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30858     | 34805               | 2.95                         | 40.32                           |
| 31299     | 34805               | 4.32                         | 35.35                           |
| 31409     | 35119               | 3.86                         | 34.58                           |
| 31526     | 31526               | 0.00                         | 26.55                           |
| 31707     | 31707               | 0.00                         | 37.41                           |
| 34805     | 34805               | 0.00                         | 37.65                           |
| 35119     | 35119               | 0.00                         | 32.21                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Coal tar spirit SR**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31126-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Coal tar spirit SR; Spiritus picis lithanthracis SR

### Special notes

When selecting the *Coal tar spirit SR* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Coal tar spirit SR        | 4      | 2      | 84     |

## Second-stage model

For differentiation of the substance/substance group *Coal tar spirit SR* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Coal tar spirit SR*:

| Supplier | Substance          | Batch     | Sample ID | Spectra | Certificate |
|----------|--------------------|-----------|-----------|---------|-------------|
| apomix   | Coal tar spirit SR | 04C151014 | 31626     | 60      | 20141022    |
| apomix   | Coal tar spirit SR | 05B170715 | 33466     | 40      | 20150728    |
| Fagron   | Coal tar spirit SR | 13D05-M14 | 31126     | 40      | 1403343     |
| Fagron   | Coal tar spirit SR | 05A290319 | 34595     | 40      | 20190409    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Coal tar spirit SR*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Coal tar spirit SR*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance          | Batch     | Sample ID | Spectra |
|----------|--------------------|-----------|-----------|---------|
| apomix   | Coal tar spirit SR | 01B180220 | 35459     | 40      |
| Fagron   | Coal tar spirit SR | 04B200916 | 33464     | 40      |
| Fagron   | Coal tar spirit SR | 04B200916 | 33465     | 40      |

- 91 371 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 277 spectra from 178 *Apo-Ident* customers from 93 batches from the substance/substance group *Coal tar spirit SR*.
- Among them are spectra of independent samples from 84 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance          | Batch    | Spectra |
|-----------------------|--------------------|----------|---------|
| AHD /apomix           | Coal tar spirit SR | 2B270215 | 2       |
| AHD /apomix           | Coal tar spirit SR | 4B200916 | 1       |
| AHD /apomix           | Coal tar spirit SR | 5C231116 | 1       |
| Anzag                 | Coal tar spirit SR | 2A140219 | 1       |
| Caelo                 | Coal tar spirit SR | 2A161017 | 1       |
| apomix                | Coal tar spirit SR | 3C230508 | 1       |
| apomix                | Coal tar spirit SR | 7633599  | 1       |
| apomix                | Coal tar spirit SR | 5B170715 | 2       |
| apomix                | Coal tar spirit SR | 3B170616 | 1       |
| apomix                | Coal tar spirit SR | 5A231116 | 2       |
| apomix                | Coal tar spirit SR | 5C231116 | 1       |
| apomix                | Coal tar spirit SR | 2A161017 | 1       |
| apomix                | Coal tar spirit SR | 1C300617 | 1       |
| apomix                | Coal tar spirit SR | 1B020718 | 1       |
| apomix                | Coal tar spirit SR | 2C161017 | 1       |
| apomix                | Coal tar spirit SR | 1C020718 | 2       |
| apomix                | Coal tar spirit SR | 3A111018 | 1       |
| apomix                | Coal tar spirit SR | 2C280414 | 1       |
| apomix                | Coal tar spirit SR | 5B290319 | 1       |
| apomix                | Coal tar spirit SR | 9A141019 | 1       |
| Apomix                | Coal tar spirit SR | 5A101210 | 1       |
| Apomix                | Coal tar spirit SR | 1A040112 | 1       |
| Apomix                | Coal tar spirit SR | 5B271112 | 1       |
| Apomix                | Coal tar spirit SR | 1B120214 | 2       |
| Apomix                | Coal tar spirit SR | 2C280414 | 1       |
| Apomix                | Coal tar spirit SR | 3B010415 | 1       |
| Apomix                | Coal tar spirit SR | 1A190216 | 3       |
| Apomix                | Coal tar spirit SR | 5B170715 | 1       |
| Apomix                | Coal tar spirit SR | 5C231116 | 3       |
| Apomix                | Coal tar spirit SR | 2B070316 | 1       |
| Apomix                | Coal tar spirit SR | 2A161017 | 1       |
| Apomix                | Coal tar spirit SR | 3B270613 | 1       |
| Apomix                | Coal tar spirit SR | 3B170616 | 1       |
| Apomix                | Coal tar spirit SR | 3A111018 | 2       |
| Apomix                | Coal tar spirit SR | 1D020718 | 2       |
| Apomix                | Coal tar spirit SR | 1B300617 | 1       |
| Apomix                | Coal tar spirit SR | 8A050619 | 1       |
| Apomix                | Coal tar spirit SR | 1B180220 | 1       |
| ApoMix                | Coal tar spirit SR | 4B221009 | 1       |
| apomix 004            | Coal tar spirit SR | 4A190712 | 1       |
| apomix PKH GmbH Halle | Coal tar spirit SR | 4A170615 | 1       |

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| <b>Supplier</b>            | <b>Substance</b>   | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|--------------------|--------------|----------------|
| Apomix (AMH)               | Coal tar spirit SR | 1C020718     | 1              |
| Apomix (AMH)               | Coal tar spirit SR | 1A180220     | 1              |
| Apomix / Alliance Healt... | Coal tar spirit SR | 5B170715     | 1              |
| Apomix / Alliance Healt... | Coal tar spirit SR | 5B231116     | 1              |
| Apomix / Alliance Healt... | Coal tar spirit SR | 4A170615     | 1              |
| Apomix / Alliance Healt... | Coal tar spirit SR | 1B300617     | 1              |
| apomix / Anzag             | Coal tar spirit SR | 1A140115     | 1              |
| apomix / Gehe              | Coal tar spirit SR | 2A161017     | 1              |
| apomix / Gehe              | Coal tar spirit SR | 1C300617     | 1              |
| Apomix / Gehe              | Coal tar spirit SR | 5C231116     | 1              |
| Apomix / Gehe              | Coal tar spirit SR | 1C020718     | 1              |
| apomix / Noweda            | Coal tar spirit SR | 4A070319     | 1              |
| Apomix / Noweda            | Coal tar spirit SR | 3B111018     | 1              |
| Apomix / Phoenix           | Coal tar spirit SR | 1C020718     | 1              |
| apomix / Phönix            | Coal tar spirit SR | 1C020718     | 1              |
| Apomix / Sanacorp          | Coal tar spirit SR | 2C040413     | 1              |
| Apomix /AllianceHC         | Coal tar spirit SR | 1A140115     | 1              |
| Apomix /Gehe               | Coal tar spirit SR | 5B231116     | 1              |
| Apomix /Gehe               | Coal tar spirit SR | 1c300617     | 1              |
| Apomix /Gehe               | Coal tar spirit SR | 1b020718     | 1              |
| apomix AMH Niemann GmbH... | Coal tar spirit SR | 6A210915     | 1              |
| apomix AMH Niemann GmbH... | Coal tar spirit SR | 1A190216     | 3              |
| apomix AMH Niemann GmbH... | Coal tar spirit SR | 1B300617     | 1              |
| Apomix Anzag               | Coal tar spirit SR | 3B270613     | 1              |
| Apomix Anzag               | Coal tar spirit SR | 6B031213     | 1              |
| Apomix Gehe                | Coal tar spirit SR | 3A170616     | 1              |
| Apomix Gehe                | Coal tar spirit SR | 9A141019     | 1              |
| apomix PKH GmbH            | Coal tar spirit SR | 3A111018     | 1              |
| apomix PKH GmbH Halle      | Coal tar spirit SR | 6B090620     | 1              |
| Apomix PKH Halle           | Coal tar spirit SR | 2A161017     | 2              |
| Apomix Sanacorp            | Coal tar spirit SR | 2C16101      | 1              |
| Apomix Sanacorp            | Coal tar spirit SR | 1B300617     | 1              |
| Apomix Sanacorp            | Coal tar spirit SR | 1D020718     | 1              |
| Apomix Sanacorp            | Coal tar spirit SR | 3B111018     | 1              |
| Apomix Sanacorp            | Coal tar spirit SR | 6A300419     | 1              |
| Apomix/                    | Coal tar spirit SR | 9A141019     | 2              |
| Apomix/                    | Coal tar spirit SR | 1A180220     | 2              |
| Apomix/ Gehe               | Coal tar spirit SR | 5B231116     | 1              |
| Apomix/ Jenne              | Coal tar spirit SR | 3B170616     | 1              |
| Apomix/ Noweda             | Coal tar spirit SR | 6A211212     | 1              |
| apomix/AHD                 | Coal tar spirit SR | 2D161017     | 1              |
| Apomix/Alliance            | Coal tar spirit SR | 2A161017     | 1              |
| apomix/AMH Niemann GmbH... | Coal tar spirit SR | 8A021220     | 1              |
| apomix/Anzag               | Coal tar spirit SR | 4B220813     | 1              |
| Apomix/Anzag               | Coal tar spirit SR | 4A070319     | 1              |
| Apomix/Apomix              | Coal tar spirit SR | 1B180220     | 1              |
| apomix/Gehe                | Coal tar spirit SR | 9A141019     | 1              |
| apomix/Gehe                | Coal tar spirit SR | 8A021220     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 5A231116     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 5B231116     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 6A300419     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 1A180220     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 6B090620     | 1              |
| Apomix/Gehe                | Coal tar spirit SR | 8A021220     | 1              |
| apomix/Gehe 18.04.2018     | Coal tar spirit SR | 2A161017     | 1              |
| Apomix/Ge-HH               | Coal tar spirit SR | 8A050619     | 1              |
| Apomix/Ge-HH               | Coal tar spirit SR | 6B090620     | 2              |
| apomix/Holdermann          | Coal tar spirit SR | 3B170616     | 1              |
| apomix/Holdermann          | Coal tar spirit SR | 1D020718     | 1              |
| Apomix/Kehr                | Coal tar spirit SR | 8B050619     | 1              |

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| Supplier                   | Substance          | Batch               | Spectra |
|----------------------------|--------------------|---------------------|---------|
| apomix/Noweda              | Coal tar spirit SR | 8B050619            | 1       |
| Apomix/Noweda              | Coal tar spirit SR | 4C151014            | 1       |
| Apomix/Noweda              | Coal tar spirit SR | 5B170715            | 1       |
| Apomix/Noweda              | Coal tar spirit SR | 5C231116            | 2       |
| Apomix/Noweda              | Coal tar spirit SR | 1B020718            | 1       |
| Apomix/Noweda              | Coal tar spirit SR | 1C020718            | 1       |
| Apomix/Noweda              | Coal tar spirit SR | 1A180220            | 1       |
| Apomix/Phö                 | Coal tar spirit SR | 4A070319            | 2       |
| Apomix/Phoenix             | Coal tar spirit SR | 1B190216            | 1       |
| Apomix/Phoenix             | Coal tar spirit SR | 2A161017            | 1       |
| apomix/Phönix              | Coal tar spirit SR | 1A170119            | 2       |
| apomix/Phönix              | Coal tar spirit SR | 9A141019            | 1       |
| Apomix/Phönix              | Coal tar spirit SR | 1B020718            | 1       |
| Apomix/Phönix              | Coal tar spirit SR | 8A021220            | 1       |
| Apomix/PKH Halle/Noweda    | Coal tar spirit SR | 1A190216            | 1       |
| Apomix/Sa-HH               | Coal tar spirit SR | 6A300419            | 1       |
| Apomix/Sanacorp            | Coal tar spirit SR | 3A200320            | 1       |
| ApomixNoweda               | Coal tar spirit SR | 1C020718            | 1       |
| Bombastus                  | Coal tar spirit SR | 4C151014            | 1       |
| Caelo                      | Coal tar spirit SR | 3B150507            | 1       |
| Caelo                      | Coal tar spirit SR | 1B020718            | 1       |
| Caelo                      | Coal tar spirit SR | 2a120918            | 1       |
| Caelo                      | Coal tar spirit SR | 5C271112            | 1       |
| Caelo                      | Coal tar spirit SR | 6B031213            | 1       |
| Caelo                      | Coal tar spirit SR | 6A031213            | 1       |
| Caelo                      | Coal tar spirit SR | 2A070316            | 1       |
| Caesar & Loretz GmbH / ... | Coal tar spirit SR | 6A300419            | 1       |
| Euro OTC                   | Coal tar spirit SR | 1414/04-M02         | 1       |
| Fagron                     | Coal tar spirit SR | 11E18-M02           | 1       |
| Fagron                     | Coal tar spirit SR | 14/04-M02           | 1       |
| Fagron                     | Coal tar spirit SR | 2A270215            | 2       |
| Fagron                     | Coal tar spirit SR | 2A070316            | 5       |
| Fagron                     | Coal tar spirit SR | 6b210915            | 1       |
| Fagron                     | Coal tar spirit SR | 170209SKTS02A070316 | 1       |
| Fagron                     | Coal tar spirit SR | 2A140219            | 10      |
| Fagron                     | Coal tar spirit SR | 2a140219            | 1       |
| Fagron                     | Coal tar spirit SR | 14A30-M01           | 2       |
| Fagron                     | Coal tar spirit SR | 9A021220            | 2       |
| Fagron                     | Coal tar spirit SR | 5a290319            | 1       |
| Fagron                     | Coal tar spirit SR | 4B200916            | 4       |
| Fagron                     | Coal tar spirit SR | 1404-M02            | 1       |
| Fagron                     | Coal tar spirit SR | 2A180220            | 6       |
| Fagron                     | Coal tar spirit SR | 14I04-M02           | 1       |
| Fagron                     | Coal tar spirit SR | 6B210915            | 4       |
| Fagron                     | Coal tar spirit SR | 15C11-M09           | 2       |
| Fagron                     | Coal tar spirit SR | 2A120918            | 13      |
| Fagron                     | Coal tar spirit SR | 4b200916            | 1       |
| Fagron                     | Coal tar spirit SR | 3A130614            | 1       |
| Fagron                     | Coal tar spirit SR | 4A270420            | 7       |
| Fagron                     | Coal tar spirit SR | 5C231116            | 1       |
| Fagron                     | Coal tar spirit SR | 7A160519            | 4       |
| Fagron                     | Coal tar spirit SR | 13G16-M01           | 1       |
| Fargon/Noweda              | Coal tar spirit SR | 4A270420            | 1       |
| Fiebig                     | Coal tar spirit SR | 7a160519            | 1       |
| Fragon                     | Coal tar spirit SR | 1B170119            | 1       |
| Gehe                       | Coal tar spirit SR | 6B211212            | 1       |
| Gehe                       | Coal tar spirit SR | 13D05-M14           | 1       |
| GEHE                       | Coal tar spirit SR | 2A120918            | 1       |
| Gehe amax                  | Coal tar spirit SR | 5C231116            | 1       |
| Ichthyol-Gesellschaft      | Coal tar spirit SR | 1B300617            | 1       |

*continued on the next page*

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| Supplier           | Substance          | Batch       | Spectra |
|--------------------|--------------------|-------------|---------|
| Kehr/PKH Halle     | Coal tar spirit SR | 1A170119    | 1       |
| Fagron             | Coal tar spirit SR | 5A290319    | 6       |
| Noweda             | Coal tar spirit SR | 2A140219    | 1       |
| Noweda             | Coal tar spirit SR | 5A290319    | 1       |
| Noweda/Aapomix     | Coal tar spirit SR | 5B170715    | 1       |
| noweda/anzag       | Coal tar spirit SR | 2A140219    | 1       |
| Noweda/Apomix      | Coal tar spirit SR | 2A161017    | 1       |
| Noweda/PKH Halle   | Coal tar spirit SR | 9A141019    | 1       |
| Phoenix            | Coal tar spirit SR | 3B170616    | 1       |
| Phoenix            | Coal tar spirit SR | 2A180220    | 1       |
| Phoenix            | Coal tar spirit SR | 4A270420    | 1       |
| Fagron             | Coal tar spirit SR | 2x05A290319 | 1       |
| Phönix             | Coal tar spirit SR | 1B300617    | 1       |
| Phönix/Apomix      | Coal tar spirit SR | 3B170616    | 1       |
| PKH GmbH           | Coal tar spirit SR | 5B181113    | 1       |
| PKH GmbH / Noweda  | Coal tar spirit SR | 7A160519    | 1       |
| PKH GmbH Apomix    | Coal tar spirit SR | 8A050619    | 1       |
| PKH GmbH/ Gehe     | Coal tar spirit SR | 3C170616    | 1       |
| PKH GmbH/Noweda    | Coal tar spirit SR | 2A070316    | 2       |
| PKH Halle          | Coal tar spirit SR | 4C151014    | 1       |
| PKH Halle          | Coal tar spirit SR | 5B170715    | 1       |
| PKH Halle          | Coal tar spirit SR | 1C300617    | 1       |
| PKH Halle          | Coal tar spirit SR | 3B130614    | 1       |
| PKH Halle          | Coal tar spirit SR | 3B111018    | 1       |
| PKH Halle          | Coal tar spirit SR | 6B090620    | 1       |
| PKH Halle / Anzag  | Coal tar spirit SR | 4C151014    | 1       |
| PKH Halle / Noweda | Coal tar spirit SR | 1A180220    | 1       |
| pkh halle,phönix   | Coal tar spirit SR | 4A170615    | 1       |
| PKH Halle/Phönix   | Coal tar spirit SR | 5B290319    | 1       |
| PKH Halle/Sanacorp | Coal tar spirit SR | 3A010415    | 1       |
| PKH/ Noweda        | Coal tar spirit SR | 1B020718    | 1       |
| Reichelt           | Coal tar spirit SR | 4B200916    | 1       |
| Sanacorp           | Coal tar spirit SR | 4B151014    | 1       |
| Sanacorp / apomix  | Coal tar spirit SR | 5C231116    | 1       |
| Sanacorp / apomix  | Coal tar spirit SR | 1C020718    | 2       |
| Caelo              | Coal tar spirit SR | 3A111018    | 2       |
| Sanacorp/ apomix   | Coal tar spirit SR | 5B231116    | 1       |
| Fagron             | Coal tar spirit SR | 1A180220    | 1       |
| Fagron             | Coal tar spirit SR | 13D05-M14   | 1       |

- 241 086 spectra from 1121 *Apo-Ident* customers from a total of 46 914 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Coal tar spirit SR* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Coal tar spirit SR* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).



|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 180           | 0              | 63 759        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 275           | 2              | 241 086       |

The substance/substance group *Coal tar spirit SR* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.2780 % (> 98.1949 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Coal tar spirit SR* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in main model | Distance in second-stage model |
|--------------|------------------------|--------------------------------|
| Ethanol 96%  | 48.64                  | –                              |
| Dexpanthenol | 82.89                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Coal tar spirit SR* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31126     | 31126               | 0.00                         | 72.06                           |
| 31626     | 31126               | 4.57                         | 72.11                           |
| 33466     | 31126               | 12.59                        | 66.96                           |
| 34595     | 31126               | 10.75                        | 54.57                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at

least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Collodion 4%</b>                                              |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30210-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Collodion 4%

### Special notes

When selecting the *Collodion 4%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Collodion 4%              | 4      | 3      | 38     |

## Second-stage model

For differentiation of the substance/substance group *Collodion 4%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Collodion 4%*:

| Supplier | Substance    | Batch    | Sample ID | Spectra | Certificate |
|----------|--------------|----------|-----------|---------|-------------|
| Caelo    | Collodion 4% | 13325403 | 31186     | 40      | 1402569     |
| Caelo    | Collodion 4% | 13325411 | 31434     | 60      | 20131016    |
| Caelo    | Collodion 4% | 16284201 | 32962     | 40      | 20161107    |
| Caelo    | Collodion 4% | 190996   | 34635     | 40      | 20190418*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Collodion 4%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Collodion 4%*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance    | Batch    | Sample ID | Spectra |
|----------|--------------|----------|-----------|---------|
| Caelo    | Collodion 4% | 16337201 | 33514     | 40      |
| Caelo    | Collodion 4% | 18070501 | 34070     | 40      |
| Caelo    | Collodion 4% | 20001913 | 34998     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 110 spectra from 48 *Apo-Ident* customers from 41 batches from the substance/substance group *Collodion 4%*.
- Among them are spectra of independent samples from 38 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                  | Substance    | Batch       | Spectra |
|---------------------------|--------------|-------------|---------|
| Caelo                     | Collodion 4% | 16284201    | 1       |
| Caelo                     | Collodion 4% | 11336001    | 1       |
| Caelo                     | Collodion 4% | 12035903    | 2       |
| Caelo                     | Collodion 4% | 20021305    | 1       |
| Caelo                     | Collodion 4% | 12035913    | 2       |
| Caelo                     | Collodion 4% | 7031404     | 1       |
| Caelo                     | Collodion 4% | 14079101    | 4       |
| Caelo                     | Collodion 4% | 14079105    | 4       |
| Caelo                     | Collodion 4% | 27041502    | 1       |
| Caelo                     | Collodion 4% | 15199203    | 6       |
| Caelo                     | Collodion 4% | 15199206    | 3       |
| Caelo                     | Collodion 4% | 15199205    | 1       |
| Caelo                     | Collodion 4% | 16337201    | 9       |
| Caelo                     | Collodion 4% | 5011905     | 1       |
| Caelo                     | Collodion 4% | 18221605    | 1       |
| Caelo                     | Collodion 4% | 19099601    | 4       |
| Caelo                     | Collodion 4% | 19289202    | 1       |
| Caelo                     | Collodion 4% | 20001913002 | 3       |
| Caelo                     | Collodion 4% | 90266259    | 1       |
| Caelo                     | Collodion 4% | 15429002    | 3       |
| Caelo                     | Collodion 4% | 13325402    | 3       |
| Caelo                     | Collodion 4% | 13325405    | 3       |
| Caelo                     | Collodion 4% | 12035916    | 5       |
| Caelo                     | Collodion 4% | 18221606    | 2       |
| Caelo                     | Collodion 4% | 18070501    | 9       |
| Caelo                     | Collodion 4% | 1218A-01286 | 1       |
| Caesar & Loretz GmbH      | Collodion 4% | 18070501    | 1       |
| Caesar & Loretz GmbH      | Collodion 4% | 20001913002 | 1       |
| Caesar & Loretz GmbH      | Collodion 4% | 20001913001 | 1       |
| Caesar & Loretz GmbH/J... | Collodion 4% | 18070501    | 2       |
| Caesar & Loretz/AHC       | Collodion 4% | 18221605    | 2       |
| Caesar & Loretz/Sanacorp  | Collodion 4% | 15199206    | 1       |
| Caesar&Loretz GmbH /Anzag | Collodion 4% | 14079105    | 1       |
| Caesar&Loretz,Phoenix     | Collodion 4% | 12035916    | 1       |
| Defektur                  | Collodion 4% | 12035916    | 1       |

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| Supplier    | Substance    | Batch        | Spectra |
|-------------|--------------|--------------|---------|
| Euro OTC    | Collodion 4% | 14079105     | 1       |
| Euro OTC    | Collodion 4% | 16284202     | 1       |
| Euro OTC    | Collodion 4% | 16337201     | 1       |
| Euro OTC    | Collodion 4% | 16337202     | 1       |
| Euro OTC    | Collodion 4% | 15199203     | 1       |
| Gatt-Koller | Collodion 4% | 1803807      | 2       |
| Gatt-Koller | Collodion 4% | 1900117      | 1       |
| Gatt-Koller | Collodion 4% | 1900585      | 2       |
| Gehe        | Collodion 4% | 11336004     | 1       |
| Kögl        | Collodion 4% | 384211160717 | 1       |
| Kögl        | Collodion 4% | 1700246      | 1       |
| Kögl        | Collodion 4% | 20171534     | 1       |
| Kögl        | Collodion 4% | 1701628      | 1       |
| Kögl        | Collodion 4% | 1801945      | 2       |
| Caelo       | Collodion 4% | 13325401     | 1       |
| Caelo       | Collodion 4% | 13325403     | 3       |
| Caelo       | Collodion 4% | 13325411     | 2       |
| Caelo       | Collodion 4% | 16284201     | 3       |

- 241 253 spectra from 1121 *Apo-Ident* customers from a total of 46 965 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Collodion 4%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Collodion 4%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 110           | 0              | 241 253       |

The substance/substance group *Collodion 4%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 100.0000 % (> 94.5455 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Collodion 4%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance   | Distance in<br>main model | Distance in<br>second-stage model |
|-------------|---------------------------|-----------------------------------|
| Lanolin DAB | 146.80                    | –                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Collodion 4%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31186     | 31186                  | 0.00                            | 195.98                             |
| 31434     | 34635                  | 4.76                            | 196.09                             |
| 32962     | 31186                  | 25.73                           | 182.81                             |
| 34635     | 34635                  | 0.00                            | 202.26                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Cooling cream / Cooling cream with rose oil                      |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30889-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Cooling cream / Cooling cream with rose oil; Cooling cream DAB; Cooling ointment DAB 6; Unguentum leniens; Unguentum leniens DAB 6

### Special notes

When selecting the *Cooling cream / Cooling cream with rose oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                   | Type A | Type B | Type C |
|---------------------------------------------|--------|--------|--------|
| Cooling cream / Cooling cream with rose oil | 24     | 105    | 2132   |

## Second-stage model

For differentiation of the substance/substance group *Cooling cream / Cooling cream with rose oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Cooling cream / Cooling cream with rose oil*:

| Supplier      | Substance           | Batch            | Sample ID | Spectra | Certificate |
|---------------|---------------------|------------------|-----------|---------|-------------|
| Bombastus     | Cooling cream DAB   | 275667           | 30890     | 90      | 20121221    |
| Bombastus     | Cooling cream DAB   | 19001417         | 34501     | 40      | 20190318    |
| Caelo         | Cooling cream DAB   | 12364802         | 30889     | 130     | 20121217    |
| Caelo         | Cooling cream DAB   | 13051601         | 31052     | 40      | 20130221    |
| Caelo         | Cooling cream DAB   | 13315101         | 31224     | 70      | 20130925    |
| Caelo         | Cooling cream DAB   | 153277           | 31992     | 60      | 20150930*   |
| Caelo         | Cooling cream DAB   | 172551           | 33779     | 30      | 20170927*   |
| Caelo         | Cooling cream DAB   | 20000333         | 34973     | 40      | 20200218*   |
| Caelo         | Cooling cream DAB   | 20002954         | 35230     | 40      | 20201027*   |
| Caelo         | Cooling cream DAB   | 20002955         | 35231     | 40      | 20201027*   |
| Caelo         | Cooling cream DAB   | 20003302         | 35233     | 40      | 20201120*   |
| Caelo         | Cooling cream DAB   | 20003303         | 35234     | 40      | 20201120*   |
| Caelo         | Cooling cream DAB   | 20003304         | 35235     | 40      | 20201120*   |
| Fagron        | Cooling cream DAB   | 18K05-T08-061775 | 34499     | 40      | 20190125    |
| Fagron        | Cooling cream DAB   | 19C21-T06-065275 | 34500     | 40      | 20190614    |
| Henry Lamotte | Cooling cream DAB   | 5321500          | 30921     | 80      | 20120627    |
| Henry Lamotte | Cooling cream DAB   | 8005213002       | 34502     | 40      | 20190306    |
| Caelo         | Cooling ointment... | 13317001         | 31249     | 40      | 1405180     |
| Caelo         | Cooling ointment... | 153029           | 31922     | 60      | 20150911*   |
| Caelo         | Cooling ointment... | 160897           | 32293     | 40      | 20160405*   |
| Caelo         | Cooling ointment... | 160896           | 32294     | 40      | 20160405*   |
| Caelo         | Cooling ointment... | 162223           | 32506     | 40      | 20160727*   |
| Caelo         | Cooling ointment... | 162224           | 32507     | 40      | 20160727*   |
| Caelo         | Cooling ointment... | 170413           | 33180     | 40      | 20170221*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 1200 spectra of 24 reference samples from the substance/substance group *Cooling cream / Cooling cream with rose oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 24 different batches.
- 62 739 spectra from a total of 1283 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 4560 spectra of 110 reference samples from the substance/substance group *Cooling cream / Cooling cream with rose oil*.
- Among them are spectra of independent samples from 105 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance         | Batch  | Sample ID | Spectra |
|----------|-------------------|--------|-----------|---------|
| Caelo    | Cooling cream DAB | 153281 | 31993     | 60      |
| Caelo    | Cooling cream DAB | 161293 | 32227     | 40      |
| Caelo    | Cooling cream DAB | 161294 | 32229     | 40      |
| Caelo    | Cooling cream DAB | 161295 | 32230     | 40      |
| Caelo    | Cooling cream DAB | 161296 | 32231     | 40      |
| Caelo    | Cooling cream DAB | 161297 | 32232     | 40      |
| Caelo    | Cooling cream DAB | 161341 | 32233     | 40      |
| Caelo    | Cooling cream DAB | 161342 | 32234     | 40      |
| Caelo    | Cooling cream DAB | 161338 | 32235     | 40      |
| Caelo    | Cooling cream DAB | 161718 | 32408     | 40      |
| Caelo    | Cooling cream DAB | 161719 | 32409     | 40      |
| Caelo    | Cooling cream DAB | 161720 | 32411     | 40      |
| Caelo    | Cooling cream DAB | 161725 | 32413     | 40      |
| Caelo    | Cooling cream DAB | 161727 | 32414     | 40      |
| Caelo    | Cooling cream DAB | 161728 | 32415     | 40      |
| Caelo    | Cooling cream DAB | 161729 | 32416     | 40      |
| Caelo    | Cooling cream DAB | 162445 | 32624     | 40      |
| Caelo    | Cooling cream DAB | 162446 | 32625     | 40      |
| Caelo    | Cooling cream DAB | 162447 | 32626     | 40      |
| Caelo    | Cooling cream DAB | 162462 | 32627     | 40      |
| Caelo    | Cooling cream DAB | 162463 | 32628     | 40      |
| Caelo    | Cooling cream DAB | 162464 | 32629     | 40      |
| Caelo    | Cooling cream DAB | 163017 | 32888     | 40      |
| Caelo    | Cooling cream DAB | 163018 | 32889     | 40      |
| Caelo    | Cooling cream DAB | 163019 | 32890     | 40      |
| Caelo    | Cooling cream DAB | 163020 | 32891     | 40      |
| Caelo    | Cooling cream DAB | 163021 | 32892     | 40      |
| Caelo    | Cooling cream DAB | 170004 | 33112     | 40      |
| Caelo    | Cooling cream DAB | 170005 | 33113     | 40      |
| Caelo    | Cooling cream DAB | 163540 | 33164     | 40      |
| Caelo    | Cooling cream DAB | 163544 | 33165     | 40      |
| Caelo    | Cooling cream DAB | 170003 | 33168     | 40      |
| Caelo    | Cooling cream DAB | 170006 | 33169     | 40      |
| Caelo    | Cooling cream DAB | 171251 | 33340     | 40      |
| Caelo    | Cooling cream DAB | 171157 | 33341     | 40      |
| Caelo    | Cooling cream DAB | 171250 | 33342     | 40      |
| Caelo    | Cooling cream DAB | 171159 | 33343     | 40      |
| Caelo    | Cooling cream DAB | 171249 | 33344     | 40      |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Sample ID</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|------------------|----------------|
| Caelo           | Cooling cream DAB | 171160       | 33345            | 40             |
| Caelo           | Cooling cream DAB | 171227       | 33346            | 40             |
| Caelo           | Cooling cream DAB | 171228       | 33347            | 40             |
| Caelo           | Cooling cream DAB | 171156       | 33348            | 40             |
| Caelo           | Cooling cream DAB | 171248       | 33349            | 40             |
| Caelo           | Cooling cream DAB | 170748       | 33404            | 40             |
| Caelo           | Cooling cream DAB | 171567       | 33563            | 40             |
| Caelo           | Cooling cream DAB | 171570       | 33564            | 40             |
| Caelo           | Cooling cream DAB | 171571       | 33565            | 40             |
| Caelo           | Cooling cream DAB | 171572       | 33566            | 40             |
| Caelo           | Cooling cream DAB | 171573       | 33567            | 40             |
| Caelo           | Cooling cream DAB | 171897       | 33568            | 40             |
| Caelo           | Cooling cream DAB | 172536       | 33771            | 40             |
| Caelo           | Cooling cream DAB | 172539       | 33773            | 40             |
| Caelo           | Cooling cream DAB | 172540       | 33774            | 40             |
| Caelo           | Cooling cream DAB | 172541       | 33775            | 40             |
| Caelo           | Cooling cream DAB | 172544       | 33776            | 40             |
| Caelo           | Cooling cream DAB | 172545       | 33777            | 40             |
| Caelo           | Cooling cream DAB | 172546       | 33778            | 40             |
| Caelo           | Cooling cream DAB | 172548       | 33780            | 40             |
| Caelo           | Cooling cream DAB | 172549       | 33781            | 40             |
| Caelo           | Cooling cream DAB | 172550       | 33782            | 40             |
| Caelo           | Cooling cream DAB | 180424       | 34150            | 40             |
| Caelo           | Cooling cream DAB | 182729       | 34354            | 40             |
| Caelo           | Cooling cream DAB | 191501       | 34786            | 40             |
| Caelo           | Cooling cream DAB | 192370       | 34787            | 40             |
| Caelo           | Cooling cream DAB | 20001719     | 34974            | 40             |
| Caelo           | Cooling cream DAB | 20002951     | 35171            | 40             |
| Caelo           | Cooling cream DAB | 20002950     | 35227            | 40             |
| Caelo           | Cooling cream DAB | 20002952     | 35228            | 40             |
| Caelo           | Cooling cream DAB | 20002953     | 35229            | 40             |
| Caelo           | Cooling cream DAB | 20002956     | 35232            | 40             |
| Caelo           | Cooling cream DAB | 20003305     | 35236            | 40             |
| Caelo           | Cooling cream DAB | 21000659     | 35347            | 40             |
| Caelo           | Cooling cream DAB | 21000660     | 35348            | 40             |
| Caelo           | Cooling cream DAB | 21000661     | 35349            | 40             |
| Caelo           | Cooling cream DAB | 21000662     | 35350            | 40             |
| Caelo           | Cooling cream DAB | 21000663     | 35351            | 40             |
| Caelo           | Cooling cream DAB | 21000664     | 35352            | 40             |
| Caelo           | Cooling cream DAB | 21000665     | 35353            | 40             |
| Caelo           | Cooling cream DAB | 21000666     | 35354            | 40             |
| Caelo           | Cooling cream DAB | 21000667     | 35355            | 40             |
| Caelo           | Cooling cream DAB | 21000668     | 35356            | 40             |
| Caelo           | Cooling cream DAB | 21001230     | 35357            | 40             |
| Caelo           | Cooling cream DAB | 21001231     | 35358            | 40             |
| Caelo           | Cooling cream DAB | 21001232     | 35359            | 40             |
| Caelo           | Cooling cream DAB | 21001233     | 35360            | 40             |
| Caelo           | Cooling cream DAB | 21001234     | 35361            | 40             |
| Caelo           | Cooling cream DAB | 21001854     | 35668            | 50             |
| Caelo           | Cooling cream DAB | 21001855     | 35669            | 50             |
| Caelo           | Cooling cream DAB | 21001859     | 35670            | 50             |
| Caelo           | Cooling cream DAB | 21001856     | 35671            | 50             |
| Caelo           | Cooling cream DAB | 21001857     | 35672            | 50             |
| Caelo           | Cooling cream DAB | 21001858     | 35673            | 50             |
| Caelo           | Cooling cream DAB | 21002376     | 35674            | 50             |
| Caelo           | Cooling cream DAB | 21002377     | 35675            | 50             |
| Caelo           | Cooling cream DAB | 21002378     | 35676            | 50             |
| Caelo           | Cooling cream DAB | 21002379     | 35677            | 50             |
| Caelo           | Cooling cream DAB | 21002380     | 35678            | 50             |
| Caelo           | Cooling cream DAB | 21002381     | 35679            | 50             |

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| Supplier | Substance              | Batch    | Sample ID | Spectra |
|----------|------------------------|----------|-----------|---------|
| Caelo    | Cooling cream DAB      | 21002382 | 35680     | 50      |
| Caelo    | Cooling cream DAB      | 21002383 | 35681     | 50      |
| Caelo    | Cooling ointment DAB 6 | 12306001 | 31037     | 40      |
| Caelo    | Cooling ointment DAB 6 | 180218   | 34142     | 40      |
| Caelo    | Cooling ointment DAB 6 | 181897   | 34265     | 40      |
| Caelo    | Cooling ointment DAB 6 | 19000801 | 34982     | 40      |
| Caelo    | Cooling ointment DAB 6 | 20003917 | 35323     | 40      |
| Caelo    | Cooling cream DAB      | 161293   | 32228     | 40      |
| Caelo    | Cooling cream DAB      | 161719   | 32410     | 40      |
| Caelo    | Cooling cream DAB      | 161720   | 32412     | 40      |
| Caelo    | Cooling cream DAB      | 170004   | 33166     | 40      |
| Caelo    | Cooling cream DAB      | 170005   | 33167     | 40      |

- 86 931 spectra from a total of 1911 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 9412 spectra from 901 *Apo-Ident* customers from 1811 batches from the substance/substance group *Cooling cream / Cooling cream with rose oil*.
- Among them are spectra of independent samples from 1787 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier      | Substance         | Batch      | Spectra |
|---------------|-------------------|------------|---------|
| Caelo         | Cooling cream DAB | 1289501    | 1       |
| /Phoenix      | Cooling cream DAB | 17189701   | 1       |
| A.H.D.        | Cooling cream DAB | 13226301   | 1       |
| aelo/Noweda   | Cooling cream DAB | 18219301   | 2       |
| AEP           | Cooling cream DAB | 18004433   | 1       |
| AEP           | Cooling cream DAB | 19074101   | 1       |
| AEP           | Cooling cream DAB | 19074401   | 1       |
| Bombastus     | Cooling cream DAB | 20004659   | 3       |
| AHC/Lamotte   | Cooling cream DAB | 8003478009 | 1       |
| AHD           | Cooling cream DAB | 16354401   | 2       |
| AHD           | Cooling cream DAB | 17189701   | 1       |
| AHD           | Cooling cream DAB | 18219301   | 1       |
| AHD           | Cooling cream DAB | 18272801   | 1       |
| AHD           | Cooling cream DAB | 19001402   | 1       |
| AHD           | Cooling cream DAB | 19073803   | 1       |
| AHD           | Cooling cream DAB | 19073701   | 1       |
| AHD           | Cooling cream DAB | 1000010941 | 4       |
| Euro OTC      | Cooling cream DAB | 16354401   | 1       |
| AHD, 08.11.13 | Cooling cream DAB | 13225801   | 1       |
| Bombastus     | Cooling cream DAB | 284303     | 3       |
| Bombastus     | Cooling cream DAB | 287542     | 1       |
| AHDFiebig     | Cooling cream DAB | 17075101   | 1       |
| AHL           | Cooling cream DAB | 302385     | 1       |
| AHL           | Cooling cream DAB | 8003158005 | 2       |
| Caelo         | Cooling cream DAB | 310004     | 1       |
| AHL/Henry     | Cooling cream DAB | 8003478008 | 1       |

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| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| AHL/Henry                  | Cooling cream DAB | 61360            | 1       |
| AlH                        | Cooling cream DAB | 305131           | 1       |
| Caelo                      | Cooling cream DAB | 2000126001       | 1       |
| Alliance                   | Cooling cream DAB | 15066601         | 1       |
| Alliance                   | Cooling cream DAB | 17189701         | 1       |
| Alliance                   | Cooling cream DAB | 17298401         | 2       |
| Alliance                   | Cooling cream DAB | 20001259001      | 1       |
| Alliance H.                | Cooling cream DAB | 15434401         | 1       |
| Alliance Health Care       | Cooling cream DAB | 20000331001      | 1       |
| alliance healthcare        | Cooling cream DAB | 18006325         | 1       |
| Alliance Healthcare        | Cooling cream DAB | 277534           | 1       |
| Alliance Healthcare        | Cooling cream DAB | 277368           | 1       |
| Alliance Healthcare        | Cooling cream DAB | 277366           | 1       |
| Alliance Healthcare        | Cooling cream DAB | 278444           | 1       |
| Alliance Healthcare        | Cooling cream DAB | 278523           | 1       |
| Alliance Healthcare        | Cooling cream DAB | 18219041         | 1       |
| Alliance Healthcare        | Cooling cream DAB | 19073801         | 2       |
| Alliance Healthcare        | Cooling cream DAB | 19237601         | 2       |
| Allianz Healthcare 05.1... | Cooling cream DAB | 14271101         | 1       |
| Anzag                      | Cooling cream DAB | 5253700          | 1       |
| Anzag                      | Cooling cream DAB | 272348           | 1       |
| Anzag                      | Cooling cream DAB | 272347           | 1       |
| Anzag                      | Cooling cream DAB | 274042           | 1       |
| Anzag                      | Cooling cream DAB | 60082802         | 1       |
| Anzag                      | Cooling cream DAB | 274911           | 1       |
| Anzag                      | Cooling cream DAB | 13175101         | 1       |
| Anzag                      | Cooling cream DAB | 6002062002       | 1       |
| Anzag                      | Cooling cream DAB | 18003752         | 2       |
| ANZAG                      | Cooling cream DAB | 273504           | 1       |
| Euro OTC                   | Cooling cream DAB | 19237101         | 1       |
| Anzag 05.02.13 ek: 9,38EUR | Cooling cream DAB | 12312801         | 1       |
| Anzag 07.05.13 ek: 9,38EUR | Cooling cream DAB | 13059701         | 1       |
| Anzag 21.02.2013           | Cooling cream DAB | 12291901         | 1       |
| Anzag 25.10.12             | Cooling cream DAB | 272484           | 1       |
| Anzag 27.12.12 ek:9,09     | Cooling cream DAB | 12312301         | 1       |
| Anzag 31.10.12 ek:9.12EUR  | Cooling cream DAB | 12187301         | 1       |
| Bombastus                  | Cooling cream DAB | 279680           | 2       |
| Bombastus                  | Cooling cream DAB | 279681           | 1       |
| Caelo                      | Cooling cream DAB | 13004402         | 4       |
| Bombastus                  | Cooling cream DAB | 271623           | 1       |
| Bombastus                  | Cooling cream DAB | 274080           | 2       |
| Caelo                      | Cooling cream DAB | 1097071          | 2       |
| Anzag/Lamotte              | Cooling cream DAB | 5407300          | 1       |
| apomix                     | Cooling cream DAB | 16f13-to8-034247 | 1       |
| APOMIX                     | Cooling cream DAB | 3B150420         | 1       |
| apomix Fiebig              | Cooling cream DAB | 299362           | 1       |
| Audor Pharma               | Cooling cream DAB | 180003171        | 1       |
| Audor Pharma               | Cooling cream DAB | 19074201         | 1       |
| Bambustus/Gehe             | Cooling cream DAB | 18002085         | 1       |
| Beiersdorf / E             | Cooling cream DAB | 290486           | 1       |
| Berkel AHK                 | Cooling cream DAB | 13226301         | 3       |
| Berkel AHK                 | Cooling cream DAB | 14268101         | 1       |
| Bionorica Ethics           | Cooling cream DAB | 17001966         | 1       |
| Bionorica SE               | Cooling cream DAB | 17330801         | 1       |
| Bomastus/Phönix            | Cooling cream DAB | 304582           | 1       |
| Bomastus-Werke AG          | Cooling cream DAB | 18005195         | 1       |
| bomb                       | Cooling cream DAB | 296316           | 1       |
| bomb/alliance              | Cooling cream DAB | 307924           | 2       |
| bomb/phönix                | Cooling cream DAB | 18000328         | 2       |
| Bomb/Phönix                | Cooling cream DAB | 19001401         | 1       |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bomba/AHD       | Cooling cream DAB | 277269       | 1              |
| Bomba/AHD       | Cooling cream DAB | 281031       | 2              |
| Bomba/AHD       | Cooling cream DAB | 281920       | 1              |
| Bomba/AHD       | Cooling cream DAB | 283115       | 1              |
| bombast         | Cooling cream DAB | 17001964     | 1              |
| Bombastus       | Cooling cream DAB | 303155       | 1              |
| Bombastus       | Cooling cream DAB | 17001969     | 4              |
| Bombastus       | Cooling cream DAB | 265549       | 1              |
| Bombastus       | Cooling cream DAB | 266717       | 1              |
| Bombastus       | Cooling cream DAB | 2405212541   | 1              |
| Bombastus       | Cooling cream DAB | 92086        | 1              |
| Bombastus       | Cooling cream DAB | 22487        | 1              |
| Bombastus       | Cooling cream DAB | 269092       | 1              |
| Bombastus       | Cooling cream DAB | 1109212541   | 1              |
| Bombastus       | Cooling cream DAB | 271624       | 1              |
| Bombastus       | Cooling cream DAB | 272564       | 2              |
| Bombastus       | Cooling cream DAB | 274042       | 1              |
| Bombastus       | Cooling cream DAB | 273503       | 1              |
| Bombastus       | Cooling cream DAB | 273444       | 1              |
| Bombastus       | Cooling cream DAB | 2112212541   | 1              |
| Bombastus       | Cooling cream DAB | 274044       | 2              |
| Bombastus       | Cooling cream DAB | 274791       | 2              |
| Bombastus       | Cooling cream DAB | 275663       | 1              |
| Bombastus       | Cooling cream DAB | 272353       | 1              |
| Bombastus       | Cooling cream DAB | 276281       | 1              |
| Bombastus       | Cooling cream DAB | 275664       | 2              |
| Bombastus       | Cooling cream DAB | 276288       | 1              |
| Bombastus       | Cooling cream DAB | 277534       | 2              |
| Bombastus       | Cooling cream DAB | 273443       | 1              |
| Bombastus       | Cooling cream DAB | 277371       | 1              |
| Bombastus       | Cooling cream DAB | 277525       | 2              |
| Bombastus       | Cooling cream DAB | 278439       | 2              |
| Bombastus       | Cooling cream DAB | 2413Q02541   | 1              |
| Bombastus       | Cooling cream DAB | 278438       | 1              |
| Bombastus       | Cooling cream DAB | 278342       | 1              |
| Bombastus       | Cooling cream DAB | 278674       | 1              |
| Bombastus       | Cooling cream DAB | 276282       | 1              |
| Bombastus       | Cooling cream DAB | 2713Q2541    | 1              |
| Bombastus       | Cooling cream DAB | 279765       | 2              |
| Bombastus       | Cooling cream DAB | 276284       | 1              |
| Bombastus       | Cooling cream DAB | 278441       | 1              |
| Bombastus       | Cooling cream DAB | 278440       | 2              |
| Bombastus       | Cooling cream DAB | 275669       | 1              |
| Bombastus       | Cooling cream DAB | 278525       | 3              |
| Bombastus       | Cooling cream DAB | 279755       | 3              |
| Bombastus       | Cooling cream DAB | 279682       | 1              |
| Bombastus       | Cooling cream DAB | 281030       | 1              |
| Bombastus       | Cooling cream DAB | 281820       | 1              |
| Bombastus       | Cooling cream DAB | 272480       | 1              |
| Bombastus       | Cooling cream DAB | 77309        | 1              |
| Bombastus       | Cooling cream DAB | 281134       | 1              |
| Bombastus       | Cooling cream DAB | 283118       | 1              |
| Bombastus       | Cooling cream DAB | 281919       | 1              |
| Bombastus       | Cooling cream DAB | 283117       | 1              |
| Bombastus       | Cooling cream DAB | 281138       | 1              |
| Bombastus       | Cooling cream DAB | 284265       | 1              |
| Bombastus       | Cooling cream DAB | 284302       | 2              |
| Bombastus       | Cooling cream DAB | 283051       | 1              |
| Bombastus       | Cooling cream DAB | 284264       | 2              |
| Bombastus       | Cooling cream DAB | 285069       | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>   | <b>Spectra</b> |
|-----------------|-------------------|----------------|----------------|
| Bombastus       | Cooling cream DAB | 285499         | 2              |
| Bombastus       | Cooling cream DAB | 285634         | 2              |
| Bombastus       | Cooling cream DAB | 285063         | 1              |
| Bombastus       | Cooling cream DAB | 285639         | 1              |
| Bombastus       | Cooling cream DAB | 285503         | 1              |
| Bombastus       | Cooling cream DAB | 285644         | 1              |
| Bombastus       | Cooling cream DAB | 287485         | 2              |
| Bombastus       | Cooling cream DAB | 286650         | 1              |
| Bombastus       | Cooling cream DAB | 285635         | 2              |
| Bombastus       | Cooling cream DAB | 287539         | 1              |
| Bombastus       | Cooling cream DAB | 286661         | 1              |
| Bombastus       | Cooling cream DAB | 288152         | 3              |
| Bombastus       | Cooling cream DAB | 289188         | 1              |
| Bombastus       | Cooling cream DAB | 289191         | 3              |
| Bombastus       | Cooling cream DAB | 287544         | 2              |
| Bombastus       | Cooling cream DAB | 289251         | 1              |
| Bombastus       | Cooling cream DAB | 289260         | 4              |
| Bombastus       | Cooling cream DAB | 289265         | 1              |
| Bombastus       | Cooling cream DAB | 288112         | 2              |
| Bombastus       | Cooling cream DAB | 289256         | 1              |
| Bombastus       | Cooling cream DAB | 286567         | 1              |
| Bombastus       | Cooling cream DAB | 292107         | 1              |
| Bombastus       | Cooling cream DAB | 290382         | 1              |
| Bombastus       | Cooling cream DAB | 292932         | 1              |
| Bombastus       | Cooling cream DAB | 297104         | 1              |
| Bombastus       | Cooling cream DAB | 297213         | 1              |
| Bombastus       | Cooling cream DAB | 288107         | 1              |
| Bombastus       | Cooling cream DAB | 291619         | 1              |
| Bombastus       | Cooling cream DAB | 291620         | 2              |
| Bombastus       | Cooling cream DAB | 291552         | 1              |
| Bombastus       | Cooling cream DAB | 292280         | 1              |
| Bombastus       | Cooling cream DAB | 292997         | 4              |
| Bombastus       | Cooling cream DAB | 293616         | 2              |
| Bombastus       | Cooling cream DAB | 292930         | 2              |
| Bombastus       | Cooling cream DAB | 293621         | 4              |
| Bombastus       | Cooling cream DAB | 295019         | 3              |
| Bombastus       | Cooling cream DAB | 29072015A      | 1              |
| Bombastus       | Cooling cream DAB | 6861938        | 1              |
| Bombastus       | Cooling cream DAB | 293750         | 1              |
| Bombastus       | Cooling cream DAB | 295756         | 1              |
| Bombastus       | Cooling cream DAB | 295762         | 1              |
| Bombastus       | Cooling cream DAB | 296314         | 1              |
| Bombastus       | Cooling cream DAB | 295190         | 1              |
| Bombastus       | Cooling cream DAB | 297097         | 2              |
| Bombastus       | Cooling cream DAB | 298111         | 1              |
| Bombastus       | Cooling cream DAB | 298121         | 3              |
| Bombastus       | Cooling cream DAB | 295124         | 1              |
| Bombastus       | Cooling cream DAB | 298881         | 3              |
| Bombastus       | Cooling cream DAB | 160321(intern) | 1              |
| Bombastus       | Cooling cream DAB | 299358         | 1              |
| Bombastus       | Cooling cream DAB | 299354         | 1              |
| Bombastus       | Cooling cream DAB | 299970         | 1              |
| Bombastus       | Cooling cream DAB | 300717         | 1              |
| Bombastus       | Cooling cream DAB | 299966         | 1              |
| Bombastus       | Cooling cream DAB | 300721         | 2              |
| Bombastus       | Cooling cream DAB | 299355         | 1              |
| Bombastus       | Cooling cream DAB | 300722         | 1              |
| Bombastus       | Cooling cream DAB | 299352         | 1              |
| Bombastus       | Cooling cream DAB | 299351         | 2              |
| Bombastus       | Cooling cream DAB | 301700         | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 301669       | 1              |
| Bombastus       | Cooling cream DAB | 299978       | 1              |
| Bombastus       | Cooling cream DAB | 300796       | 1              |
| Bombastus       | Cooling cream DAB | 301693       | 1              |
| Bombastus       | Cooling cream DAB | 301673       | 1              |
| Bombastus       | Cooling cream DAB | 303151       | 1              |
| Bombastus       | Cooling cream DAB | 301699       | 2              |
| Bombastus       | Cooling cream DAB | 302382       | 1              |
| Bombastus       | Cooling cream DAB | 302370       | 2              |
| Bombastus       | Cooling cream DAB | 303163       | 2              |
| Bombastus       | Cooling cream DAB | 301702       | 1              |
| Bombastus       | Cooling cream DAB | 303153       | 1              |
| Bombastus       | Cooling cream DAB | 304582       | 4              |
| Bombastus       | Cooling cream DAB | 301670       | 1              |
| Bombastus       | Cooling cream DAB | 301692       | 1              |
| Bombastus       | Cooling cream DAB | 302371       | 1              |
| Bombastus       | Cooling cream DAB | 304580       | 1              |
| Bombastus       | Cooling cream DAB | 303619       | 1              |
| Bombastus       | Cooling cream DAB | 303623       | 1              |
| Bombastus       | Cooling cream DAB | 303622       | 1              |
| Bombastus       | Cooling cream DAB | 305021       | 3              |
| Bombastus       | Cooling cream DAB | 305131       | 3              |
| Bombastus       | Cooling cream DAB | 305129       | 3              |
| Bombastus       | Cooling cream DAB | 306937       | 2              |
| Bombastus       | Cooling cream DAB | 306932       | 5              |
| Bombastus       | Cooling cream DAB | 305957       | 3              |
| Bombastus       | Cooling cream DAB | 304579       | 1              |
| Bombastus       | Cooling cream DAB | 306529       | 3              |
| Bombastus       | Cooling cream DAB | 306939       | 1              |
| Bombastus       | Cooling cream DAB | 305949       | 2              |
| Bombastus       | Cooling cream DAB | 307932       | 4              |
| Bombastus       | Cooling cream DAB | 306930       | 3              |
| Bombastus       | Cooling cream DAB | 307348       | 1              |
| Bombastus       | Cooling cream DAB | 307916       | 2              |
| Bombastus       | Cooling cream DAB | 306944       | 3              |
| Bombastus       | Cooling cream DAB | 305959       | 2              |
| Bombastus       | Cooling cream DAB | 303159       | 1              |
| Bombastus       | Cooling cream DAB | 308710       | 1              |
| Bombastus       | Cooling cream DAB | 305952       | 2              |
| Bombastus       | Cooling cream DAB | 308489       | 2              |
| Bombastus       | Cooling cream DAB | 307357       | 1              |
| Bombastus       | Cooling cream DAB | 308725       | 3              |
| Bombastus       | Cooling cream DAB | 307923       | 1              |
| Bombastus       | Cooling cream DAB | 305955       | 1              |
| Bombastus       | Cooling cream DAB | 308720       | 1              |
| Bombastus       | Cooling cream DAB | 8002875004   | 1              |
| Bombastus       | Cooling cream DAB | 310004       | 1              |
| Bombastus       | Cooling cream DAB | 308714       | 1              |
| Bombastus       | Cooling cream DAB | 310002       | 2              |
| Bombastus       | Cooling cream DAB | 309999       | 6              |
| Bombastus       | Cooling cream DAB | 310975       | 1              |
| Bombastus       | Cooling cream DAB | 308713       | 1              |
| Bombastus       | Cooling cream DAB | 307914       | 1              |
| Bombastus       | Cooling cream DAB | 17000221     | 2              |
| Bombastus       | Cooling cream DAB | 309995       | 1              |
| Bombastus       | Cooling cream DAB | 17000223     | 1              |
| Bombastus       | Cooling cream DAB | 17000976     | 3              |
| Bombastus       | Cooling cream DAB | 17000225     | 1              |
| Bombastus       | Cooling cream DAB | 17000222     | 4              |
| Bombastus       | Cooling cream DAB | 17000228     | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 17000972     | 1              |
| Bombastus       | Cooling cream DAB | 17001966     | 2              |
| Bombastus       | Cooling cream DAB | 17001964     | 3              |
| Bombastus       | Cooling cream DAB | 17000971     | 2              |
| Bombastus       | Cooling cream DAB | 18000333     | 2              |
| Bombastus       | Cooling cream DAB | 310972       | 1              |
| Bombastus       | Cooling cream DAB | 18000334     | 1              |
| Bombastus       | Cooling cream DAB | 18002087     | 2              |
| Bombastus       | Cooling cream DAB | 18002094     | 8              |
| Bombastus       | Cooling cream DAB | 18001079     | 3              |
| Bombastus       | Cooling cream DAB | 18002096     | 3              |
| Bombastus       | Cooling cream DAB | 18002088     | 3              |
| Bombastus       | Cooling cream DAB | 18000336     | 2              |
| Bombastus       | Cooling cream DAB | 18001078     | 3              |
| Bombastus       | Cooling cream DAB | 18002092     | 1              |
| Bombastus       | Cooling cream DAB | 18003174     | 6              |
| Bombastus       | Cooling cream DAB | 18003177     | 3              |
| Bombastus       | Cooling cream DAB | 18003744     | 1              |
| Bombastus       | Cooling cream DAB | 18004434     | 6              |
| Bombastus       | Cooling cream DAB | 18003172     | 1              |
| Bombastus       | Cooling cream DAB | 18004426     | 5              |
| Bombastus       | Cooling cream DAB | 18004428     | 1              |
| Bombastus       | Cooling cream DAB | 18003173     | 3              |
| Bombastus       | Cooling cream DAB | 18002090     | 2              |
| Bombastus       | Cooling cream DAB | 18004433     | 6              |
| Bombastus       | Cooling cream DAB | 18005606     | 3              |
| Bombastus       | Cooling cream DAB | 18005603     | 5              |
| Bombastus       | Cooling cream DAB | 18005608     | 5              |
| Bombastus       | Cooling cream DAB | 18004430     | 2              |
| Bombastus       | Cooling cream DAB | 18006325     | 3              |
| Bombastus       | Cooling cream DAB | 18006314     | 1              |
| Bombastus       | Cooling cream DAB | 19000763     | 4              |
| Bombastus       | Cooling cream DAB | 18005601     | 2              |
| Bombastus       | Cooling cream DAB | 19001406     | 3              |
| Bombastus       | Cooling cream DAB | 19001408     | 1              |
| Bombastus       | Cooling cream DAB | 19002517     | 3              |
| Bombastus       | Cooling cream DAB | 19002514     | 5              |
| Bombastus       | Cooling cream DAB | 19003469     | 3              |
| Bombastus       | Cooling cream DAB | 19003478     | 1              |
| Bombastus       | Cooling cream DAB | 19004553     | 5              |
| Bombastus       | Cooling cream DAB | 19004546     | 2              |
| Bombastus       | Cooling cream DAB | 20000247     | 10             |
| Bombastus       | Cooling cream DAB | 20001614     | 3              |
| Bombastus       | Cooling cream DAB | 20002271     | 3              |
| Bombastus       | Cooling cream DAB | 20004640     | 1              |
| Bombastus       | Cooling cream DAB | 20002261     | 1              |
| Bombastus       | Cooling cream DAB | 20004642     | 2              |
| Bombastus       | Cooling cream DAB | 20004647     | 1              |
| Bombastus       | Cooling cream DAB | 21000734     | 2              |
| Bombastus       | Cooling cream DAB | 310986       | 5              |
| Bombastus       | Cooling cream DAB | 18000337     | 6              |
| Bombastus       | Cooling cream DAB | 18001082     | 5              |
| Bombastus       | Cooling cream DAB | 18002309     | 3              |
| Bombastus       | Cooling cream DAB | 19001414     | 3              |
| Bombastus       | Cooling cream DAB | 19002521     | 3              |
| Bombastus       | Cooling cream DAB | 270310       | 1              |
| Bombastus       | Cooling cream DAB | 275665       | 1              |
| Bombastus       | Cooling cream DAB | 307356       | 1              |
| Bombastus       | Cooling cream DAB | 17000226     | 1              |
| Bombastus       | Cooling cream DAB | 18006324     | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 19004567     | 4              |
| Bombastus       | Cooling cream DAB | 20000223     | 1              |
| Bombastus       | Cooling cream DAB | 18001076     | 1              |
| Bombastus       | Cooling cream DAB | 310989       | 4              |
| Bombastus       | Cooling cream DAB | 281824       | 1              |
| Bombastus       | Cooling cream DAB | 17000977     | 3              |
| Bombastus       | Cooling cream DAB | 19003468     | 2              |
| Bombastus       | Cooling cream DAB | 285502       | 2              |
| Bombastus       | Cooling cream DAB | 285065       | 1              |
| Bombastus       | Cooling cream DAB | 290483       | 2              |
| Bombastus       | Cooling cream DAB | 291618       | 1              |
| Bombastus       | Cooling cream DAB | 300720       | 3              |
| Bombastus       | Cooling cream DAB | 305956       | 1              |
| Bombastus       | Cooling cream DAB | 272571       | 1              |
| Bombastus       | Cooling cream DAB | 60082801     | 5              |
| Bombastus       | Cooling cream DAB | 297202972505 | 1              |
| Bombastus       | Cooling cream DAB | 300730       | 3              |
| Bombastus       | Cooling cream DAB | 20000243     | 4              |
| Bombastus       | Cooling cream DAB | 19004540     | 1              |
| Bombastus       | Cooling cream DAB | 20001617     | 2              |
| Bombastus       | Cooling cream DAB | 18005207     | 8              |
| Bombastus       | Cooling cream DAB | 19004566     | 4              |
| Bombastus       | Cooling cream DAB | 289189       | 1              |
| Bombastus       | Cooling cream DAB | 295185       | 1              |
| Bombastus       | Cooling cream DAB | 304591       | 1              |
| Bombastus       | Cooling cream DAB | 18005201     | 3              |
| Bombastus       | Cooling cream DAB | 290487       | 1              |
| Bombastus       | Cooling cream DAB | 281140       | 1              |
| Bombastus       | Cooling cream DAB | 284299       | 2              |
| Bombastus       | Cooling cream DAB | 295021       | 1              |
| Bombastus       | Cooling cream DAB | 309371       | 7              |
| Bombastus       | Cooling cream DAB | 310988       | 3              |
| Bombastus       | Cooling cream DAB | 18001085     | 1              |
| Bombastus       | Cooling cream DAB | 278436       | 1              |
| Bombastus       | Cooling cream DAB | 20001625     | 2              |
| Bombastus       | Cooling cream DAB | 19002516     | 1              |
| Bombastus       | Cooling cream DAB | 19004562     | 2              |
| Bombastus       | Cooling cream DAB | 308715       | 1              |
| Bombastus       | Cooling cream DAB | 17000973     | 2              |
| Bombastus       | Cooling cream DAB | 292103       | 1              |
| Bombastus       | Cooling cream DAB | 20001626     | 8              |
| Bombastus       | Cooling cream DAB | 301701       | 3              |
| Bombastus       | Cooling cream DAB | 17001971     | 4              |
| Bombastus       | Cooling cream DAB | 18003752     | 3              |
| Bombastus       | Cooling cream DAB | 308716       | 1              |
| Bombastus       | Cooling cream DAB | 307917       | 1              |
| Bombastus       | Cooling cream DAB | 19002513     | 1              |
| Bombastus       | Cooling cream DAB | 20000249     | 3              |
| Bombastus       | Cooling cream DAB | 2001621      | 1              |
| Bombastus       | Cooling cream DAB | 21000736     | 1              |
| Bombastus       | Cooling cream DAB | 18005205     | 3              |
| Bombastus       | Cooling cream DAB | 283056       | 1              |
| Bombastus       | Cooling cream DAB | 19000322     | 1              |
| Bombastus       | Cooling cream DAB | 200000249    | 1              |
| Bombastus       | Cooling cream DAB | 19002520     | 2              |
| Bombastus       | Cooling cream DAB | 282021       | 2              |
| Bombastus       | Cooling cream DAB | 286654       | 2              |
| Bombastus       | Cooling cream DAB | 295184       | 2              |
| Bombastus       | Cooling cream DAB | 302385       | 4              |
| Bombastus       | Cooling cream DAB | 297206       | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 299362       | 1              |
| Bombastus       | Cooling cream DAB | 19000756     | 1              |
| Bombastus       | Cooling cream DAB | 18000339     | 5              |
| Bombastus       | Cooling cream DAB | 286648       | 4              |
| Bombastus       | Cooling cream DAB | 285645       | 2              |
| Bombastus       | Cooling cream DAB | 303625       | 4              |
| Bombastus       | Cooling cream DAB | 18002306     | 5              |
| Bombastus       | Cooling cream DAB | 277526       | 1              |
| Bombastus       | Cooling cream DAB | 309370       | 2              |
| Bombastus       | Cooling cream DAB | 19003463     | 3              |
| Bombastus       | Cooling cream DAB | 20000234     | 1              |
| Bombastus       | Cooling cream DAB | 300729       | 1              |
| Bombastus       | Cooling cream DAB | 304593       | 4              |
| Bombastus       | Cooling cream DAB | 292281       | 1              |
| Bombastus       | Cooling cream DAB | 293749       | 1              |
| Bombastus       | Cooling cream DAB | 292931       | 2              |
| Bombastus       | Cooling cream DAB | 19004561     | 3              |
| Bombastus       | Cooling cream DAB | 20000535     | 3              |
| Bombastus       | Cooling cream DAB | 4013Q2541    | 1              |
| Bombastus       | Cooling cream DAB | 614U2541     | 1              |
| Bombastus       | Cooling cream DAB | 17000229     | 4              |
| Bombastus       | Cooling cream DAB | 279751       | 1              |
| Bombastus       | Cooling cream DAB | 283116       | 1              |
| Bombastus       | Cooling cream DAB | 284263       | 1              |
| Bombastus       | Cooling cream DAB | 284298       | 1              |
| Bombastus       | Cooling cream DAB | 286564       | 3              |
| Bombastus       | Cooling cream DAB | 17001968     | 1              |
| Bombastus       | Cooling cream DAB | 18006322     | 1              |
| Bombastus       | Cooling cream DAB | 276419       | 2              |
| Bombastus       | Cooling cream DAB | 18003176     | 5              |
| Bombastus       | Cooling cream DAB | 282019       | 2              |
| Bombastus       | Cooling cream DAB | 281139       | 2              |
| Bombastus       | Cooling cream DAB | 13315701     | 1              |
| Bombastus       | Cooling cream DAB | 293622       | 2              |
| Bombastus       | Cooling cream DAB | 297214       | 2              |
| Bombastus       | Cooling cream DAB | 301676       | 1              |
| Bombastus       | Cooling cream DAB | 306532       | 2              |
| Bombastus       | Cooling cream DAB | 268194       | 1              |
| Bombastus       | Cooling cream DAB | 20002269     | 1              |
| Bombastus       | Cooling cream DAB | 277367       | 1              |
| Bombastus       | Cooling cream DAB | 277369       | 1              |
| Bombastus       | Cooling cream DAB | 278335       | 3              |
| Bombastus       | Cooling cream DAB | 281823       | 1              |
| Bombastus       | Cooling cream DAB | 284300       | 3              |
| Bombastus       | Cooling cream DAB | 294121       | 1              |
| Bombastus       | Cooling cream DAB | 18002093     | 4              |
| Bombastus       | Cooling cream DAB | 18005195     | 3              |
| Bombastus       | Cooling cream DAB | 18005193     | 2              |
| Bombastus       | Cooling cream DAB | 18006321     | 8              |
| Bombastus       | Cooling cream DAB | 19001398     | 2              |
| Bombastus       | Cooling cream DAB | 19001405     | 2              |
| Bombastus       | Cooling cream DAB | 19001413     | 1              |
| Bombastus       | Cooling cream DAB | 19003477     | 10             |
| Bombastus       | Cooling cream DAB | 19904547     | 1              |
| Bombastus       | Cooling cream DAB | 20000242     | 1              |
| Bombastus       | Cooling cream DAB | 281912       | 1              |
| Bombastus       | Cooling cream DAB | 283058       | 1              |
| Bombastus       | Cooling cream DAB | 282017       | 1              |
| Bombastus       | Cooling cream DAB | 303156       | 1              |
| Bombastus       | Cooling cream DAB | 310000       | 4              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 17000979     | 2              |
| Bombastus       | Cooling cream DAB | 17000969     | 1              |
| Bombastus       | Cooling cream DAB | 17001962     | 2              |
| Bombastus       | Cooling cream DAB | 18003749     | 1              |
| Bombastus       | Cooling cream DAB | 19000759     | 6              |
| Bombastus       | Cooling cream DAB | 19003462     | 6              |
| Bombastus       | Cooling cream DAB | 19004547     | 2              |
| Bombastus       | Cooling cream DAB | 20001610     | 1              |
| Bombastus       | Cooling cream DAB | 18001084     | 3              |
| Bombastus       | Cooling cream DAB | 19000323     | 4              |
| Bombastus       | Cooling cream DAB | 273499       | 1              |
| Bombastus       | Cooling cream DAB | 274083       | 2              |
| Bombastus       | Cooling cream DAB | 275670       | 1              |
| Bombastus       | Cooling cream DAB | 274783       | 1              |
| Bombastus       | Cooling cream DAB | 285070       | 1              |
| Bombastus       | Cooling cream DAB | 290490       | 1              |
| Bombastus       | Cooling cream DAB | 308490       | 2              |
| Bombastus       | Cooling cream DAB | 18002069     | 1              |
| Bombastus       | Cooling cream DAB | 19001415     | 4              |
| Bombastus       | Cooling cream DAB | 19003476     | 2              |
| Bombastus       | Cooling cream DAB | 16244701     | 1              |
| Bombastus       | Cooling cream DAB | 20001622     | 4              |
| Bombastus       | Cooling cream DAB | 18003171     | 2              |
| Bombastus       | Cooling cream DAB | 266941       | 1              |
| Bombastus       | Cooling cream DAB | 307358       | 1              |
| Bombastus       | Cooling cream DAB | 309368       | 10             |
| Bombastus       | Cooling cream DAB | 269088       | 1              |
| Bombastus       | Cooling cream DAB | 277530       | 2              |
| Bombastus       | Cooling cream DAB | 283054       | 1              |
| Bombastus       | Cooling cream DAB | 289258       | 1              |
| Bombastus       | Cooling cream DAB | 309366       | 2              |
| Bombastus       | Cooling cream DAB | 295022       | 1              |
| Bombastus       | Cooling cream DAB | 301668       | 1              |
| Bombastus       | Cooling cream DAB | 309997       | 1              |
| Bombastus       | Cooling cream DAB | 18006312     | 2              |
| Bombastus       | Cooling cream DAB | 272482       | 1              |
| Bombastus       | Cooling cream DAB | 297209       | 1              |
| Bombastus       | Cooling cream DAB | 296312       | 3              |
| Bombastus       | Cooling cream DAB | 295761       | 1              |
| Bombastus       | Cooling cream DAB | 1418E-02541  | 1              |
| Bombastus       | Cooling cream DAB | 513A-02541   | 1              |
| Bombastus       | Cooling cream DAB | 13315101     | 2              |
| Bombastus       | Cooling cream DAB | 285637       | 1              |
| Bombastus       | Cooling cream DAB | 289187       | 1              |
| Bombastus       | Cooling cream DAB | 295189       | 1              |
| Bombastus       | Cooling cream DAB | 297099       | 1              |
| Bombastus       | Cooling cream DAB | 298113       | 3              |
| Bombastus       | Cooling cream DAB | 298119       | 2              |
| Bombastus       | Cooling cream DAB | 298879       | 2              |
| Bombastus       | Cooling cream DAB | 299974       | 1              |
| Bombastus       | Cooling cream DAB | 300727       | 3              |
| Bombastus       | Cooling cream DAB | 300724       | 1              |
| Bombastus       | Cooling cream DAB | 301672       | 2              |
| Bombastus       | Cooling cream DAB | 299980       | 3              |
| Bombastus       | Cooling cream DAB | 104948       | 1              |
| Bombastus       | Cooling cream DAB | 306530       | 2              |
| Bombastus       | Cooling cream DAB | 308491       | 2              |
| Bombastus       | Cooling cream DAB | 310974       | 3              |
| Bombastus       | Cooling cream DAB | 310006       | 3              |
| Bombastus       | Cooling cream DAB | 17000986     | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 17001967     | 4              |
| Bombastus       | Cooling cream DAB | 17000982     | 2              |
| Bombastus       | Cooling cream DAB | 17001958     | 2              |
| Bombastus       | Cooling cream DAB | 17001970     | 9              |
| Bombastus       | Cooling cream DAB | 180003302x   | 1              |
| Bombastus       | Cooling cream DAB | 18002084     | 3              |
| Bombastus       | Cooling cream DAB | 18002095     | 5              |
| Bombastus       | Cooling cream DAB | 1800030      | 1              |
| Bombastus       | Cooling cream DAB | 188000325    | 1              |
| Bombastus       | Cooling cream DAB | 18003746     | 3              |
| Bombastus       | Cooling cream DAB | 18005203     | 6              |
| Bombastus       | Cooling cream DAB | 18005609     | 4              |
| Bombastus       | Cooling cream DAB | 19000327     | 1              |
| Bombastus       | Cooling cream DAB | 19000335     | 6              |
| Bombastus       | Cooling cream DAB | 19001397     | 1              |
| Bombastus       | Cooling cream DAB | 19001402     | 1              |
| Bombastus       | Cooling cream DAB | 19001420     | 5              |
| Bombastus       | Cooling cream DAB | 19002515     | 3              |
| Bombastus       | Cooling cream DAB | 19003472     | 1              |
| Bombastus       | Cooling cream DAB | 19004539     | 1              |
| Bombastus       | Cooling cream DAB | 19004550     | 2              |
| Bombastus       | Cooling cream DAB | 19004551     | 1              |
| Bombastus       | Cooling cream DAB | 20000225     | 2              |
| Bombastus       | Cooling cream DAB | 20000222     | 1              |
| Bombastus       | Cooling cream DAB | 20000226     | 1              |
| Bombastus       | Cooling cream DAB | 20000230     | 4              |
| Bombastus       | Cooling cream DAB | 20000232     | 4              |
| Bombastus       | Cooling cream DAB | 20001624     | 2              |
| Bombastus       | Cooling cream DAB | 20001615     | 4              |
| Bombastus       | Cooling cream DAB | 20002268     | 3              |
| Bombastus       | Cooling cream DAB | 20003370     | 2              |
| Bombastus       | Cooling cream DAB | 295763       | 1              |
| Bombastus       | Cooling cream DAB | 20002273     | 1              |
| Bombastus       | Cooling cream DAB | 17001965     | 6              |
| Bombastus       | Cooling cream DAB | 18004429     | 3              |
| Bombastus       | Cooling cream DAB | 19002512     | 2              |
| Bombastus       | Cooling cream DAB | 270315       | 1              |
| Bombastus       | Cooling cream DAB | 271627       | 1              |
| Bombastus       | Cooling cream DAB | 276418       | 3              |
| Bombastus       | Cooling cream DAB | 3100004      | 1              |
| Bombastus       | Cooling cream DAB | 285068       | 2              |
| Bombastus       | Cooling cream DAB | 299981       | 2              |
| Bombastus       | Cooling cream DAB | 306940       | 1              |
| Bombastus       | Cooling cream DAB | 17000983     | 7              |
| Bombastus       | Cooling cream DAB | 283057       | 1              |
| Bombastus       | Cooling cream DAB | 287543       | 1              |
| Bombastus       | Cooling cream DAB | 286653       | 2              |
| Bombastus       | Cooling cream DAB | 287483       | 1              |
| Bombastus       | Cooling cream DAB | 288110       | 1              |
| Bombastus       | Cooling cream DAB | 288158       | 1              |
| Bombastus       | Cooling cream DAB | 91709        | 1              |
| Bombastus       | Cooling cream DAB | 292202       | 1              |
| Bombastus       | Cooling cream DAB | 293751       | 1              |
| Bombastus       | Cooling cream DAB | 295120       | 1              |
| Bombastus       | Cooling cream DAB | 295760       | 2              |
| Bombastus       | Cooling cream DAB | 297211       | 2              |
| Bombastus       | Cooling cream DAB | 297210       | 2              |
| Bombastus       | Cooling cream DAB | 298117       | 2              |
| Bombastus       | Cooling cream DAB | 299968       | 1              |
| Bombastus       | Cooling cream DAB | 301675       | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 302380       | 1              |
| Bombastus       | Cooling cream DAB | 302372       | 2              |
| Bombastus       | Cooling cream DAB | 305954       | 1              |
| Bombastus       | Cooling cream DAB | 304592       | 1              |
| Bombastus       | Cooling cream DAB | 307929       | 3              |
| Bombastus       | Cooling cream DAB | 3066944      | 1              |
| Bombastus       | Cooling cream DAB | 307933       | 2              |
| Bombastus       | Cooling cream DAB | 309369       | 3              |
| Bombastus       | Cooling cream DAB | 310984       | 1              |
| Bombastus       | Cooling cream DAB | 17000970     | 1              |
| Bombastus       | Cooling cream DAB | 17001963     | 1              |
| Bombastus       | Cooling cream DAB | 18000328     | 1              |
| Bombastus       | Cooling cream DAB | 180000339    | 1              |
| Bombastus       | Cooling cream DAB | 18002083     | 3              |
| Bombastus       | Cooling cream DAB | 18002307     | 1              |
| Bombastus       | Cooling cream DAB | 18003168     | 1              |
| Bombastus       | Cooling cream DAB | 18004432     | 1              |
| Bombastus       | Cooling cream DAB | 18004431     | 1              |
| Bombastus       | Cooling cream DAB | 18006311     | 3              |
| Bombastus       | Cooling cream DAB | 19000760     | 2              |
| Bombastus       | Cooling cream DAB | 19000325     | 1              |
| Bombastus       | Cooling cream DAB | 19001396     | 2              |
| Bombastus       | Cooling cream DAB | 19002510     | 1              |
| Bombastus       | Cooling cream DAB | 19004559     | 2              |
| Bombastus       | Cooling cream DAB | 20001611     | 1              |
| Bombastus       | Cooling cream DAB | 20001620     | 1              |
| Bombastus       | Cooling cream DAB | 20003363     | 1              |
| Bombastus       | Cooling cream DAB | 20004650     | 1              |
| Bombastus       | Cooling cream DAB | 6861944      | 2              |
| Bombastus       | Cooling cream DAB | 310983       | 5              |
| Bombastus       | Cooling cream DAB | 278341       | 2              |
| Bombastus       | Cooling cream DAB | 278442       | 1              |
| Bombastus       | Cooling cream DAB | 279676       | 2              |
| Bombastus       | Cooling cream DAB | 283119       | 1              |
| Bombastus       | Cooling cream DAB | 300728       | 4              |
| Bombastus       | Cooling cream DAB | 305020       | 1              |
| Bombastus       | Cooling cream DAB | 305950       | 2              |
| Bombastus       | Cooling cream DAB | 307352       | 2              |
| Bombastus       | Cooling cream DAB | 17000220     | 3              |
| Bombastus       | Cooling cream DAB | 17000980     | 1              |
| Bombastus       | Cooling cream DAB | 310977       | 2              |
| Bombastus       | Cooling cream DAB | 17001961     | 4              |
| Bombastus       | Cooling cream DAB | 310980       | 2              |
| Bombastus       | Cooling cream DAB | 18000331     | 1              |
| Bombastus       | Cooling cream DAB | 18000338     | 2              |
| Bombastus       | Cooling cream DAB | 18002086     | 2              |
| Bombastus       | Cooling cream DAB | 18001083     | 1              |
| Bombastus       | Cooling cream DAB | 18002308     | 4              |
| Bombastus       | Cooling cream DAB | 18001080     | 1              |
| Bombastus       | Cooling cream DAB | 18003751     | 4              |
| Bombastus       | Cooling cream DAB | 18005194     | 6              |
| Bombastus       | Cooling cream DAB | 18003750     | 1              |
| Bombastus       | Cooling cream DAB | 18005197     | 4              |
| Bombastus       | Cooling cream DAB | 18006323     | 4              |
| Bombastus       | Cooling cream DAB | 18006319     | 3              |
| Bombastus       | Cooling cream DAB | 18006317     | 5              |
| Bombastus       | Cooling cream DAB | 19000329     | 1              |
| Bombastus       | Cooling cream DAB | 18006318     | 2              |
| Bombastus       | Cooling cream DAB | 19000331     | 6              |
| Bombastus       | Cooling cream DAB | 19001395     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 19001410     | 1              |
| Bombastus       | Cooling cream DAB | 19002511     | 2              |
| Bombastus       | Cooling cream DAB | 19001407     | 1              |
| Bombastus       | Cooling cream DAB | 19003466     | 1              |
| Bombastus       | Cooling cream DAB | 19004557     | 2              |
| Bombastus       | Cooling cream DAB | 19004556     | 5              |
| Bombastus       | Cooling cream DAB | 20000231     | 1              |
| Bombastus       | Cooling cream DAB | 20000240     | 2              |
| Bombastus       | Cooling cream DAB | 19003464     | 1              |
| Bombastus       | Cooling cream DAB | 20001619     | 1              |
| Bombastus       | Cooling cream DAB | 20005670     | 1              |
| Bombastus       | Cooling cream DAB | 20004656     | 2              |
| Bombastus       | Cooling cream DAB | 20004653     | 1              |
| Bombastus       | Cooling cream DAB | 18001074     | 10             |
| Bombastus       | Cooling cream DAB | 18001075     | 2              |
| Bombastus       | Cooling cream DAB | 298877       | 3              |
| Bombastus       | Cooling cream DAB | 20002272     | 2              |
| Bombastus       | Cooling cream DAB | 278437       | 1              |
| Bombastus       | Cooling cream DAB | 288113       | 1              |
| Bombastus       | Cooling cream DAB | 289193       | 1              |
| Bombastus       | Cooling cream DAB | 292101       | 4              |
| Bombastus       | Cooling cream DAB | 292199       | 2              |
| Bombastus       | Cooling cream DAB | 292934       | 4              |
| Bombastus       | Cooling cream DAB | 293620       | 1              |
| Bombastus       | Cooling cream DAB | 293747       | 3              |
| Bombastus       | Cooling cream DAB | 295188       | 3              |
| Bombastus       | Cooling cream DAB | 295122       | 1              |
| Bombastus       | Cooling cream DAB | 297102       | 3              |
| Bombastus       | Cooling cream DAB | 297103       | 1              |
| Bombastus       | Cooling cream DAB | 302381       | 6              |
| Bombastus       | Cooling cream DAB | 302376       | 1              |
| Bombastus       | Cooling cream DAB | 303152       | 6              |
| Bombastus       | Cooling cream DAB | 303158       | 4              |
| Bombastus       | Cooling cream DAB | 304584       | 3              |
| Bombastus       | Cooling cream DAB | 305022       | 2              |
| Bombastus       | Cooling cream DAB | 307920       | 4              |
| Bombastus       | Cooling cream DAB | 307930       | 1              |
| Bombastus       | Cooling cream DAB | 308717       | 6              |
| Bombastus       | Cooling cream DAB | 310987       | 4              |
| Bombastus       | Cooling cream DAB | 310982       | 7              |
| Bombastus       | Cooling cream DAB | 18001081     | 3              |
| Bombastus       | Cooling cream DAB | 18002244     | 7              |
| Bombastus       | Cooling cream DAB | 18003753     | 4              |
| Bombastus       | Cooling cream DAB | 19000326     | 2              |
| Bombastus       | Cooling cream DAB | 19000753     | 1              |
| Bombastus       | Cooling cream DAB | 20000244     | 2              |
| Bombastus       | Cooling cream DAB | 20000246     | 3              |
| Bombastus       | Cooling cream DAB | 20000241     | 1              |
| Bombastus       | Cooling cream DAB | 20004657     | 2              |
| Bombastus       | Cooling cream DAB | 277363       | 1              |
| Bombastus       | Cooling cream DAB | 310005       | 5              |
| Bombastus       | Cooling cream DAB | 17075201     | 1              |
| Bombastus       | Cooling cream DAB | 310979       | 2              |
| Bombastus       | Cooling cream DAB | 17000975     | 2              |
| Bombastus       | Cooling cream DAB | 17001957     | 1              |
| Bombastus       | Cooling cream DAB | 17000984     | 1              |
| Bombastus       | Cooling cream DAB | 18002239     | 2              |
| Bombastus       | Cooling cream DAB | 18003175     | 2              |
| Bombastus       | Cooling cream DAB | 18005198     | 3              |
| Bombastus       | Cooling cream DAB | 18005199     | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Bombastus       | Cooling cream DAB | 18005604     | 3              |
| Bombastus       | Cooling cream DAB | 18005602     | 1              |
| Bombastus       | Cooling cream DAB | 19000762     | 8              |
| Bombastus       | Cooling cream DAB | 19001403     | 3              |
| Bombastus       | Cooling cream DAB | 19001412     | 2              |
| Bombastus       | Cooling cream DAB | 19000332     | 2              |
| Bombastus       | Cooling cream DAB | 19000754     | 1              |
| Bombastus       | Cooling cream DAB | 19004565     | 3              |
| Bombastus       | Cooling cream DAB | 19004544     | 2              |
| Bombastus       | Cooling cream DAB | 19004548     | 1              |
| Bombastus       | Cooling cream DAB | 20000235     | 1              |
| Bombastus       | Cooling cream DAB | 20000228     | 1              |
| Bombastus       | Cooling cream DAB | 2001619      | 1              |
| Bombastus       | Cooling cream DAB | 20003367     | 2              |
| Bombastus       | Cooling cream DAB | 2005672      | 1              |
| Bombastus       | Cooling cream DAB | 4617M-02541  | 1              |
| Bombastus       | Cooling cream DAB | 618E-02541   | 1              |
| Bombastus       | Cooling cream DAB | 718A-02541   | 1              |
| Bombastus       | Cooling cream DAB | 1718A-02541  | 1              |
| Bombastus       | Cooling cream DAB | 277533       | 1              |
| Bombastus       | Cooling cream DAB | 281033       | 1              |
| Bombastus       | Cooling cream DAB | 299976       | 3              |
| Bombastus       | Cooling cream DAB | 19001416     | 10             |
| Bombastus       | Cooling cream DAB | 19001419     | 4              |
| Bombastus       | Cooling cream DAB | 285638       | 2              |
| Bombastus       | Cooling cream DAB | 286562       | 1              |
| Bombastus       | Cooling cream DAB | 290380       | 5              |
| Bombastus       | Cooling cream DAB | 292106       | 3              |
| Bombastus       | Cooling cream DAB | 272485       | 1              |
| Bombastus       | Cooling cream DAB | 272349       | 1              |
| Bombastus       | Cooling cream DAB | 271541       | 1              |
| Bombastus       | Cooling cream DAB | 273501       | 1              |
| Bombastus       | Cooling cream DAB | 274077       | 1              |
| Bombastus       | Cooling cream DAB | 274914       | 1              |
| Bombastus       | Cooling cream DAB | 274785       | 1              |
| Bombastus       | Cooling cream DAB | 275668       | 1              |
| Bombastus       | Cooling cream DAB | 277275       | 2              |
| Bombastus       | Cooling cream DAB | 278337       | 1              |
| Bombastus       | Cooling cream DAB | 286652       | 1              |
| Bombastus       | Cooling cream DAB | 288109       | 2              |
| Bombastus       | Cooling cream DAB | 289253       | 1              |
| Bombastus       | Cooling cream DAB | 291555       | 1              |
| Bombastus       | Cooling cream DAB | 292936       | 1              |
| Bombastus       | Cooling cream DAB | 298120       | 1              |
| Bombastus       | Cooling cream DAB | 300715       | 1              |
| Bombastus       | Cooling cream DAB | 299967       | 1              |
| Bombastus       | Cooling cream DAB | 18002243     | 4              |
| Bombastus       | Cooling cream DAB | 18005196     | 1              |
| Bombastus       | Cooling cream DAB | 20000356     | 1              |
| Bombastus       | Cooling cream DAB | 20003366     | 4              |
| Bombastus       | Cooling cream DAB | 20003364     | 1              |
| Bombastus       | Cooling cream DAB | 264601       | 1              |
| Bombastus       | Cooling cream DAB | 276422       | 2              |
| Bombastus       | Cooling cream DAB | 12082013A    | 1              |
| Bombastus       | Cooling cream DAB | 151113a      | 1              |
| Bombastus       | Cooling cream DAB | 13012014A    | 1              |
| Bombastus       | Cooling cream DAB | 7022014B     | 1              |
| Bombastus       | Cooling cream DAB | 14052014B    | 1              |
| Bombastus       | Cooling cream DAB | 3092014A     | 1              |
| Bombastus       | Cooling cream DAB | 290489       | 1              |

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| <b>Supplier</b>    | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-------------------|--------------|----------------|
| Bombastus          | Cooling cream DAB | 3022015B     | 1              |
| Bombastus          | Cooling cream DAB | 4032015B     | 1              |
| Bombastus          | Cooling cream DAB | 297205       | 2              |
| Bombastus          | Cooling cream DAB | 295183       | 1              |
| Bombastus          | Cooling cream DAB | 295192       | 1              |
| Bombastus          | Cooling cream DAB | 298882       | 1              |
| Bombastus          | Cooling cream DAB | 298118       | 1              |
| Bombastus          | Cooling cream DAB | 302374       | 2              |
| Bombastus          | Cooling cream DAB | 305961       | 2              |
| Bombastus          | Cooling cream DAB | 307353       | 2              |
| Bombastus          | Cooling cream DAB | 306528       | 1              |
| Bombastus          | Cooling cream DAB | 308724       | 4              |
| Bombastus          | Cooling cream DAB | 307927       | 1              |
| Bombastus          | Cooling cream DAB | 309365       | 1              |
| Bombastus          | Cooling cream DAB | 306934       | 2              |
| Bombastus          | Cooling cream DAB | 310003       | 2              |
| Bombastus          | Cooling cream DAB | 17000974     | 2              |
| Bombastus          | Cooling cream DAB | 17000985     | 4              |
| Bombastus          | Cooling cream DAB | 18000332     | 2              |
| Bombastus          | Cooling cream DAB | 18000325     | 3              |
| Bombastus          | Cooling cream DAB | 18002240     | 3              |
| Bombastus          | Cooling cream DAB | 18005206     | 3              |
| Bombastus          | Cooling cream DAB | 19000333     | 2              |
| Bombastus          | Cooling cream DAB | 19001401     | 2              |
| Bombastus          | Cooling cream DAB | 19003479     | 7              |
| Bombastus          | Cooling cream DAB | 19004560     | 1              |
| Bombastus          | Cooling cream DAB | 19004563     | 5              |
| Bombastus          | Cooling cream DAB | 19003473     | 1              |
| Bombastus          | Cooling cream DAB | 19004558     | 1              |
| Bombastus          | Cooling cream DAB | 20002270     | 2              |
| Bombastus          | Cooling cream DAB | 20003362     | 2              |
| Bombastus          | Cooling cream DAB | 20003358     | 1              |
| Bombastus          | Cooling cream DAB | 19004564     | 3              |
| Bombastus          | Cooling cream DAB | 19002519     | 6              |
| Bombastus          | Cooling cream DAB | 19000336     | 4              |
| Bombastus          | Cooling cream DAB | 20000238     | 2              |
| Bombastus          | Cooling cream DAB | 296316       | 1              |
| Bombastus          | Cooling cream DAB | 299361       | 1              |
| Bombastus          | Cooling cream DAB | 129845       | 1              |
| Bombastus          | Cooling cream DAB | 16095503     | 1              |
| Bombastus          | Cooling cream DAB | 307926       | 1              |
| Bombastus          | Cooling cream DAB | 19032014A    | 1              |
| Bombastus          | Cooling cream DAB | 296317       | 1              |
| Bombastuts/Gehe    | Cooling cream DAB | 60082802     | 1              |
| Bombastuts/Gehe    | Cooling cream DAB | 307350       | 1              |
| Bombastuts/Gehe    | Cooling cream DAB | 307919       | 1              |
| Bombastuts/Gehe    | Cooling cream DAB | 308712       | 1              |
| Bombastuts/Noweda  | Cooling cream DAB | 300726       | 1              |
| Bombstus           | Cooling cream DAB | 308711       | 1              |
| Bumbastus          | Cooling cream DAB | 297213       | 1              |
| Bumbastus/Sanacorp | Cooling cream DAB | 18006325     | 1              |
| Cae/Phönix         | Cooling cream DAB | 15228601     | 1              |
| cael               | Cooling cream DAB | 13004201     | 1              |
| Caeleo/ Krieger    | Cooling cream DAB | 18272901     | 1              |
| Caeleo/ Krieger    | Cooling cream DAB | 19000582001  | 1              |
| Caelo              | Cooling cream DAB | 4061203      | 1              |
| Caelo              | Cooling cream DAB | 12312101     | 2              |
| Caelo              | Cooling cream DAB | 14101401     | 1              |
| Caelo              | Cooling cream DAB | 1798201      | 1              |
| Caelo              | Cooling cream DAB | 1915021      | 1              |

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| Supplier | Substance         | Batch       | Spectra |
|----------|-------------------|-------------|---------|
| Caelo    | Cooling cream DAB | 16114625    | 1       |
| Caelo    | Cooling cream DAB | 11323101    | 2       |
| Caelo    | Cooling cream DAB | 11322901    | 1       |
| Caelo    | Cooling cream DAB | 12045901    | 1       |
| Caelo    | Cooling cream DAB | 12002401    | 1       |
| Caelo    | Cooling cream DAB | 11323501    | 1       |
| Caelo    | Cooling cream DAB | 12089901    | 1       |
| Caelo    | Cooling cream DAB | 120601202   | 1       |
| Caelo    | Cooling cream DAB | 12001901    | 3       |
| Caelo    | Cooling cream DAB | 7071203     | 1       |
| Caelo    | Cooling cream DAB | 12089402    | 2       |
| Caelo    | Cooling cream DAB | 14071204    | 1       |
| Caelo    | Cooling cream DAB | 2081201     | 1       |
| Caelo    | Cooling cream DAB | 27061201    | 1       |
| Caelo    | Cooling cream DAB | 12174401    | 4       |
| Caelo    | Cooling cream DAB | 10081209    | 1       |
| Caelo    | Cooling cream DAB | 10081210    | 1       |
| Caelo    | Cooling cream DAB | 12090501    | 2       |
| Caelo    | Cooling cream DAB | 12089601    | 5       |
| Caelo    | Cooling cream DAB | 7091201     | 1       |
| Caelo    | Cooling cream DAB | 12052001    | 1       |
| Caelo    | Cooling cream DAB | 12182801    | 3       |
| Caelo    | Cooling cream DAB | 12187301    | 4       |
| Caelo    | Cooling cream DAB | 12178902    | 3       |
| Caelo    | Cooling cream DAB | 12090601    | 1       |
| Caelo    | Cooling cream DAB | 12253101    | 4       |
| Caelo    | Cooling cream DAB | 16101201    | 1       |
| Caelo    | Cooling cream DAB | 12174601    | 2       |
| Caelo    | Cooling cream DAB | 6111201     | 1       |
| Caelo    | Cooling cream DAB | 6111202     | 1       |
| Caelo    | Cooling cream DAB | 8111201     | 1       |
| Caelo    | Cooling cream DAB | 12253301    | 2       |
| Caelo    | Cooling cream DAB | 12174301    | 2       |
| Caelo    | Cooling cream DAB | 27111201    | 1       |
| Caelo    | Cooling cream DAB | 12292201    | 7       |
| Caelo    | Cooling cream DAB | 1287201     | 1       |
| Caelo    | Cooling cream DAB | 12253401    | 2       |
| Caelo    | Cooling cream DAB | 18121205    | 1       |
| Caelo    | Cooling cream DAB | 5132        | 1       |
| Caelo    | Cooling cream DAB | 28121203    | 1       |
| Caelo    | Cooling cream DAB | 11269101    | 1       |
| Caelo    | Cooling cream DAB | 12292401    | 4       |
| Caelo    | Cooling cream DAB | 15011304    | 1       |
| Caelo    | Cooling cream DAB | 12292301    | 3       |
| Caelo    | Cooling cream DAB | 12090401    | 3       |
| Caelo    | Cooling cream DAB | 31011301    | 1       |
| Caelo    | Cooling cream DAB | 613I-02541  | 1       |
| Caelo    | Cooling cream DAB | 12312102    | 5       |
| Caelo    | Cooling cream DAB | 12312601    | 3       |
| Caelo    | Cooling cream DAB | 7021301     | 1       |
| Caelo    | Cooling cream DAB | 22021305    | 1       |
| Caelo    | Cooling cream DAB | 13004101    | 5       |
| Caelo    | Cooling cream DAB | 12174501    | 1       |
| Caelo    | Cooling cream DAB | 12364601    | 13      |
| Caelo    | Cooling cream DAB | 913I-02541  | 1       |
| Caelo    | Cooling cream DAB | 28021306    | 1       |
| Caelo    | Cooling cream DAB | 1113Q-02541 | 1       |
| Caelo    | Cooling cream DAB | 1213M-02541 | 2       |
| Caelo    | Cooling cream DAB | 13004501    | 7       |
| Caelo    | Cooling cream DAB | 13004201    | 4       |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Cooling cream DAB | 12046101     | 1              |
| Caelo           | Cooling cream DAB | 8041304      | 1              |
| Caelo           | Cooling cream DAB | 12253001     | 1              |
| Caelo           | Cooling cream DAB | 13059701     | 6              |
| Caelo           | Cooling cream DAB | 13068101     | 3              |
| Caelo           | Cooling cream DAB | 22051307     | 1              |
| Caelo           | Cooling cream DAB | 13059902     | 4              |
| Caelo           | Cooling cream DAB | 6061303      | 1              |
| Caelo           | Cooling cream DAB | 22061301     | 1              |
| Caelo           | Cooling cream DAB | 13121002     | 2              |
| Caelo           | Cooling cream DAB | 13175201     | 7              |
| Caelo           | Cooling cream DAB | 26071307     | 1              |
| Caelo           | Cooling cream DAB | 13121601     | 1              |
| Caelo           | Cooling cream DAB | 16081303     | 1              |
| Caelo           | Cooling cream DAB | 13191401     | 10             |
| Caelo           | Cooling cream DAB | 30081302     | 1              |
| Caelo           | Cooling cream DAB | 13175001     | 2              |
| Caelo           | Cooling cream DAB | 10091306     | 1              |
| Caelo           | Cooling cream DAB | 25091308     | 1              |
| Caelo           | Cooling cream DAB | 13191801     | 8              |
| Caelo           | Cooling cream DAB | 13192201     | 1              |
| Caelo           | Cooling cream DAB | 13121503     | 1              |
| Caelo           | Cooling cream DAB | 28101302     | 1              |
| Caelo           | Cooling cream DAB | 279753       | 1              |
| Caelo           | Cooling cream DAB | 13226701     | 4              |
| Caelo           | Cooling cream DAB | 1322601      | 1              |
| Caelo           | Cooling cream DAB | 13227001     | 3              |
| Caelo           | Cooling cream DAB | 13327101     | 1              |
| Caelo           | Cooling cream DAB | 13315201     | 9              |
| Caelo           | Cooling cream DAB | 17121301     | 1              |
| Caelo           | Cooling cream DAB | 13227301     | 4              |
| Caelo           | Cooling cream DAB | 13227201     | 7              |
| Caelo           | Cooling cream DAB | 12011402     | 1              |
| Caelo           | Cooling cream DAB | 13401801     | 28             |
| Caelo           | Cooling cream DAB | 13402001     | 5              |
| Caelo           | Cooling cream DAB | 13402101     | 7              |
| Caelo           | Cooling cream DAB | 13315401     | 1              |
| Caelo           | Cooling cream DAB | 14000101     | 2              |
| Caelo           | Cooling cream DAB | 25021414     | 1              |
| Caelo           | Cooling cream DAB | 14000401     | 2              |
| Caelo           | Cooling cream DAB | 281140       | 1              |
| Caelo           | Cooling cream DAB | 14055301     | 7              |
| Caelo           | Cooling cream DAB | 14055601     | 11             |
| Caelo           | Cooling cream DAB | 14055702     | 11             |
| Caelo           | Cooling cream DAB | 13315901     | 1              |
| Caelo           | Cooling cream DAB | 14086101     | 3              |
| Caelo           | Cooling cream DAB | 14086201     | 5              |
| Caelo           | Cooling cream DAB | 13316001     | 1              |
| Caelo           | Cooling cream DAB | 12051401     | 1              |
| Caelo           | Cooling cream DAB | 14086401     | 3              |
| Caelo           | Cooling cream DAB | 285504       | 2              |
| Caelo           | Cooling cream DAB | 1408631      | 1              |
| Caelo           | Cooling cream DAB | 4061405      | 1              |
| Caelo           | Cooling cream DAB | 1408601      | 1              |
| Caelo           | Cooling cream DAB | 1412801      | 1              |
| Caelo           | Cooling cream DAB | 14055501     | 3              |
| Caelo           | Cooling cream DAB | 1071407      | 1              |
| Caelo           | Cooling cream DAB | 14086501     | 1              |
| Caelo           | Cooling cream DAB | 21071401     | 1              |
| Caelo           | Cooling cream DAB | 1484701      | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Cooling cream DAB | 2091404      | 1              |
| Caelo           | Cooling cream DAB | 14129701     | 1              |
| Caelo           | Cooling cream DAB | 14184901     | 6              |
| Caelo           | Cooling cream DAB | 1418401      | 2              |
| Caelo           | Cooling cream DAB | 287481       | 1              |
| Caelo           | Cooling cream DAB | 30091402     | 1              |
| Caelo           | Cooling cream DAB | 14271101     | 4              |
| Caelo           | Cooling cream DAB | 142681012    | 1              |
| Caelo           | Cooling cream DAB | 14184501     | 18             |
| Caelo           | Cooling cream DAB | 14268301     | 17             |
| Caelo           | Cooling cream DAB | 14132001     | 1              |
| Caelo           | Cooling cream DAB | 14268201     | 4              |
| Caelo           | Cooling cream DAB | 1468201      | 1              |
| Caelo           | Cooling cream DAB | 8121403      | 1              |
| Caelo           | Cooling cream DAB | 23121412     | 1              |
| Caelo           | Cooling cream DAB | 14271501     | 3              |
| Caelo           | Cooling cream DAB | 30011505     | 1              |
| Caelo           | Cooling cream DAB | 14329501     | 4              |
| Caelo           | Cooling cream DAB | 15058901     | 3              |
| Caelo           | Cooling cream DAB | 15066701     | 5              |
| Caelo           | Cooling cream DAB | 15058801     | 5              |
| Caelo           | Cooling cream DAB | 15152801     | 3              |
| Caelo           | Cooling cream DAB | 15066901     | 4              |
| Caelo           | Cooling cream DAB | 15153101     | 4              |
| Caelo           | Cooling cream DAB | 15413701     | 7              |
| Caelo           | Cooling cream DAB | 1543512      | 1              |
| Caelo           | Cooling cream DAB | 14101713     | 1              |
| Caelo           | Cooling cream DAB | 14288701     | 5              |
| Caelo           | Cooling cream DAB | 14268102     | 1              |
| Caelo           | Cooling cream DAB | 5031509      | 1              |
| Caelo           | Cooling cream DAB | 14328901     | 3              |
| Caelo           | Cooling cream DAB | 1234         | 1              |
| Caelo           | Cooling cream DAB | 123test      | 2              |
| Caelo           | Cooling cream DAB | 4051503      | 2              |
| Caelo           | Cooling cream DAB | 15017601     | 1              |
| Caelo           | Cooling cream DAB | 19051505     | 1              |
| Caelo           | Cooling cream DAB | 15152901     | 4              |
| Caelo           | Cooling cream DAB | 15066501     | 2              |
| Caelo           | Cooling cream DAB | 16071505     | 1              |
| Caelo           | Cooling cream DAB | 15153701     | 9              |
| Caelo           | Cooling cream DAB | 29081509     | 1              |
| Caelo           | Cooling cream DAB | 15228701     | 9              |
| Caelo           | Cooling cream DAB | 14143101     | 1              |
| Caelo           | Cooling cream DAB | 15066801test | 1              |
| Caelo           | Cooling cream DAB | 15236701     | 1              |
| Caelo           | Cooling cream DAB | 1506601      | 1              |
| Caelo           | Cooling cream DAB | 295123       | 1              |
| Caelo           | Cooling cream DAB | 15417201     | 6              |
| Caelo           | Cooling cream DAB | 15328101     | 3              |
| Caelo           | Cooling cream DAB | 2769         | 1              |
| Caelo           | Cooling cream DAB | 16085902     | 9              |
| Caelo           | Cooling cream DAB | 1686101      | 1              |
| Caelo           | Cooling cream DAB | 1256856      | 1              |
| Caelo           | Cooling cream DAB | 15000501     | 1              |
| Caelo           | Cooling cream DAB | 2x16129501   | 1              |
| Caelo           | Cooling cream DAB | 1629401      | 1              |
| Caelo           | Cooling cream DAB | 161333801    | 1              |
| Caelo           | Cooling cream DAB | 16134202     | 1              |
| Caelo           | Cooling cream DAB | 123Test      | 1              |
| Caelo           | Cooling cream DAB | 160859       | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|-------------------|-------------------|----------------|
| Caelo           | Cooling cream DAB | 302378            | 1              |
| Caelo           | Cooling cream DAB | 6002062002        | 1              |
| Caelo           | Cooling cream DAB | 1097065           | 3              |
| Caelo           | Cooling cream DAB | 1605901           | 1              |
| Caelo           | Cooling cream DAB | 304590            | 1              |
| Caelo           | Cooling cream DAB | 163020001         | 1              |
| Caelo           | Cooling cream DAB | 304582            | 1              |
| Caelo           | Cooling cream DAB | 162446901         | 1              |
| Caelo           | Cooling cream DAB | 304591            | 2              |
| Caelo           | Cooling cream DAB | 170207UL/16323101 | 1              |
| Caelo           | Cooling cream DAB | 1000601           | 1              |
| Caelo           | Cooling cream DAB | 16031707          | 1              |
| Caelo           | Cooling cream DAB | 123456            | 1              |
| Caelo           | Cooling cream DAB | 1041702           | 1              |
| Caelo           | Cooling cream DAB | 170000301         | 1              |
| Caelo           | Cooling cream DAB | 306941            | 1              |
| Caelo           | Cooling cream DAB | 6051702           | 1              |
| Caelo           | Cooling cream DAB | 301701            | 1              |
| Caelo           | Cooling cream DAB | 17061702          | 1              |
| Caelo           | Cooling cream DAB | 10071705          | 1              |
| Caelo           | Cooling cream DAB | 170754015325      | 1              |
| Caelo           | Cooling cream DAB | 1705101           | 1              |
| Caelo           | Cooling cream DAB | 17075105          | 1              |
| Caelo           | Cooling cream DAB | 309370            | 1              |
| Caelo           | Cooling cream DAB | 8003158005        | 1              |
| Caelo           | Cooling cream DAB | 8003478004        | 1              |
| Caelo           | Cooling cream DAB | 17000978          | 1              |
| Caelo           | Cooling cream DAB | 17124911          | 1              |
| Caelo           | Cooling cream DAB | 173308021         | 1              |
| Caelo           | Cooling cream DAB | 18012201          | 1              |
| Caelo           | Cooling cream DAB | 18001084          | 1              |
| Caelo           | Cooling cream DAB | 12051809          | 1              |
| Caelo           | Cooling cream DAB | 18002087          | 1              |
| Caelo           | Cooling cream DAB | 8003478008        | 2              |
| Caelo           | Cooling cream DAB | 16071809          | 1              |
| Caelo           | Cooling cream DAB | 18181201          | 1              |
| Caelo           | Cooling cream DAB | 18002093          | 1              |
| Caelo           | Cooling cream DAB | 16081812          | 1              |
| Caelo           | Cooling cream DAB | 16081813          | 1              |
| Caelo           | Cooling cream DAB | 8091807           | 1              |
| Caelo           | Cooling cream DAB | 18004431          | 1              |
| Caelo           | Cooling cream DAB | 18182602          | 2              |
| Caelo           | Cooling cream DAB | 18005202          | 1              |
| Caelo           | Cooling cream DAB | 18005207          | 2              |
| Caelo           | Cooling cream DAB | 18273001          | 8              |
| Caelo           | Cooling cream DAB | 19000333          | 2              |
| Caelo           | Cooling cream DAB | 19073803          | 1              |
| Caelo           | Cooling cream DAB | 19001103          | 1              |
| Caelo           | Cooling cream DAB | 190154901         | 1              |
| Caelo           | Cooling cream DAB | 19155101          | 10             |
| Caelo           | Cooling cream DAB | 19033001          | 1              |
| Caelo           | Cooling cream DAB | 19120101          | 1              |
| Caelo           | Cooling cream DAB | 19258101          | 1              |
| Caelo           | Cooling cream DAB | 20000331001       | 9              |
| Caelo           | Cooling cream DAB | 2000033101x2      | 1              |
| Caelo           | Cooling cream DAB | 200000228001      | 1              |
| Caelo           | Cooling cream DAB | 20000334001       | 3              |
| Caelo           | Cooling cream DAB | 20000536          | 1              |
| Caelo           | Cooling cream DAB | 20000332001       | 2              |
| Caelo           | Cooling cream DAB | 20001263003       | 1              |

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| Supplier | Substance         | Batch                      | Spectra |
|----------|-------------------|----------------------------|---------|
| Caelo    | Cooling cream DAB | 20000226001                | 1       |
| Caelo    | Cooling cream DAB | 200012590001               | 1       |
| Caelo    | Cooling cream DAB | 200001721001               | 1       |
| Caelo    | Cooling cream DAB | 20003303001                | 3       |
| Caelo    | Cooling cream DAB | 20002955001                | 2       |
| Caelo    | Cooling cream DAB | 20004348001                | 1       |
| Caelo    | Cooling cream DAB | 20004346001                | 1       |
| Caelo    | Cooling cream DAB | 20004349001                | 1       |
| Caelo    | Cooling cream DAB | 21000661001                | 1       |
| Caelo    | Cooling cream DAB | 19000334                   | 1       |
| Caelo    | Cooling cream DAB | CH-B17157201               | 1       |
| Caelo    | Cooling cream DAB | CH-B18219301               | 1       |
| Caelo    | Cooling cream DAB | CH-B19074301               | 1       |
| Caelo    | Cooling cream DAB | CHB19237201                | 1       |
| Caelo    | Cooling cream DAB | CHB20001259001             | 1       |
| Caelo    | Cooling cream DAB | 11268501                   | 1       |
| Caelo    | Cooling cream DAB | 13214010                   | 1       |
| Caelo    | Cooling cream DAB | 299361                     | 1       |
| Caelo    | Cooling cream DAB | 80027600004                | 1       |
| Caelo    | Cooling cream DAB | 3963/V12/14                | 1       |
| Caelo    | Cooling cream DAB | 13315801                   | 4       |
| Caelo    | Cooling cream DAB | 5600300                    | 1       |
| Caelo    | Cooling cream DAB | 15338601                   | 2       |
| Caelo    | Cooling cream DAB | 1700601                    | 2       |
| Caelo    | Cooling cream DAB | 17001963                   | 1       |
| Caelo    | Cooling cream DAB | 18002088                   | 1       |
| Caelo    | Cooling cream DAB | 6012127001                 | 1       |
| Caelo    | Cooling cream DAB | 20000333001                | 3       |
| Caelo    | Cooling cream DAB | 20002075001                | 2       |
| Caelo    | Cooling cream DAB | 307931                     | 1       |
| Caelo    | Cooling cream DAB | 12292102                   | 12      |
| Caelo    | Cooling cream DAB | 275666                     | 2       |
| Caelo    | Cooling cream DAB | 5321500                    | 1       |
| Caelo    | Cooling cream DAB | 12290102                   | 1       |
| Caelo    | Cooling cream DAB | 14129402                   | 2       |
| Caelo    | Cooling cream DAB | 8003478006                 | 1       |
| Caelo    | Cooling cream DAB | 19150102/19074401/19074501 | 1       |
| Caelo    | Cooling cream DAB | 192377101                  | 1       |
| Caelo    | Cooling cream DAB | 13051602                   | 3       |
| Caelo    | Cooling cream DAB | 3964/V01/15                | 1       |
| Caelo    | Cooling cream DAB | 13226301                   | 5       |
| Caelo    | Cooling cream DAB | 14145602                   | 2       |
| Caelo    | Cooling cream DAB | 16086001-20160615Ma1       | 1       |
| Caelo    | Cooling cream DAB | 306932                     | 1       |
| Caelo    | Cooling cream DAB | 1523609                    | 1       |
| Caelo    | Cooling cream DAB | 190744301                  | 1       |
| Caelo    | Cooling cream DAB | 19236701                   | 2       |
| Caelo    | Cooling cream DAB | 157301                     | 1       |
| Caelo    | Cooling cream DAB | 17000977                   | 1       |
| Caelo    | Cooling cream DAB | 2000033502                 | 1       |
| Caelo    | Cooling cream DAB | 14055703                   | 2       |
| Caelo    | Cooling cream DAB | 15008501                   | 1       |
| Caelo    | Cooling cream DAB | 14185101                   | 5       |
| Caelo    | Cooling cream DAB | 19001101                   | 3       |
| Caelo    | Cooling cream DAB | 272479                     | 2       |
| Caelo    | Cooling cream DAB | 271631                     | 1       |
| Caelo    | Cooling cream DAB | 273441                     | 2       |
| Caelo    | Cooling cream DAB | 12089701                   | 1       |
| Caelo    | Cooling cream DAB | 15434401/20160309/1        | 1       |
| Caelo    | Cooling cream DAB | 15434401/20160309/2        | 1       |

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| Supplier | Substance         | Batch              | Spectra |
|----------|-------------------|--------------------|---------|
| Caelo    | Cooling cream DAB | 15434401/201603093 | 1       |
| Caelo    | Cooling cream DAB | 18006325           | 1       |
| Caelo    | Cooling cream DAB | 310005             | 1       |
| Caelo    | Cooling cream DAB | 14184402           | 3       |
| Caelo    | Cooling cream DAB | 17000218           | 1       |
| Caelo    | Cooling cream DAB | 20002951001        | 2       |
| Caelo    | Cooling cream DAB | 15053001           | 3       |
| Caelo    | Cooling cream DAB | 12291301           | 1       |
| Caelo    | Cooling cream DAB | 13225701           | 2       |
| Caelo    | Cooling cream DAB | 133227401          | 1       |
| Caelo    | Cooling cream DAB | 18001083           | 2       |
| Caelo    | Cooling cream DAB | 18001082           | 3       |
| Caelo    | Cooling cream DAB | 190737701          | 1       |
| Caelo    | Cooling cream DAB | 1534501            | 1       |
| Caelo    | Cooling cream DAB | 43(18219201)       | 1       |
| Caelo    | Cooling cream DAB | 307358             | 1       |
| Caelo    | Cooling cream DAB | 1427801            | 1       |
| Caelo    | Cooling cream DAB | 1000010941         | 1       |
| Caelo    | Cooling cream DAB | 15066801           | 7       |
| Caelo    | Cooling cream DAB | 142728301          | 1       |
| Caelo    | Cooling cream DAB | 12178901           | 2       |
| Caelo    | Cooling cream DAB | 1315601            | 1       |
| Caelo    | Cooling cream DAB | 1543502            | 1       |
| Caelo    | Cooling cream DAB | 170728UL/17081801  | 1       |
| Caelo    | Cooling cream DAB | 18002309           | 2       |
| Caelo    | Cooling cream DAB | 19258105           | 1       |
| Caelo    | Cooling cream DAB | 21001233002        | 1       |
| Caelo    | Cooling cream DAB | 21001232001        | 1       |
| Caelo    | Cooling cream DAB | 3287               | 1       |
| Caelo    | Cooling cream DAB | 20003304001        | 1       |
| Caelo    | Cooling cream DAB | 20000225001        | 1       |
| Caelo    | Cooling cream DAB | 1312601            | 1       |
| Caelo    | Cooling cream DAB | 13191601           | 6       |
| Caelo    | Cooling cream DAB | 13227101           | 6       |
| Caelo    | Cooling cream DAB | 13315102           | 3       |
| Caelo    | Cooling cream DAB | 295762             | 1       |
| Caelo    | Cooling cream DAB | 1821901            | 1       |
| Caelo    | Cooling cream DAB | 14000501           | 5       |
| Caelo    | Cooling cream DAB | 289265             | 1       |
| Caelo    | Cooling cream DAB | 14278201           | 9       |
| Caelo    | Cooling cream DAB | 2000207301         | 1       |
| Caelo    | Cooling cream DAB | 192360901          | 1       |
| Caelo    | Cooling cream DAB | 3217I-02541        | 1       |
| Caelo    | Cooling cream DAB | 19237201           | 8       |
| Caelo    | Cooling cream DAB | 281822             | 2       |
| Caelo    | Cooling cream DAB | 18006312           | 3       |
| Caelo    | Cooling cream DAB | 18273201           | 14      |
| Caelo    | Cooling cream DAB | 16129502           | 2       |
| Caelo    | Cooling cream DAB | 307919             | 1       |
| Caelo    | Cooling cream DAB | 17253801           | 1       |
| Caelo    | Cooling cream DAB | 3012M-02541        | 1       |
| Caelo    | Cooling cream DAB | 5215A-02541        | 1       |
| Caelo    | Cooling cream DAB | 17000986           | 1       |
| Caelo    | Cooling cream DAB | 180420402          | 1       |
| Caelo    | Cooling cream DAB | 182218901          | 1       |
| Caelo    | Cooling cream DAB | 12046401           | 1       |
| Caelo    | Cooling cream DAB | 15236902           | 6       |
| Caelo    | Cooling cream DAB | 19198501           | 1       |
| Caelo    | Cooling cream DAB | 171298501          | 1       |
| Caelo    | Cooling cream DAB | 14086001           | 5       |

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| Supplier | Substance         | Batch        | Spectra |
|----------|-------------------|--------------|---------|
| Caelo    | Cooling cream DAB | 299357       | 1       |
| Caelo    | Cooling cream DAB | 14085902     | 4       |
| Caelo    | Cooling cream DAB | 14129501     | 4       |
| Caelo    | Cooling cream DAB | 14145901     | 10      |
| Caelo    | Cooling cream DAB | 12312201     | 4       |
| Caelo    | Cooling cream DAB | 12291901     | 2       |
| Caelo    | Cooling cream DAB | 1290301      | 1       |
| Caelo    | Cooling cream DAB | 13192001     | 8       |
| Caelo    | Cooling cream DAB | 13315601     | 6       |
| Caelo    | Cooling cream DAB | 13402201     | 16      |
| Caelo    | Cooling cream DAB | 14000201     | 7       |
| Caelo    | Cooling cream DAB | 13225801     | 1       |
| Caelo    | Cooling cream DAB | 14000301     | 12      |
| Caelo    | Cooling cream DAB | 14086801     | 8       |
| Caelo    | Cooling cream DAB | 14132401     | 12      |
| Caelo    | Cooling cream DAB | 14184701     | 7       |
| Caelo    | Cooling cream DAB | 14278502     | 7       |
| Caelo    | Cooling cream DAB | 14278601     | 4       |
| Caelo    | Cooling cream DAB | 1502801      | 1       |
| Caelo    | Cooling cream DAB | 14184301     | 1       |
| Caelo    | Cooling cream DAB | 5735600      | 1       |
| Caelo    | Cooling cream DAB | 14268002     | 1       |
| Caelo    | Cooling cream DAB | 14328701     | 3       |
| Caelo    | Cooling cream DAB | 1513101      | 2       |
| Caelo    | Cooling cream DAB | 1509201      | 1       |
| Caelo    | Cooling cream DAB | 15228801     | 14      |
| Caelo    | Cooling cream DAB | 15153401     | 1       |
| Caelo    | Cooling cream DAB | 16133801     | 4       |
| Caelo    | Cooling cream DAB | 1605801      | 1       |
| Caelo    | Cooling cream DAB | 310989       | 1       |
| Caelo    | Cooling cream DAB | 17000226     | 3       |
| Caelo    | Cooling cream DAB | 1725421      | 1       |
| Caelo    | Cooling cream DAB | 1718902      | 1       |
| Caelo    | Cooling cream DAB | 17254001     | 3       |
| Caelo    | Cooling cream DAB | 18042601     | 3       |
| Caelo    | Cooling cream DAB | 18002096     | 1       |
| Caelo    | Cooling cream DAB | 719A-03978   | 1       |
| Caelo    | Cooling cream DAB | 19237501     | 10      |
| Caelo    | Cooling cream DAB | 2000125002   | 1       |
| Caelo    | Cooling cream DAB | 20002074002  | 3       |
| Caelo    | Cooling cream DAB | 18003752     | 1       |
| Caelo    | Cooling cream DAB | 200001262001 | 1       |
| Caelo    | Cooling cream DAB | 14186601     | 1       |
| Caelo    | Cooling cream DAB | 41(17189701) | 1       |
| Caelo    | Cooling cream DAB | 42(17298002) | 1       |
| Caelo    | Cooling cream DAB | 307356       | 1       |
| Caelo    | Cooling cream DAB | 310988       | 2       |
| Caelo    | Cooling cream DAB | 18005204     | 4       |
| Caelo    | Cooling cream DAB | 1845         | 1       |
| Caelo    | Cooling cream DAB | 14185001     | 9       |
| Caelo    | Cooling cream DAB | P158/14      | 1       |
| Caelo    | Cooling cream DAB | 15048701     | 1       |
| Caelo    | Cooling cream DAB | 293748       | 1       |
| Caelo    | Cooling cream DAB | 16000601     | 12      |
| Caelo    | Cooling cream DAB | 299352       | 1       |
| Caelo    | Cooling cream DAB | 16173001     | 1       |
| Caelo    | Cooling cream DAB | 16434201     | 1       |
| Caelo    | Cooling cream DAB | 8002320007   | 2       |
| Caelo    | Cooling cream DAB | 8002875004   | 1       |
| Caelo    | Cooling cream DAB | 170614182    | 1       |

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| Supplier | Substance         | Batch                | Spectra |
|----------|-------------------|----------------------|---------|
| Caelo    | Cooling cream DAB | 306944               | 1       |
| Caelo    | Cooling cream DAB | 170926UL/17122701    | 1       |
| Caelo    | Cooling cream DAB | 171229UL/17122801    | 1       |
| Caelo    | Cooling cream DAB | 17000985             | 1       |
| Caelo    | Cooling cream DAB | 18002243             | 3       |
| Caelo    | Cooling cream DAB | 18000339             | 1       |
| Caelo    | Cooling cream DAB | 8003478007           | 1       |
| Caelo    | Cooling cream DAB | 18004433             | 1       |
| Caelo    | Cooling cream DAB | 92378011             | 1       |
| Caelo    | Cooling cream DAB | 17G03-B11-341399     | 1       |
| Caelo    | Cooling cream DAB | 20001263002          | 6       |
| Caelo    | Cooling cream DAB | 20001718001          | 2       |
| Caelo    | Cooling cream DAB | 20002267             | 1       |
| Caelo    | Cooling cream DAB | 2000295001           | 1       |
| Caelo    | Cooling cream DAB | 20002952002          | 2       |
| Caelo    | Cooling cream DAB | 20002592002          | 1       |
| Fagron   | Cooling cream DAB | 18218801             | 1       |
| Fagron   | Cooling cream DAB | 18183101             | 1       |
| Fagron   | Cooling cream DAB | 18218901             | 1       |
| Fagron   | Cooling cream DAB | 18219301             | 1       |
| Caelo    | Cooling cream DAB | 12178801             | 2       |
| Caelo    | Cooling cream DAB | 12253201             | 2       |
| Caelo    | Cooling cream DAB | 12312301             | 1       |
| Caelo    | Cooling cream DAB | 13059601             | 7       |
| Caelo    | Cooling cream DAB | 12312001             | 1       |
| Caelo    | Cooling cream DAB | 4313I-02541          | 1       |
| Caelo    | Cooling cream DAB | 14055401             | 2       |
| Caelo    | Cooling cream DAB | 14086601             | 4       |
| Caelo    | Cooling cream DAB | 14129401             | 14      |
| Caelo    | Cooling cream DAB | 14200401             | 1       |
| Caelo    | Cooling cream DAB | 15069201             | 1       |
| Caelo    | Cooling cream DAB | 16000801             | 7       |
| Caelo    | Cooling cream DAB | 16/268/L             | 1       |
| Caelo    | Cooling cream DAB | 1718980              | 1       |
| Caelo    | Cooling cream DAB | 913022UL             | 1       |
| Caelo    | Cooling cream DAB | 181892701            | 1       |
| Caelo    | Cooling cream DAB | 19001404             | 1       |
| Caelo    | Cooling cream DAB | 19043701             | 1       |
| Caelo    | Cooling cream DAB | 19002511             | 1       |
| Caelo    | Cooling cream DAB | 19000575002          | 4       |
| Caelo    | Cooling cream DAB | 20001719001          | 3       |
| Caelo    | Cooling cream DAB | 20003305002          | 1       |
| Caelo    | Cooling cream DAB | 2002955001           | 1       |
| Caelo    | Cooling cream DAB | 17081801-20170818Ma8 | 1       |
| Caelo    | Cooling cream DAB | 14145801             | 2       |
| Caelo    | Cooling cream DAB | 13121301             | 5       |
| Caelo    | Cooling cream DAB | 305018               | 1       |
| Caelo    | Cooling cream DAB | 12090201             | 2       |
| Caelo    | Cooling cream DAB | 13004301             | 3       |
| Caelo    | Cooling cream DAB | 12364701             | 2       |
| Caelo    | Cooling cream DAB | 14132201             | 6       |
| Caelo    | Cooling cream DAB | 14145701             | 5       |
| Caelo    | Cooling cream DAB | 1915M-02541          | 1       |
| Caelo    | Cooling cream DAB | 290386               | 2       |
| Caelo    | Cooling cream DAB | 160850801            | 1       |
| Caelo    | Cooling cream DAB | 16000401             | 1       |
| Caelo    | Cooling cream DAB | 305129               | 1       |
| Caelo    | Cooling cream DAB | 16301901             | 7       |
| Caelo    | Cooling cream DAB | 305022               | 1       |
| Caelo    | Cooling cream DAB | 306937               | 3       |

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| Supplier             | Substance         | Batch         | Spectra |
|----------------------|-------------------|---------------|---------|
| Caelo                | Cooling cream DAB | 306930        | 5       |
| Caelo                | Cooling cream DAB | 17033011      | 2       |
| Caelo                | Cooling cream DAB | 170975201     | 1       |
| Caelo                | Cooling cream DAB | 3144-17156801 | 1       |
| Caelo                | Cooling cream DAB | 1218Q-02541   | 1       |
| Caelo                | Cooling cream DAB | 18001077      | 1       |
| Caelo                | Cooling cream DAB | 18001081      | 1       |
| Caelo                | Cooling cream DAB | 18002092      | 1       |
| Caelo                | Cooling cream DAB | 2618M-02541   | 1       |
| Caelo                | Cooling cream DAB | 18001080      | 2       |
| Caelo                | Cooling cream DAB | 18002305      | 1       |
| Caelo                | Cooling cream DAB | 18005206      | 2       |
| Caelo                | Cooling cream DAB | 18182801      | 1       |
| Caelo                | Cooling cream DAB | 1828801       | 1       |
| Caelo                | Cooling cream DAB | 190400404     | 1       |
| Caelo                | Cooling cream DAB | 19237701      | 10      |
| Caelo                | Cooling cream DAB | 19237101      | 14      |
| Caelo                | Cooling cream DAB | 19004561      | 1       |
| Caelo                | Cooling cream DAB | 19000581001   | 12      |
| Caelo                | Cooling cream DAB | 20003329001   | 1       |
| Caelo                | Cooling cream DAB | 2000001       | 1       |
| Caelo                | Cooling cream DAB | 12089301      | 2       |
| Caelo                | Cooling cream DAB | 12089201      | 1       |
| Caelo                | Cooling cream DAB | 1312091       | 1       |
| Caelo                | Cooling cream DAB | 13191301      | 2       |
| Caelo                | Cooling cream DAB | 13226901      | 8       |
| Caelo                | Cooling cream DAB | 13226602      | 1       |
| Caelo                | Cooling cream DAB | 14271301      | 4       |
| Caelo                | Cooling cream DAB | 14097214      | 1       |
| Caelo                | Cooling cream DAB | 1513201       | 2       |
| Caelo                | Cooling cream DAB | 15417601      | 7       |
| Caelo                | Cooling cream DAB | 1543501       | 1       |
| Caelo                | Cooling cream DAB | 16129601      | 4       |
| Caelo                | Cooling cream DAB | 163230001     | 1       |
| Caelo                | Cooling cream DAB | 17330803      | 1       |
| Caelo                | Cooling cream DAB | 17298501      | 10      |
| Caelo                | Cooling cream DAB | 118042701     | 1       |
| Caelo                | Cooling cream DAB | 18272502      | 2       |
| Caelo                | Cooling cream DAB | 19000756      | 1       |
| Caelo                | Cooling cream DAB | 9150301       | 1       |
| Caelo                | Cooling cream DAB | 20001722001   | 6       |
| Caelo                | Cooling cream DAB | 2073001       | 1       |
| Caelo                | Cooling cream DAB | 20002074001   | 1       |
| Caelo                | Cooling cream DAB | 200003305001  | 1       |
| Caelo                | Cooling cream DAB | 170750101     | 1       |
| Caelo                | Cooling cream DAB | 4817A-02541   | 1       |
| Caelo                | Cooling cream DAB | 16323001      | 9       |
| Caelo                | Cooling cream DAB | 3413E-02541   | 1       |
| Caelo                | Cooling cream DAB | 20000023001   | 1       |
| Caeolo/Ahd           | Cooling cream DAB | 18272802      | 1       |
| Caeolo/Noweda        | Cooling cream DAB | 18219301      | 1       |
| Caeolo/Phönix        | Cooling cream DAB | 16354401      | 1       |
| Caeolo/Sanacorp      | Cooling cream DAB | 17330802      | 1       |
| Caesar & Loretz      | Cooling cream DAB | 16244701      | 2       |
| Caesar & Loretz      | Cooling cream DAB | 17075101      | 1       |
| Caesar & Loretz      | Cooling cream DAB | 17075201      | 1       |
| Caesar & Loretz      | Cooling cream DAB | 17254201      | 1       |
| Caesar & Loretz      | Cooling cream DAB | 18182301      | 1       |
| Caesar & Loretz      | Cooling cream DAB | 18218302      | 2       |
| Caesar & Loretz GmbH | Cooling cream DAB | 12178901      | 1       |

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| <b>Supplier</b>      | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------|-------------------|--------------|----------------|
| Caesar & Loretz GmbH | Cooling cream DAB | 12306001     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 282019       | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 13315101     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 13315201     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 14085901     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 14184501     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 15228601     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 15434401     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 14278701     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 17330802     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182301     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182401     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182501     | 4              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182601     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18272801     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18272802     | 5              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18273001     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182701     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18218701     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18182801     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18273101     | 4              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18218401     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18005202     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18219301     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 18273201     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19001201     | 4              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19001301     | 10             |
| Caesar & Loretz GmbH | Cooling cream DAB | 19073701     | 14             |
| Caesar & Loretz GmbH | Cooling cream DAB | 18218502     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19074101     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19074003     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19074201     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19074301     | 4              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19073802     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19001419     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19073901     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19153201     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19150201     | 6              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19154701     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19154901     | 4              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19155001     | 8              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19155202     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19236901     | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237701     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19155101     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237101     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19236701     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237601     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237201     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237301     | 3              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19237801     | 5              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19236801     | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19000579001  | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19000582001  | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19000576001  | 6              |
| Caesar & Loretz GmbH | Cooling cream DAB | 20000224001  | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 20000230001  | 2              |
| Caesar & Loretz GmbH | Cooling cream DAB | 20000331001  | 1              |
| Caesar & Loretz GmbH | Cooling cream DAB | 20001262001  | 7              |
| Caesar & Loretz GmbH | Cooling cream DAB | 19000583001  | 4              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Cooling cream DAB | 20000231001  | 5              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001263002  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20000232001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20000332001  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20000229001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20000335001  | 4              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001263001  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001719001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001722002  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001257001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20002073001  | 3              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20002074001  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001261001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20001716002  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20002075001  | 2              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20004341002  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20004343001  | 1              |
| Caesar & Loretz GmbH       | Cooling cream DAB | 20003305002  | 1              |
| Caesar & Loretz GmbH / ... | Cooling cream DAB | 19074501     | 1              |
| Caesar & Loretz GmbH / ... | Cooling cream DAB | 19150102     | 1              |
| Caesar & Loretz GmbH / ... | Cooling cream DAB | 19237701     | 2              |
| Caesar & Loretz GmbH 40... | Cooling cream DAB | 11299001     | 1              |
| Caesar & Loretz GmbH D-... | Cooling cream DAB | 12253001     | 1              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 12046001     | 1              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 12046201     | 2              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 12174401     | 2              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 12182801     | 2              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 12292301     | 1              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13059601     | 1              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13121401     | 2              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13121701     | 2              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13175101     | 4              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13192001     | 1              |
| Caesar & Loretz GmbH, 4... | Cooling cream DAB | 13315601     | 1              |
| Caesar & Loretz GmbH//S... | Cooling cream DAB | 20000231001  | 1              |
| Caesar & Loretz GmbH//S... | Cooling cream DAB | 20000229001  | 1              |
| Caesar & Loretz GmbH/AEP   | Cooling cream DAB | 19237201     | 1              |
| Caesar & Loretz GmbH/AHD   | Cooling cream DAB | 19237101     | 2              |
| Caesar & Loretz GmbH/AHD   | Cooling cream DAB | 20000230001  | 1              |
| Caesar & Loretz GmbH/Al... | Cooling cream DAB | 1900057001   | 1              |
| Caesar & Loretz GmbH/An... | Cooling cream DAB | 19074101     | 1              |
| Caesar & Loretz GmbH/An... | Cooling cream DAB | 19237101     | 1              |
| Caesar & Loretz GmbH/Fi... | Cooling cream DAB | 19001201     | 2              |
| Caesar & Loretz GmbH/Fi... | Cooling cream DAB | 19155001     | 2              |
| Caesar & Loretz GmbH/Gehe  | Cooling cream DAB | 19073802     | 2              |
| Caesar & Loretz GmbH/GEHE  | Cooling cream DAB | 19073801     | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 19074501     | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 19150101     | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 19154701     | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 19237301     | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 20000230001  | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 20000228001  | 1              |
| Caesar & Loretz GmbH/Je... | Cooling cream DAB | 20000335001  | 1              |
| Caesar & Loretz GmbH/Kehr  | Cooling cream DAB | 19001401     | 1              |
| Caesar & Loretz GmbH/Kehr  | Cooling cream DAB | 19073802     | 1              |
| Caesar & Loretz GmbH/No... | Cooling cream DAB | 18218901     | 1              |
| Caesar & Loretz GmbH/No... | Cooling cream DAB | 19150201     | 1              |
| Caesar & Loretz GmbH/No... | Cooling cream DAB | 19155101     | 1              |
| Caesar & Loretz GmbH/Ph... | Cooling cream DAB | 20002951001  | 1              |
| Caesar & Loretz GmbH/ph... | Cooling cream DAB | 20001262001  | 1              |

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| Supplier                   | Substance         | Batch           | Spectra |
|----------------------------|-------------------|-----------------|---------|
| Caesar & Loretz GmbH/Ph... | Cooling cream DAB | 20000228001     | 1       |
| Caesar & Loretz GmbH/Ph... | Cooling cream DAB | 20001716002     | 1       |
| Caesar & Loretz GmbH/Ph... | Cooling cream DAB | 20004347001     | 2       |
| Caesar & Loretz GmbH/Sa... | Cooling cream DAB | 20002073001     | 1       |
| Caesar und Loretz GmbH     | Cooling cream DAB | 17122801        | 1       |
| Caesar&Loretz              | Cooling cream DAB | 15228501        | 2       |
| Caesar&Loretz              | Cooling cream DAB | 16354401        | 2       |
| Caesar&Loretz/Noweda       | Cooling cream DAB | 15328001        | 1       |
| Caesar/Gehe                | Cooling cream DAB | 19000582002     | 1       |
| Caesar/Lorenz              | Cooling cream DAB | 13004401        | 1       |
| CaesaruLorenzIPhoenix      | Cooling cream DAB | 15049201        | 1       |
| Caeser&Loretz GmbH         | Cooling cream DAB | 20001722001     | 1       |
| Caeser/Phönix              | Cooling cream DAB | 4223719         | 1       |
| Caleo                      | Cooling cream DAB | 16246201        | 1       |
| Caleo/ Ebert               | Cooling cream DAB | 18104601        | 1       |
| Caleo/ Noweda              | Cooling cream DAB | 18273001        | 1       |
| Caleo/Phönix               | Cooling cream DAB | 14086501        | 1       |
| calo                       | Cooling cream DAB | 13004701        | 2       |
| Calo/AHD                   | Cooling cream DAB | 14328702        | 1       |
| CALO/Sanacorp 030918       | Cooling cream DAB | 18183001        | 1       |
| CALO/Sanacorp 0409         | Cooling cream DAB | 18182901        | 1       |
| cealo                      | Cooling cream DAB | 15066901        | 1       |
| cealo                      | Cooling cream DAB | 18182501        | 1       |
| Cealo                      | Cooling cream DAB | 14086201        | 1       |
| Cealo                      | Cooling cream DAB | 14288701        | 1       |
| Cealo                      | Cooling cream DAB | 17157001        | 1       |
| Cealo/ Anzag               | Cooling cream DAB | 307932          | 1       |
| Cealo/ Noweda              | Cooling cream DAB | 14c06-t02010890 | 1       |
| Cealo/ Noweda              | Cooling cream DAB | 15228501        | 1       |
| Cealo/AHD                  | Cooling cream DAB | 15434402        | 1       |
| Cealo/Gehe                 | Cooling cream DAB | 12052002        | 2       |
| Cealo/Sanacorp             | Cooling cream DAB | 19073701        | 1       |
| Celo/ Kehr                 | Cooling cream DAB | 16172001        | 1       |
| chaelo/gehe                | Cooling cream DAB | 17254101        | 2       |
| Chiesi                     | Cooling cream DAB | 15228701        | 1       |
| Cordes/Gehe                | Cooling cream DAB | 17255101        | 1       |
| Cordes/Phönix              | Cooling cream DAB | 15434402        | 1       |
| DAB 2008                   | Cooling cream DAB | 12089601        | 1       |
| DAB 2010                   | Cooling cream DAB | 14269301        | 1       |
| Defektur                   | Cooling cream DAB | 160308004       | 1       |
| Delta                      | Cooling cream DAB | 17330802        | 1       |
| Delta                      | Cooling cream DAB | 18042401        | 1       |
| Delta Apotheke             | Cooling cream DAB | 18182301        | 1       |
| Delta Apotheke             | Cooling cream DAB | 18182501        | 2       |
| Dr.August Wolff/Phönix     | Cooling cream DAB | 16172701        | 1       |
| Dr.Wolff                   | Cooling cream DAB | 17001971        | 1       |
| E Plus                     | Cooling cream DAB | 305957          | 1       |
| E Plus                     | Cooling cream DAB | 307929          | 1       |
| E Plus                     | Cooling cream DAB | 309999          | 1       |
| E Plus                     | Cooling cream DAB | 17001961        | 2       |
| Ebert                      | Cooling cream DAB | 17075301        | 1       |
| Ebert & Jacobi             | Cooling cream DAB | 17298701        | 1       |
| Ebert & Jacobi 02.08.16    | Cooling cream DAB | 301701          | 1       |
| Ebert/Lamotte              | Cooling cream DAB | 8002696003      | 1       |
| EB-Ho                      | Cooling cream DAB | 295184          | 1       |
| Euro OTC                   | Cooling cream DAB | 308491          | 1       |
| Euro OTC                   | Cooling cream DAB | caelo           | 1       |
| Euro OTC                   | Cooling cream DAB | 16134201        | 1       |
| Euro OTC                   | Cooling cream DAB | 16172001        | 1       |
| Euro OTC                   | Cooling cream DAB | 17001969        | 1       |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|-------------------|------------------|----------------|
| Euro OTC                   | Cooling cream DAB | 18273001         | 1              |
| Euro OTC                   | Cooling cream DAB | 306931           | 1              |
| Euro OTC                   | Cooling cream DAB | 286563           | 1              |
| Euro OTC                   | Cooling cream DAB | 299976           | 1              |
| Euro OTC                   | Cooling cream DAB | 17157201         | 2              |
| Euro OTC                   | Cooling cream DAB | 307358           | 1              |
| Euro OTC                   | Cooling cream DAB | 13227101         | 1              |
| Euro OTC                   | Cooling cream DAB | 17000973         | 2              |
| Euro OTC                   | Cooling cream DAB | 8003478007       | 1              |
| Euro OTC                   | Cooling cream DAB | 18005202         | 3              |
| Euro OTC                   | Cooling cream DAB | 16134001         | 1              |
| Fagron                     | Cooling cream DAB | 17254101         | 1              |
| Fagron                     | Cooling cream DAB | 12G25-T02        | 2              |
| Fagron                     | Cooling cream DAB | 13E10-T01-003539 | 2              |
| Fagron                     | Cooling cream DAB | 14A20            | 1              |
| Fagron                     | Cooling cream DAB | 289253           | 1              |
| Fagron                     | Cooling cream DAB | B15A30T07018676  | 1              |
| Fagron                     | Cooling cream DAB | 15A30-T07-018974 | 2              |
| Fagron                     | Cooling cream DAB | 15A30-T07-018975 | 1              |
| Fagron                     | Cooling cream DAB | 15L03-T06-028365 | 2              |
| Fagron                     | Cooling cream DAB | 1802D001         | 1              |
| Fagron                     | Cooling cream DAB | 18219201         | 1              |
| Fagron                     | Cooling cream DAB | 1909D001         | 1              |
| Fagron                     | Cooling cream DAB | 1909d001         | 1              |
| Fagron                     | Cooling cream DAB | 1807d001         | 1              |
| Fagron                     | Cooling cream DAB | 13D19-T01-002941 | 1              |
| Fagron                     | Cooling cream DAB | 16301801         | 1              |
| Fagron                     | Cooling cream DAB | 17075101         | 1              |
| Fagron                     | Cooling cream DAB | 15228601         | 1              |
| Fagron                     | Cooling cream DAB | 8003478004       | 3              |
| Fagron                     | Cooling cream DAB | 18002094         | 1              |
| Fagron                     | Cooling cream DAB | 18002308         | 1              |
| Fagron                     | Cooling cream DAB | 277533           | 1              |
| Fagron                     | Cooling cream DAB | 14132001         | 1              |
| Fagron                     | Cooling cream DAB | 18218601         | 1              |
| Fagron                     | Cooling cream DAB | 18182401         | 1              |
| Fagron                     | Cooling cream DAB | 18002243         | 1              |
| Fagron                     | Cooling cream DAB | 304595           | 1              |
| Fagron                     | Cooling cream DAB | 7070001          | 1              |
| Fagron                     | Cooling cream DAB | 15236801         | 1              |
| Fagron                     | Cooling cream DAB | 18005201         | 2              |
| Fer. Eimermacher GmbH &... | Cooling cream DAB | 19074301         | 1              |
| Fiebig                     | Cooling cream DAB | 6002062002       | 1              |
| Fiebig                     | Cooling cream DAB | 8002320007       | 1              |
| Fiebig                     | Cooling cream DAB | 17254601         | 1              |
| Fiebig                     | Cooling cream DAB | 8003478005       | 1              |
| Fiebig                     | Cooling cream DAB | 17254901         | 3              |
| Fiebig                     | Cooling cream DAB | 17255101         | 2              |
| Fiebig                     | Cooling cream DAB | 18042801         | 1              |
| Fiebig                     | Cooling cream DAB | 18003172         | 1              |
| Fiebig                     | Cooling cream DAB | 18004427         | 1              |
| Fiebig                     | Cooling cream DAB | 18005203         | 1              |
| Fiebig                     | Cooling cream DAB | 18218701         | 1              |
| Fiebig                     | Cooling cream DAB | 18218301         | 2              |
| Fiebig                     | Cooling cream DAB | 18219401         | 1              |
| Fiebig                     | Cooling cream DAB | 19000327         | 1              |
| Fiebig                     | Cooling cream DAB | 19001301         | 1              |
| Fiebig                     | Cooling cream DAB | 19001501         | 1              |
| Fiebig                     | Cooling cream DAB | 19001397         | 1              |
| Fiebig                     | Cooling cream DAB | 19237701         | 1              |

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| Supplier           | Substance         | Batch       | Spectra |
|--------------------|-------------------|-------------|---------|
| Fiebig             | Cooling cream DAB | 20000333001 | 1       |
| Fiebig             | Cooling cream DAB | 20001261001 | 1       |
| Fiebig ek: 9.07EUR | Cooling cream DAB | 1204001     | 1       |
| Caelo              | Cooling cream DAB | 17000983    | 1       |
| Fontapharm/Phönix  | Cooling cream DAB | 286565      | 1       |
| GAlderma/Phönix    | Cooling cream DAB | 18004430    | 1       |
| gehe               | Cooling cream DAB | 13315102    | 1       |
| gehe               | Cooling cream DAB | 17189701    | 1       |
| Gehe               | Cooling cream DAB | 266839      | 2       |
| Gehe               | Cooling cream DAB | 269098      | 3       |
| Gehe               | Cooling cream DAB | 269093      | 2       |
| Gehe               | Cooling cream DAB | 271535      | 1       |
| Gehe               | Cooling cream DAB | 270314      | 1       |
| Gehe               | Cooling cream DAB | 274044      | 2       |
| Gehe               | Cooling cream DAB | 12292401    | 1       |
| Gehe               | Cooling cream DAB | 274909      | 2       |
| Gehe               | Cooling cream DAB | 12312801    | 1       |
| Gehe               | Cooling cream DAB | 12364601    | 1       |
| Gehe               | Cooling cream DAB | 13004701    | 1       |
| Gehe               | Cooling cream DAB | 276283      | 3       |
| Gehe               | Cooling cream DAB | 279681      | 2       |
| Gehe               | Cooling cream DAB | 13191501    | 1       |
| Gehe               | Cooling cream DAB | 278518      | 1       |
| Gehe               | Cooling cream DAB | 283053      | 1       |
| Gehe               | Cooling cream DAB | 282020      | 1       |
| Gehe               | Cooling cream DAB | 13315201    | 1       |
| Gehe               | Cooling cream DAB | 283114      | 1       |
| Gehe               | Cooling cream DAB | 281036      | 1       |
| Gehe               | Cooling cream DAB | 282022      | 1       |
| Gehe               | Cooling cream DAB | 284300      | 1       |
| Gehe               | Cooling cream DAB | 285066      | 1       |
| Gehe               | Cooling cream DAB | 286565      | 1       |
| Gehe               | Cooling cream DAB | 14129402    | 1       |
| Gehe               | Cooling cream DAB | 14329201    | 1       |
| Gehe               | Cooling cream DAB | 290485      | 2       |
| Gehe               | Cooling cream DAB | 14329501    | 1       |
| Gehe               | Cooling cream DAB | 293618      | 1       |
| Gehe               | Cooling cream DAB | 293677      | 1       |
| Gehe               | Cooling cream DAB | 14329301    | 1       |
| Gehe               | Cooling cream DAB | 294121      | 1       |
| Gehe               | Cooling cream DAB | 15228502    | 1       |
| Gehe               | Cooling cream DAB | 295023      | 1       |
| Gehe               | Cooling cream DAB | 15228801    | 1       |
| Gehe               | Cooling cream DAB | 15417201    | 2       |
| Gehe               | Cooling cream DAB | 15434402    | 1       |
| Gehe               | Cooling cream DAB | 6001092002  | 1       |
| Gehe               | Cooling cream DAB | 16085801    | 1       |
| Gehe               | Cooling cream DAB | 16172601    | 2       |
| Gehe               | Cooling cream DAB | 16244601    | 1       |
| Gehe               | Cooling cream DAB | 16246201    | 1       |
| Gehe               | Cooling cream DAB | 6003682010  | 3       |
| Gehe               | Cooling cream DAB | 8002320007  | 1       |
| Gehe               | Cooling cream DAB | 16354401    | 3       |
| Gehe               | Cooling cream DAB | 8002320008  | 1       |
| Gehe               | Cooling cream DAB | 305961      | 1       |
| Gehe               | Cooling cream DAB | 308723      | 5       |
| Gehe               | Cooling cream DAB | 171115601   | 1       |
| Gehe               | Cooling cream DAB | 17075201    | 1       |
| Gehe               | Cooling cream DAB | 17075101    | 1       |
| Gehe               | Cooling cream DAB | 310986      | 1       |

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| Supplier               | Substance         | Batch            | Spectra |
|------------------------|-------------------|------------------|---------|
| Gehe                   | Cooling cream DAB | 17254101         | 1       |
| Gehe                   | Cooling cream DAB | 17002971         | 1       |
| Gehe                   | Cooling cream DAB | 18042401         | 1       |
| Gehe                   | Cooling cream DAB | 18182301         | 4       |
| Gehe                   | Cooling cream DAB | 18003174         | 1       |
| Gehe                   | Cooling cream DAB | 18182601         | 1       |
| Gehe                   | Cooling cream DAB | 18005606         | 1       |
| Gehe                   | Cooling cream DAB | 18005206         | 1       |
| Gehe                   | Cooling cream DAB | 19000331         | 1       |
| Gehe                   | Cooling cream DAB | 19001402         | 2       |
| Gehe                   | Cooling cream DAB | 19002522         | 1       |
| Gehe                   | Cooling cream DAB | 19073801         | 1       |
| Gehe                   | Cooling cream DAB | 19004562         | 1       |
| Gehe                   | Cooling cream DAB | 192376001        | 1       |
| Gehe                   | Cooling cream DAB | 20002268         | 2       |
| Gehe                   | Cooling cream DAB | 21001948         | 1       |
| GEHE                   | Cooling cream DAB | 12364801         | 1       |
| GEHE                   | Cooling cream DAB | 304594           | 1       |
| GEHE                   | Cooling cream DAB | 305953           | 1       |
| GEHE                   | Cooling cream DAB | 307933           | 1       |
| GEHE                   | Cooling cream DAB | 308725           | 1       |
| GEHE                   | Cooling cream DAB | 309370           | 1       |
| GEHE                   | Cooling cream DAB | 17254101         | 1       |
| GEHE                   | Cooling cream DAB | 18042801         | 1       |
| GEHE                   | Cooling cream DAB | 18182702         | 1       |
| GEHE                   | Cooling cream DAB | 18218701         | 1       |
| GEHE                   | Cooling cream DAB | 18183301         | 1       |
| GEHE                   | Cooling cream DAB | 19000334         | 1       |
| GEHE                   | Cooling cream DAB | 19074401         | 1       |
| GEHE                   | Cooling cream DAB | 19074501         | 1       |
| GEHE                   | Cooling cream DAB | 19154701         | 1       |
| Caelo                  | Cooling cream DAB | 14258301         | 1       |
| GEHE 3.04.2014         | Cooling cream DAB | 14055703         | 2       |
| gehe 7.12.13           | Cooling cream DAB | 13226701         | 1       |
| Gehe am 03.02.2014     | Cooling cream DAB | 1322701          | 1       |
| GEHE Kassel 25.01.2019 | Cooling cream DAB | 18006322         | 1       |
| Caelo                  | Cooling cream DAB | 20000224001      | 1       |
| Bombastus              | Cooling cream DAB | 19001409         | 2       |
| Bombastus              | Cooling cream DAB | 20004644         | 3       |
| Caelo                  | Cooling cream DAB | 18004428         | 1       |
| Caelo                  | Cooling cream DAB | 19000328         | 1       |
| Bombastus              | Cooling cream DAB | 288159           | 1       |
| Bombastus              | Cooling cream DAB | 299973           | 2       |
| Bombastus              | Cooling cream DAB | 302377           | 2       |
| Bombastus              | Cooling cream DAB | 305017           | 2       |
| Bombastus              | Cooling cream DAB | 307931           | 1       |
| Bombastus              | Cooling cream DAB | 17000227         | 1       |
| Bombastus              | Cooling cream DAB | 18003169         | 2       |
| Bombastus              | Cooling cream DAB | 265548           | 1       |
| Bombastus              | Cooling cream DAB | 268073           | 3       |
| Bombastus              | Cooling cream DAB | 20002266         | 1       |
| Caelo                  | Cooling cream DAB | 1291116          | 1       |
| Caelo                  | Cooling cream DAB | 308723           | 1       |
| Caelo                  | Cooling cream DAB | 1040917/17075201 | 1       |
| Caelo                  | Cooling cream DAB | 17255901         | 2       |
| Caelo                  | Cooling cream DAB | 17296401         | 1       |
| Caelo                  | Cooling cream DAB | 18002094         | 1       |
| Caelo                  | Cooling cream DAB | 1900058001       | 1       |
| Euro OTC               | Cooling cream DAB | 16129501         | 1       |
| Geibo/Noweda           | Cooling cream DAB | 17298101         | 1       |

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| Supplier                     | Substance         | Batch       | Spectra |
|------------------------------|-------------------|-------------|---------|
| Caelo                        | Cooling cream DAB | 192238001   | 1       |
| Gutenberg-Apotheke           | Cooling cream DAB | 84187       | 1       |
| Hedinger                     | Cooling cream DAB | 18218503    | 2       |
| Hedinger                     | Cooling cream DAB | 19001301    | 1       |
| Hedinger/Gehe                | Cooling cream DAB | 16134201    | 1       |
| Henry L/Spangro              | Cooling cream DAB | 80026960003 | 1       |
| Henry L/Spangro              | Cooling cream DAB | 8003158005  | 4       |
| Henry L/Spangro              | Cooling cream DAB | 8003478005  | 6       |
| Henry Lamotte                | Cooling cream DAB | 8005213002  | 1       |
| Henry Lamotte                | Cooling cream DAB | 5407300     | 1       |
| Henry Lamotte                | Cooling cream DAB | 5496300     | 1       |
| Henry Lamotte                | Cooling cream DAB | 5691200     | 1       |
| Henry Lamotte                | Cooling cream DAB | 14328702    | 1       |
| Henry Lamotte                | Cooling cream DAB | 5861000     | 1       |
| Henry Lamotte                | Cooling cream DAB | 6000083005  | 2       |
| Henry Lamotte                | Cooling cream DAB | 6001092001  | 1       |
| Henry Lamotte                | Cooling cream DAB | 6003682010  | 1       |
| Henry Lamotte                | Cooling cream DAB | 8002320007  | 1       |
| Henry Lamotte                | Cooling cream DAB | 8002875004  | 1       |
| Henry Lamotte                | Cooling cream DAB | 8003158004  | 3       |
| Henry Lamotte                | Cooling cream DAB | 8003478006  | 2       |
| Henry Lamotte                | Cooling cream DAB | 8005213001  | 5       |
| Henry Lamotte                | Cooling cream DAB | 1000010942  | 3       |
| Henry Lamotte                | Cooling cream DAB | 1000012827  | 2       |
| Henry Lamotte / AHD          | Cooling cream DAB | 1000011853  | 1       |
| Henry lamotte / Noweda       | Cooling cream DAB | 1000012828  | 1       |
| Henry Lamotte Oils           | Cooling cream DAB | 6003682010  | 1       |
| Henry Lamotte Oils           | Cooling cream DAB | 6001092001  | 1       |
| Henry Lamotte Oils / Al. ... | Cooling cream DAB | 6012127001  | 1       |
| Henry Lamotte Oils / Gehe    | Cooling cream DAB | 8002875004  | 1       |
| henry Lamotte Oils GmbH      | Cooling cream DAB | 8003478007  | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 12292301    | 3       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 8003158004  | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 8003478005  | 2       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 8003478004  | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 17001970    | 2       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 8003478010  | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 6012127001  | 2       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 8004538001  | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 10000010942 | 1       |
| Henry Lamotte Oils GmbH      | Cooling cream DAB | 1000011854  | 2       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8003478005  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8003478008  | 2       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8003478004  | 1       |
| Henry Lamotte oils GmbH...   | Cooling cream DAB | 8002320008  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 6002062002  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8002320007  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8003478006  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8004538001  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 8005213002  | 1       |
| Henry Lamotte Oils GmbH...   | Cooling cream DAB | 1000012827  | 1       |
| Henry Lamotte Oils/ Gehe     | Cooling cream DAB | 8003158004  | 2       |
| Henry Lamotte Oils/Gehe      | Cooling cream DAB | 8004538001  | 1       |
| Henry Lamotte Oils/GEHE      | Cooling cream DAB | 5407600     | 1       |
| Henry Lamotte Oils/GEHE      | Cooling cream DAB | 5496200     | 1       |
| Henry Lamotte Oils/GEHE      | Cooling cream DAB | 5600300     | 1       |
| Henry Lamotte Oils/GEHE      | Cooling cream DAB | 5691200     | 1       |
| Henry Lamotte Oils/GEHE      | Cooling cream DAB | 5735600     | 1       |
| Henry Lamotte Olis GmbH      | Cooling cream DAB | 5735600     | 1       |
| Henry Lamotte Olis GmbH...   | Cooling cream DAB | 5600300     | 2       |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Henry Lamotte/ Anzag       | Cooling cream DAB | 8002875004   | 1              |
| Henry Lamotte/ Gehe        | Cooling cream DAB | 1000010941   | 1              |
| Henry Lamotte/ Gehe        | Cooling cream DAB | 1000011853   | 3              |
| Henry Lamotte/Anzag        | Cooling cream DAB | 8002320007   | 1              |
| Henry Lamotte/GEHE         | Cooling cream DAB | 5163700      | 1              |
| Henry Lamotte/GEHE         | Cooling cream DAB | 5316800      | 1              |
| Henry Lamotte/GEHE         | Cooling cream DAB | 5321500      | 1              |
| Henry Lamotte/GEHE         | Cooling cream DAB | 5407300      | 1              |
| Henry Lamotte/N/19.11.12   | Cooling cream DAB | 5253700      | 1              |
| Henry Lamotte/Noweda       | Cooling cream DAB | 8003478005   | 1              |
| Henry Lamotte/Noweda       | Cooling cream DAB | 8003478006   | 1              |
| Henry Lamotte/Noweda       | Cooling cream DAB | 8005213002   | 2              |
| Henry Lamotte/Phoenix      | Cooling cream DAB | 8005213002   | 1              |
| Henry Lamotte/Phoenix      | Cooling cream DAB | 1000014594   | 1              |
| HENRY LAMOTTE/Phönix       | Cooling cream DAB | 6001092002   | 1              |
| Henry Lamotte/Spangro      | Cooling cream DAB | 8002320007   | 1              |
| Henry LamotteAlliance H... | Cooling cream DAB | 1000014594   | 1              |
| Henry LamotteAlliance H... | Cooling cream DAB | 1000015312   | 1              |
| Henry Lamotte Oils GmbH    | Cooling cream DAB | 6002062002   | 1              |
| HenryFiebig                | Cooling cream DAB | 8003478007   | 1              |
| HenryL/Spangro             | Cooling cream DAB | 61360        | 1              |
| Hepart                     | Cooling cream DAB | 16244701     | 2              |
| Hepart                     | Cooling cream DAB | 18042402     | 1              |
| Herbasinica                | Cooling cream DAB | 14085901     | 1              |
| Hubert Müller              | Cooling cream DAB | 15417501     | 1              |
| Ichthyol                   | Cooling cream DAB | 16000801     | 1              |
| Ichthyol                   | Cooling cream DAB | 19000762     | 1              |
| Ichthyol Gesellschaft      | Cooling cream DAB | 17254501     | 1              |
| ichthyol/AHD               | Cooling cream DAB | 281921       | 2              |
| Ichthyol-Gesellschaft      | Cooling cream DAB | 16172601     | 1              |
| Ichthyol-Gesellschaft, ... | Cooling cream DAB | 3036532      | 1              |
| Jenne                      | Cooling cream DAB | 17298301     | 1              |
| Jenne                      | Cooling cream DAB | 20000244     | 1              |
| Jenne/Bomba/17.03.20       | Cooling cream DAB | 19004561     | 1              |
| Kehr                       | Cooling cream DAB | 8002875004   | 1              |
| Kehr                       | Cooling cream DAB | 301702       | 1              |
| Kehr                       | Cooling cream DAB | 17000986     | 1              |
| Kehr                       | Cooling cream DAB | 18182701     | 1              |
| Kehr.09.07.2020            | Cooling cream DAB | 20000243     | 1              |
| Kehr.29.01.2020            | Cooling cream DAB | 19004568     | 1              |
| Kehr/Henry Lamotte         | Cooling cream DAB | 1000010941   | 1              |
| Klenk                      | Cooling cream DAB | 17298301     | 1              |
| Klenk                      | Cooling cream DAB | 17033001     | 3              |
| Klenk                      | Cooling cream DAB | 13226801     | 1              |
| Kremer/Phönix              | Cooling cream DAB | 15/158/K     | 1              |
| Krieger                    | Cooling cream DAB | 20000335002  | 1              |
| Krieger am 23.05.2019      | Cooling cream DAB | 19001403     | 1              |
| Krieger/Lamotte            | Cooling cream DAB | 6002062002   | 1              |
| L12                        | Cooling cream DAB | 16301801     | 4              |
| lamotte                    | Cooling cream DAB | 8003158004   | 1              |
| Lamotte                    | Cooling cream DAB | 13226601     | 1              |
| Lamotte                    | Cooling cream DAB | 600008306    | 1              |
| Lamotte                    | Cooling cream DAB | 5861000      | 1              |
| Lamotte                    | Cooling cream DAB | 6000744001   | 1              |
| Lamotte                    | Cooling cream DAB | CH8003478005 | 1              |
| Lamotte                    | Cooling cream DAB | 8003478007   | 2              |
| Lamotte                    | Cooling cream DAB | 19237101     | 1              |
| Lamotte                    | Cooling cream DAB | 1000011853   | 1              |
| Lamotte                    | Cooling cream DAB | 1000010941   | 1              |
| Lamotte / AHC              | Cooling cream DAB | 8005213001   | 5              |

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| Supplier             | Substance         | Batch      | Spectra |
|----------------------|-------------------|------------|---------|
| Lamotte / AHD        | Cooling cream DAB | 8003478004 | 1       |
| Lamotte / Phönix     | Cooling cream DAB | 6012127002 | 3       |
| Lamotte Sanacorp     | Cooling cream DAB | 5496200    | 3       |
| Lamotte Sanacorp     | Cooling cream DAB | 5600300    | 1       |
| Lamotte/ Gehe        | Cooling cream DAB | 1000011853 | 1       |
| Lamotte/ Gehe        | Cooling cream DAB | 1000012827 | 1       |
| Lamotte/ Phönix      | Cooling cream DAB | 5600300    | 1       |
| Lamotte/AHC          | Cooling cream DAB | 8002696003 | 1       |
| Lamotte/AHD          | Cooling cream DAB | 5600300    | 2       |
| Lamotte/AHD          | Cooling cream DAB | 6000744001 | 2       |
| Lamotte/AHD          | Cooling cream DAB | 6001092001 | 1       |
| Lamotte/AHD          | Cooling cream DAB | 8002696003 | 3       |
| Lamotte/AHD          | Cooling cream DAB | 8002875004 | 2       |
| Lamotte/AHD          | Cooling cream DAB | 8003478005 | 2       |
| Lamotte/AHD          | Cooling cream DAB | 8003478007 | 2       |
| Lamotte/AHD          | Cooling cream DAB | 8003478008 | 1       |
| Lamotte/AHD          | Cooling cream DAB | 8003478009 | 1       |
| Lamotte/AHD          | Cooling cream DAB | 6012127002 | 1       |
| Lamotte/AHD          | Cooling cream DAB | 8005213001 | 3       |
| Lamotte/AHD 27.03.17 | Cooling cream DAB | 8002320007 | 1       |
| Lamotte/Alliance     | Cooling cream DAB | 15417201   | 1       |
| lamotte/anzag        | Cooling cream DAB | 8002112004 | 1       |
| lamotte/anzag        | Cooling cream DAB | 8002320008 | 1       |
| Lamotte/Anzag        | Cooling cream DAB | 5496200    | 2       |
| Lamotte/Anzag        | Cooling cream DAB | 6002062002 | 1       |
| Lamotte/Anzag        | Cooling cream DAB | 6002062003 | 1       |
| Lamotte/Ebert        | Cooling cream DAB | 6003682010 | 1       |
| LAmotte/Gehe         | Cooling cream DAB | 8005213002 | 3       |
| LAmotte/Gehe         | Cooling cream DAB | 1000010941 | 1       |
| LAmotte/Gehe         | Cooling cream DAB | 20000244   | 1       |
| Lamotte/Krieger      | Cooling cream DAB | 8002875004 | 1       |
| Lamotte/Krieger      | Cooling cream DAB | 18006324   | 1       |
| Lamotte/Noweda       | Cooling cream DAB | 6002062003 | 1       |
| Lamotte/Noweda       | Cooling cream DAB | 8002320008 | 1       |
| Lamotte/Noweda       | Cooling cream DAB | 8004538001 | 2       |
| Lamotte/Noweda       | Cooling cream DAB | 10000853   | 1       |
| Lamotte/Phoenix      | Cooling cream DAB | 8003478007 | 4       |
| Lamotte/Phoenix      | Cooling cream DAB | 8003478008 | 7       |
| Lamotte/Phoenix      | Cooling cream DAB | 6012127001 | 1       |
| Lamotte/Phoenix      | Cooling cream DAB | 8004538001 | 1       |
| Lamotte/Phoenix      | Cooling cream DAB | 1000010941 | 1       |
| Lamotte/Phoenix      | Cooling cream DAB | 19238001   | 1       |
| Lamotte/Phönix       | Cooling cream DAB | 8002760004 | 1       |
| lamotte/sanacorb     | Cooling cream DAB | 5496200    | 1       |
| Lamotte/Spangro      | Cooling cream DAB | 5735700    | 1       |
| Lamotte/Spangro      | Cooling cream DAB | 5861100    | 12      |
| Lamotte/Spangro      | Cooling cream DAB | 6001092002 | 8       |
| Lamotte/Spangro      | Cooling cream DAB | 8002320008 | 2       |
| Lamotte/Spangro      | Cooling cream DAB | 8002696003 | 8       |
| LaMotte/Spangro      | Cooling cream DAB | 8002875004 | 2       |
| Lamotte/Spangroh     | Cooling cream DAB | 6000744001 | 3       |
| Lanotte              | Cooling cream DAB | 1000010941 | 1       |
| Maros/Phoenix        | Cooling cream DAB | 13191901   | 1       |
| Midas                | Cooling cream DAB | 16244701   | 1       |
| Midas                | Cooling cream DAB | 306938     | 1       |
| Midas                | Cooling cream DAB | 17033001   | 6       |
| Midas                | Cooling cream DAB | 308717     | 1       |
| Midas                | Cooling cream DAB | 3100001    | 1       |
| Midas                | Cooling cream DAB | 17000227   | 1       |
| Midas                | Cooling cream DAB | 17000220   | 1       |

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| Supplier    | Substance         | Batch       | Spectra |
|-------------|-------------------|-------------|---------|
| Midas       | Cooling cream DAB | 17254201    | 1       |
| Midas       | Cooling cream DAB | 18042401    | 1       |
| Midas       | Cooling cream DAB | 18002090    | 2       |
| Midas       | Cooling cream DAB | 18004426    | 2       |
| Midas       | Cooling cream DAB | 18182401    | 1       |
| Bombastus   | Cooling cream DAB | 18006315    | 1       |
| Bombastus   | Cooling cream DAB | 19000761    | 1       |
| Nachprüfung | Cooling cream DAB | 123456      | 1       |
| noweda      | Cooling cream DAB | 20001262001 | 2       |
| Noweda      | Cooling cream DAB | 12992301    | 1       |
| Noweda      | Cooling cream DAB | 274043      | 1       |
| Noweda      | Cooling cream DAB | 13121002    | 1       |
| Noweda      | Cooling cream DAB | 276284      | 1       |
| Noweda      | Cooling cream DAB | 13315101    | 1       |
| Noweda      | Cooling cream DAB | 14085901    | 1       |
| Noweda      | Cooling cream DAB | 14129801    | 2       |
| Noweda      | Cooling cream DAB | 15066601    | 1       |
| Noweda      | Cooling cream DAB | 15417201    | 1       |
| Noweda      | Cooling cream DAB | 16000801    | 1       |
| Noweda      | Cooling cream DAB | 17000601    | 1       |
| Noweda      | Cooling cream DAB | 306943      | 1       |
| Noweda      | Cooling cream DAB | 16323101    | 1       |
| Noweda      | Cooling cream DAB | 17189701    | 1       |
| Noweda      | Cooling cream DAB | 8003478005  | 1       |
| Noweda      | Cooling cream DAB | 17075101    | 1       |
| Noweda      | Cooling cream DAB | 17124901    | 2       |
| Noweda      | Cooling cream DAB | 17157201    | 1       |
| Noweda      | Cooling cream DAB | 17001967    | 1       |
| Noweda      | Cooling cream DAB | 17254301    | 2       |
| Noweda      | Cooling cream DAB | 17298101    | 1       |
| Noweda      | Cooling cream DAB | 18000339    | 2       |
| Noweda      | Cooling cream DAB | 18042401    | 2       |
| Noweda      | Cooling cream DAB | 17330802    | 1       |
| Noweda      | Cooling cream DAB | 18001085    | 1       |
| Noweda      | Cooling cream DAB | 18002309    | 1       |
| Noweda      | Cooling cream DAB | 18182501    | 1       |
| Noweda      | Cooling cream DAB | 18003753    | 1       |
| Noweda      | Cooling cream DAB | 18005207    | 2       |
| Noweda      | Cooling cream DAB | 18272901    | 1       |
| Noweda      | Cooling cream DAB | 18006322    | 1       |
| Noweda      | Cooling cream DAB | 18218801    | 1       |
| Noweda      | Cooling cream DAB | 19000335    | 1       |
| Noweda      | Cooling cream DAB | 19001301    | 1       |
| Noweda      | Cooling cream DAB | 19001419    | 2       |
| Noweda      | Cooling cream DAB | 19001420    | 1       |
| Noweda      | Cooling cream DAB | 19073701    | 1       |
| Noweda      | Cooling cream DAB | 8005213002  | 1       |
| Noweda      | Cooling cream DAB | 19150201    | 2       |
| Noweda      | Cooling cream DAB | 19003475    | 1       |
| Noweda      | Cooling cream DAB | 19003477    | 1       |
| Noweda      | Cooling cream DAB | 19004569    | 1       |
| Noweda      | Cooling cream DAB | 1000010941  | 1       |
| Noweda      | Cooling cream DAB | 20000336001 | 1       |
| Noweda      | Cooling cream DAB | 19004566    | 1       |
| Noweda      | Cooling cream DAB | 20001621    | 1       |
| Noweda      | Cooling cream DAB | 20001721001 | 2       |
| Noweda      | Cooling cream DAB | 20000536    | 1       |
| Noweda      | Cooling cream DAB | 20002073001 | 2       |
| Noweda      | Cooling cream DAB | 20002950001 | 1       |
| Bombastus   | Cooling cream DAB | 19004569    | 3       |

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| <b>Supplier</b>    | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-------------------|--------------|----------------|
| Caelo              | Cooling cream DAB | 13315701     | 3              |
| Caelo              | Cooling cream DAB | 14132301     | 9              |
| Euro OTC           | Cooling cream DAB | 16129701     | 1              |
| Noweda/apomix      | Cooling cream DAB | 3B150420     | 1              |
| Bombastus          | Cooling cream DAB | 306941       | 1              |
| Caelo              | Cooling cream DAB | 19000576001  | 14             |
| Caelo              | Cooling cream DAB | 20001261001  | 6              |
| Caelo              | Cooling cream DAB | 20004651     | 1              |
| Noweda/Henry       | Cooling cream DAB | 8003478007   | 1              |
| Pala               | Cooling cream DAB | 17298501     | 1              |
| Pala               | Cooling cream DAB | 18042701     | 1              |
| Pala               | Cooling cream DAB | 18273101     | 1              |
| Pala               | Cooling cream DAB | 19074201     | 1              |
| Caelo              | Cooling cream DAB | 19237801     | 9              |
| Pharmachem/AHD     | Cooling cream DAB | 279680       | 1              |
| phoenix            | Cooling cream DAB | 308717       | 1              |
| phoenix            | Cooling cream DAB | 19153201     | 1              |
| Phoenix            | Cooling cream DAB | 269094       | 1              |
| Phoenix            | Cooling cream DAB | 16085801     | 1              |
| Phoenix            | Cooling cream DAB | 16086001     | 1              |
| Phoenix            | Cooling cream DAB | 16134001     | 1              |
| Phoenix            | Cooling cream DAB | 16172001     | 1              |
| Phoenix            | Cooling cream DAB | 16172701     | 1              |
| Phoenix            | Cooling cream DAB | 306932       | 1              |
| Phoenix            | Cooling cream DAB | 17038501     | 1              |
| Phoenix            | Cooling cream DAB | 17075401     | 1              |
| Phoenix            | Cooling cream DAB | 3055         | 1              |
| Phoenix            | Cooling cream DAB | 3059         | 1              |
| Phoenix            | Cooling cream DAB | 17254201     | 1              |
| Phoenix            | Cooling cream DAB | 3120         | 1              |
| Phoenix            | Cooling cream DAB | 3125         | 1              |
| Phoenix            | Cooling cream DAB | 17189801     | 1              |
| Phoenix            | Cooling cream DAB | 18000332     | 1              |
| Phoenix            | Cooling cream DAB | 18042402     | 1              |
| Phoenix            | Cooling cream DAB | 18002090     | 1              |
| Phoenix            | Cooling cream DAB | 18104601     | 1              |
| Phoenix            | Cooling cream DAB | 18218301     | 1              |
| Phoenix            | Cooling cream DAB | 18005197     | 2              |
| Phoenix            | Cooling cream DAB | 18218901     | 1              |
| Phoenix            | Cooling cream DAB | 18182701     | 1              |
| Phoenix            | Cooling cream DAB | 19001402     | 1              |
| Phoenix            | Cooling cream DAB | 19001201     | 1              |
| Phoenix            | Cooling cream DAB | 3374         | 1              |
| Phoenix            | Cooling cream DAB | 19074003     | 1              |
| Phoenix            | Cooling cream DAB | 19001414     | 1              |
| Phoenix            | Cooling cream DAB | 19237701     | 2              |
| Phoenix            | Cooling cream DAB | 19003476     | 1              |
| Phoenix            | Cooling cream DAB | 19000575002  | 1              |
| Phoenix            | Cooling cream DAB | 20000249     | 1              |
| Phoenix            | Cooling cream DAB | Bombastus    | 1              |
| Phoenix            | Cooling cream DAB | 20000333001  | 1              |
| Phoenix 07.12.18   | Cooling cream DAB | 18218601     | 1              |
| Phoenix 20.06.2014 | Cooling cream DAB | 14086001     | 1              |
| Caelo              | Cooling cream DAB | 12312801     | 3              |
| Caelo              | Cooling cream DAB | 13059501     | 2              |
| Caelo              | Cooling cream DAB | 13121501     | 1              |
| Caelo              | Cooling cream DAB | 13401901     | 13             |
| phönix             | Cooling cream DAB | 12292201     | 1              |
| phönix             | Cooling cream DAB | 12312102     | 1              |
| phönix             | Cooling cream DAB | 15435101     | 1              |

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| Supplier              | Substance         | Batch        | Spectra |
|-----------------------|-------------------|--------------|---------|
| phönix                | Cooling cream DAB | 17033001     | 1       |
| Phönix                | Cooling cream DAB | 268978       | 1       |
| Phönix                | Cooling cream DAB | 271541       | 1       |
| Phönix                | Cooling cream DAB | 12312101     | 2       |
| Phönix                | Cooling cream DAB | 13059501     | 1       |
| Phönix                | Cooling cream DAB | 13051602     | 1       |
| Phönix                | Cooling cream DAB | 13059901     | 1       |
| Phönix                | Cooling cream DAB | 13121701     | 1       |
| Phönix                | Cooling cream DAB | 278516       | 2       |
| Phönix                | Cooling cream DAB | 13192101     | 1       |
| Phönix                | Cooling cream DAB | 13191801     | 1       |
| Phönix                | Cooling cream DAB | 13226302     | 1       |
| Phönix                | Cooling cream DAB | 13227401     | 1       |
| Phönix                | Cooling cream DAB | 14055401     | 2       |
| Phönix                | Cooling cream DAB | 14850901     | 1       |
| Phönix                | Cooling cream DAB | 287486       | 1       |
| Phönix                | Cooling cream DAB | 289188       | 1       |
| Phönix                | Cooling cream DAB | 14328801     | 1       |
| Phönix                | Cooling cream DAB | 15434401     | 1       |
| Phönix                | Cooling cream DAB | 17000501     | 1       |
| Phönix                | Cooling cream DAB | 17033001     | 2       |
| Phönix                | Cooling cream DAB | 8003478007   | 4       |
| Phönix                | Cooling cream DAB | 3178         | 1       |
| Phönix                | Cooling cream DAB | 8003478006   | 1       |
| Phönix                | Cooling cream DAB | 18182401     | 1       |
| Phönix                | Cooling cream DAB | 18218601     | 1       |
| Phönix                | Cooling cream DAB | 18182601     | 1       |
| Phönix                | Cooling cream DAB | 6012127001   | 2       |
| Phönix                | Cooling cream DAB | 18272901     | 1       |
| Phönix                | Cooling cream DAB | 19001501     | 1       |
| Phönix                | Cooling cream DAB | 19004564     | 1       |
| Phönix                | Cooling cream DAB | 20001719001  | 2       |
| PHÖNIX                | Cooling cream DAB | 17254301     | 1       |
| PHÖNIX                | Cooling cream DAB | 17254901     | 1       |
| Phönix 15.10.2019     | Cooling cream DAB | 19074201     | 1       |
| Phönix 26.10.12       | Cooling cream DAB | 12187301     | 1       |
| Bombastus             | Cooling cream DAB | 19000334     | 3       |
| Phönix Gotha          | Cooling cream DAB | 12089501     | 1       |
| Phönix Gotha          | Cooling cream DAB | SRTM1104     | 1       |
| Phönix Gotha          | Cooling cream DAB | 19004567     | 1       |
| Caelo                 | Cooling cream DAB | 305131       | 1       |
| Caelo                 | Cooling cream DAB | 200000336001 | 1       |
| Bombastus             | Cooling cream DAB | 274079       | 1       |
| Bombastus             | Cooling cream DAB | 305960       | 2       |
| Bombastus             | Cooling cream DAB | 20002260     | 1       |
| Caelo                 | Cooling cream DAB | 13004601     | 4       |
| Caelo                 | Cooling cream DAB | 17345103     | 1       |
| Euro OTC              | Cooling cream DAB | 311218182501 | 1       |
| Euro OTC              | Cooling cream DAB | 19001402     | 1       |
| Phönix/Lamotte        | Cooling cream DAB | 6003682010   | 2       |
| PKH Halle/Noweda      | Cooling cream DAB | 4B221019     | 1       |
| Römerapo.             | Cooling cream DAB | 15328001     | 1       |
| Römerapo.             | Cooling cream DAB | 18272801     | 1       |
| Rondell Apotheke      | Cooling cream DAB | 15228601     | 1       |
| Sana 29.12.14 EK 5,59 | Cooling cream DAB | 14268301     | 1       |
| Caelo                 | Cooling cream DAB | 20003305001  | 1       |
| Caelo                 | Cooling cream DAB | 13227401     | 10      |
| sanacorp              | Cooling cream DAB | 15228601     | 1       |
| sanacorp              | Cooling cream DAB | 18042401     | 1       |
| sanacorp              | Cooling cream DAB | 1000011853   | 1       |

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| Supplier                     | Substance         | Batch       | Spectra |
|------------------------------|-------------------|-------------|---------|
| sanacorp                     | Cooling cream DAB | 1000010941  | 1       |
| sanacorp                     | Cooling cream DAB | 20001261001 | 1       |
| Sanacorp                     | Cooling cream DAB | 12187201    | 1       |
| Sanacorp                     | Cooling cream DAB | 12187301    | 1       |
| Sanacorp                     | Cooling cream DAB | 12312401    | 1       |
| Sanacorp                     | Cooling cream DAB | 274077      | 1       |
| Sanacorp                     | Cooling cream DAB | 12312801    | 1       |
| Sanacorp                     | Cooling cream DAB | 13004401    | 2       |
| Sanacorp                     | Cooling cream DAB | 13059601    | 1       |
| Sanacorp                     | Cooling cream DAB | 13192101    | 1       |
| Sanacorp                     | Cooling cream DAB | 13121001    | 1       |
| Sanacorp                     | Cooling cream DAB | 13226701    | 1       |
| Sanacorp                     | Cooling cream DAB | 281037      | 1       |
| Sanacorp                     | Cooling cream DAB | 13226501    | 1       |
| Sanacorp                     | Cooling cream DAB | 13402001    | 1       |
| Sanacorp                     | Cooling cream DAB | 13227001    | 1       |
| Sanacorp                     | Cooling cream DAB | 13401801    | 1       |
| Sanacorp                     | Cooling cream DAB | 73AKD4      | 1       |
| Sanacorp                     | Cooling cream DAB | 14145501    | 1       |
| Sanacorp                     | Cooling cream DAB | 14268101    | 1       |
| Sanacorp                     | Cooling cream DAB | 76/AKD3     | 1       |
| Sanacorp                     | Cooling cream DAB | 14328801    | 2       |
| Sanacorp                     | Cooling cream DAB | 77/AKD6     | 1       |
| Sanacorp                     | Cooling cream DAB | 15413901    | 1       |
| Sanacorp                     | Cooling cream DAB | 77/AKD10    | 1       |
| Sanacorp                     | Cooling cream DAB | 16301801    | 1       |
| Sanacorp                     | Cooling cream DAB | 307932      | 1       |
| Sanacorp                     | Cooling cream DAB | 17075101    | 1       |
| Sanacorp                     | Cooling cream DAB | 17157001    | 2       |
| Sanacorp                     | Cooling cream DAB | 17157301    | 1       |
| Sanacorp                     | Cooling cream DAB | 17000228    | 4       |
| Sanacorp                     | Cooling cream DAB | 17189701    | 1       |
| Sanacorp                     | Cooling cream DAB | 17254501    | 1       |
| Sanacorp                     | Cooling cream DAB | 17000984    | 1       |
| Sanacorp                     | Cooling cream DAB | 17001970    | 1       |
| Sanacorp                     | Cooling cream DAB | 18000337    | 1       |
| Sanacorp                     | Cooling cream DAB | 18001077    | 1       |
| Sanacorp                     | Cooling cream DAB | 18002239    | 1       |
| Sanacorp                     | Cooling cream DAB | 18218503    | 1       |
| Sanacorp                     | Cooling cream DAB | 18218801    | 1       |
| Sanacorp                     | Cooling cream DAB | 1812501     | 1       |
| Sanacorp                     | Cooling cream DAB | 18005199    | 1       |
| Sanacorp                     | Cooling cream DAB | 19001402    | 2       |
| Sanacorp                     | Cooling cream DAB | 182772901   | 1       |
| Sanacorp                     | Cooling cream DAB | 19001501    | 1       |
| Sanacorp                     | Cooling cream DAB | 19073701    | 1       |
| Sanacorp                     | Cooling cream DAB | 19002518    | 1       |
| Sanacorp                     | Cooling cream DAB | 19000582001 | 1       |
| Sanacorp                     | Cooling cream DAB | 19000583001 | 1       |
| Sanacorp                     | Cooling cream DAB | 20000334001 | 2       |
| Sanacorp / Gehe              | Cooling cream DAB | 17001965    | 1       |
| Sanacorp 08.03.2017 EK:...   | Cooling cream DAB | 16301801    | 1       |
| sanacorp, 9,51EUR, 27.09.... | Cooling cream DAB | 16172001    | 1       |
| Bombastus                    | Cooling cream DAB | 268981      | 1       |
| Bombastus                    | Cooling cream DAB | 270381      | 1       |
| Bombastus                    | Cooling cream DAB | 270309      | 1       |
| Bombastus                    | Cooling cream DAB | 271726      | 1       |
| Bombastus                    | Cooling cream DAB | 272573      | 2       |
| Bombastus                    | Cooling cream DAB | 18001086    | 1       |
| Bombastus                    | Cooling cream DAB | 18002085    | 6       |

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| <b>Supplier</b>            | <b>Substance</b>       | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------------|--------------|----------------|
| Bombastus                  | Cooling cream DAB      | 18004427     | 1              |
| Caelo                      | Cooling cream DAB      | 12002501     | 3              |
| Caelo                      | Cooling cream DAB      | 72/AD2       | 1              |
| Caelo                      | Cooling cream DAB      | 73/AKD3      | 1              |
| Caelo                      | Cooling cream DAB      | 20001716002  | 2              |
| Sanacorp/Ebert             | Cooling cream DAB      | 17156901     | 1              |
| Sanacorp/Henry Lamotte     | Cooling cream DAB      | 6000083005   | 1              |
| Sanacorp/Henry Lamotte     | Cooling cream DAB      | 6003682010   | 3              |
| sanacorp/ichthyol          | Cooling cream DAB      | 16086001     | 1              |
| sanacorp/Lamotte           | Cooling cream DAB      | 5735600      | 1              |
| Sonnen-Apotheke Wefensl... | Cooling cream DAB      | 17000971     | 2              |
| Th. Geyer                  | Cooling cream DAB      | 18218901     | 1              |
| VDL                        | Cooling cream DAB      | 12090501     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 19002522     | 4              |
| AHD                        | Cooling ointment DAB 6 | 18218301     | 1              |
| Caelo                      | Cooling ointment DAB 6 | 17157301     | 16             |
| Caelo                      | Cooling ointment DAB 6 | 20000231001  | 7              |
| Anzag                      | Cooling ointment DAB 6 | 17075102     | 1              |
| apomix                     | Cooling ointment DAB 6 | 38150420     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 17254201     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 298319       | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 301674       | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 17254901     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 19001399     | 8              |
| Bombastus                  | Cooling ointment DAB 6 | 19004538     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 19003475     | 6              |
| Bombastus                  | Cooling ointment DAB 6 | 19004537     | 7              |
| Bombastus                  | Cooling ointment DAB 6 | 19004568     | 4              |
| Bombastus                  | Cooling ointment DAB 6 | 20000248     | 4              |
| Bombastus                  | Cooling ointment DAB 6 | 20001613     | 7              |
| Bombastus                  | Cooling ointment DAB 6 | 20002258     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 20005661     | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 20004655     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 303621       | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 304585       | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 308711       | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 20001621     | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 20004643     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 20000239     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 303620       | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 305953       | 6              |
| Bombastus                  | Cooling ointment DAB 6 | 2/2018       | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 20004661     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 302375       | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 296315       | 8              |
| Bombastus                  | Cooling ointment DAB 6 | 17189701     | 6              |
| Bombastus                  | Cooling ointment DAB 6 | 18004435     | 5              |
| Bombastus                  | Cooling ointment DAB 6 | 18000327     | 5              |
| Bombastus                  | Cooling ointment DAB 6 | 19002518     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 20000536     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 20004658     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 20005674     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 21000724     | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 290486       | 1              |
| Bombastus                  | Cooling ointment DAB 6 | 295191       | 4              |
| Bombastus                  | Cooling ointment DAB 6 | 20000237     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 310976       | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 19001418     | 3              |
| Bombastus                  | Cooling ointment DAB 6 | 20000236     | 2              |
| Bombastus                  | Cooling ointment DAB 6 | 21001934     | 1              |

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| <b>Supplier</b> | <b>Substance</b>       | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------------|--------------|----------------|
| Bombstus        | Cooling ointment DAB 6 | 17000977     | 1              |
| Caelo           | Cooling ointment DAB 6 | 14145501     | 22             |
| Caelo           | Cooling ointment DAB 6 | 14184801     | 6              |
| Caelo           | Cooling ointment DAB 6 | 15134404     | 1              |
| Caelo           | Cooling ointment DAB 6 | 5328001      | 1              |
| Caelo           | Cooling ointment DAB 6 | 1097214      | 1              |
| Caelo           | Cooling ointment DAB 6 | 17035401     | 13             |
| Caelo           | Cooling ointment DAB 6 | 1712901      | 1              |
| Caelo           | Cooling ointment DAB 6 | 18182601     | 32             |
| Caelo           | Cooling ointment DAB 6 | 19074003     | 4              |
| Caelo           | Cooling ointment DAB 6 | 12182701     | 7              |
| Caelo           | Cooling ointment DAB 6 | 20130912-3   | 1              |
| Caelo           | Cooling ointment DAB 6 | 13004401     | 4              |
| Caelo           | Cooling ointment DAB 6 | 12312401     | 10             |
| Caelo           | Cooling ointment DAB 6 | 213E-02541   | 1              |
| Caelo           | Cooling ointment DAB 6 | 12312501     | 4              |
| Caelo           | Cooling ointment DAB 6 | 12187201     | 3              |
| Caelo           | Cooling ointment DAB 6 | 13120901     | 22             |
| Caelo           | Cooling ointment DAB 6 | 13051401     | 8              |
| Caelo           | Cooling ointment DAB 6 | 13047201     | 2              |
| Caelo           | Cooling ointment DAB 6 | 12364801     | 5              |
| Caelo           | Cooling ointment DAB 6 | 13059901     | 12             |
| Caelo           | Cooling ointment DAB 6 | 13191501     | 5              |
| Caelo           | Cooling ointment DAB 6 | 13191901     | 5              |
| Caelo           | Cooling ointment DAB 6 | 13226801     | 21             |
| Caelo           | Cooling ointment DAB 6 | 14271201     | 4              |
| Caelo           | Cooling ointment DAB 6 | 14129801     | 23             |
| Caelo           | Cooling ointment DAB 6 | 14085901     | 16             |
| Caelo           | Cooling ointment DAB 6 | 14086301     | 12             |
| Caelo           | Cooling ointment DAB 6 | 14271401     | 9              |
| Caelo           | Cooling ointment DAB 6 | 14118002     | 1              |
| Caelo           | Cooling ointment DAB 6 | 14278401     | 6              |
| Caelo           | Cooling ointment DAB 6 | 14329301     | 13             |
| Caelo           | Cooling ointment DAB 6 | 14329601     | 12             |
| Caelo           | Cooling ointment DAB 6 | 14184601     | 23             |
| Caelo           | Cooling ointment DAB 6 | 15153201     | 12             |
| Caelo           | Cooling ointment DAB 6 | 15228502     | 6              |
| Caelo           | Cooling ointment DAB 6 | 15052801     | 21             |
| Caelo           | Cooling ointment DAB 6 | 15228601     | 50             |
| Caelo           | Cooling ointment DAB 6 | 15228501     | 30             |
| Caelo           | Cooling ointment DAB 6 | 15237101     | 16             |
| Caelo           | Cooling ointment DAB 6 | 15327801     | 5              |
| Caelo           | Cooling ointment DAB 6 | 15417501     | 12             |
| Caelo           | Cooling ointment DAB 6 | 15434501     | 32             |
| Caelo           | Cooling ointment DAB 6 | 1547501      | 2              |
| Caelo           | Cooling ointment DAB 6 | 15434402     | 22             |
| Caelo           | Cooling ointment DAB 6 | 16086101     | 15             |
| Caelo           | Cooling ointment DAB 6 | 16085801     | 17             |
| Caelo           | Cooling ointment DAB 6 | 16129401     | 12             |
| Caelo           | Cooling ointment DAB 6 | 16134201     | 45             |
| Caelo           | Cooling ointment DAB 6 | 16134101     | 9              |
| Caelo           | Cooling ointment DAB 6 | 16171901     | 11             |
| Caelo           | Cooling ointment DAB 6 | 16172601     | 63             |
| Caelo           | Cooling ointment DAB 6 | 16172501     | 1              |
| Caelo           | Cooling ointment DAB 6 | 16172801     | 16             |
| Caelo           | Cooling ointment DAB 6 | 16244701     | 80             |
| Caelo           | Cooling ointment DAB 6 | 1617260      | 1              |
| Caelo           | Cooling ointment DAB 6 | 16244601     | 14             |
| Caelo           | Cooling ointment DAB 6 | 16301801     | 41             |
| Caelo           | Cooling ointment DAB 6 | 16246201     | 16             |

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| Supplier | Substance              | Batch            | Spectra |
|----------|------------------------|------------------|---------|
| Caelo    | Cooling ointment DAB 6 | 1630210101097214 | 1       |
| Caelo    | Cooling ointment DAB 6 | 16302001         | 7       |
| Caelo    | Cooling ointment DAB 6 | 16323101         | 5       |
| Caelo    | Cooling ointment DAB 6 | 16354401         | 38      |
| Caelo    | Cooling ointment DAB 6 | 17035301         | 17      |
| Caelo    | Cooling ointment DAB 6 | 16245301         | 1       |
| Caelo    | Cooling ointment DAB 6 | 16301702         | 6       |
| Caelo    | Cooling ointment DAB 6 | 17000501         | 9       |
| Caelo    | Cooling ointment DAB 6 | 17000401         | 13      |
| Caelo    | Cooling ointment DAB 6 | 17000301         | 11      |
| Caelo    | Cooling ointment DAB 6 | 17074801         | 11      |
| Caelo    | Cooling ointment DAB 6 | 17038501         | 15      |
| Caelo    | Cooling ointment DAB 6 | 17035501         | 12      |
| Caelo    | Cooling ointment DAB 6 | 17075102         | 8       |
| Caelo    | Cooling ointment DAB 6 | 17075002         | 3       |
| Caelo    | Cooling ointment DAB 6 | 17075001         | 17      |
| Caelo    | Cooling ointment DAB 6 | 17081801         | 21      |
| Caelo    | Cooling ointment DAB 6 | 1705401          | 1       |
| Caelo    | Cooling ointment DAB 6 | 17115701         | 13      |
| Caelo    | Cooling ointment DAB 6 | 17122801         | 19      |
| Caelo    | Cooling ointment DAB 6 | 17124801         | 5       |
| Caelo    | Cooling ointment DAB 6 | 17189701         | 32      |
| Caelo    | Cooling ointment DAB 6 | 13121717         | 1       |
| Caelo    | Cooling ointment DAB 6 | 8003478005       | 1       |
| Caelo    | Cooling ointment DAB 6 | 17157001         | 21      |
| Caelo    | Cooling ointment DAB 6 | 17254501         | 20      |
| Caelo    | Cooling ointment DAB 6 | 17157201         | 6       |
| Caelo    | Cooling ointment DAB 6 | 17254101         | 54      |
| Caelo    | Cooling ointment DAB 6 | 29011801         | 1       |
| Caelo    | Cooling ointment DAB 6 | 1715002          | 1       |
| Caelo    | Cooling ointment DAB 6 | 172545015478     | 1       |
| Caelo    | Cooling ointment DAB 6 | 17254201         | 41      |
| Caelo    | Cooling ointment DAB 6 | 17255101         | 14      |
| Caelo    | Cooling ointment DAB 6 | 17298101         | 13      |
| Caelo    | Cooling ointment DAB 6 | 23051809         | 1       |
| Caelo    | Cooling ointment DAB 6 | 23051806         | 1       |
| Caelo    | Cooling ointment DAB 6 | 20061802         | 1       |
| Caelo    | Cooling ointment DAB 6 | 172983010        | 1       |
| Caelo    | Cooling ointment DAB 6 | 18104601         | 24      |
| Caelo    | Cooling ointment DAB 6 | 1812401          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18183001         | 10      |
| Caelo    | Cooling ointment DAB 6 | 18182901         | 20      |
| Caelo    | Cooling ointment DAB 6 | 18042403         | 8       |
| Caelo    | Cooling ointment DAB 6 | 6111802          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18183301         | 17      |
| Caelo    | Cooling ointment DAB 6 | 18189701         | 1       |
| Caelo    | Cooling ointment DAB 6 | 5011902          | 1       |
| Caelo    | Cooling ointment DAB 6 | 6012127002       | 3       |
| Caelo    | Cooling ointment DAB 6 | 18272901         | 42      |
| Caelo    | Cooling ointment DAB 6 | 18218502         | 1       |
| Caelo    | Cooling ointment DAB 6 | 19001402         | 52      |
| Caelo    | Cooling ointment DAB 6 | 18273101         | 18      |
| Caelo    | Cooling ointment DAB 6 | 1827201          | 2       |
| Caelo    | Cooling ointment DAB 6 | 19006001         | 4       |
| Caelo    | Cooling ointment DAB 6 | 1906003          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18258401         | 1       |
| Caelo    | Cooling ointment DAB 6 | 19047001         | 1       |
| Caelo    | Cooling ointment DAB 6 | 19073901         | 4       |
| Caelo    | Cooling ointment DAB 6 | 19115803         | 2       |
| Caelo    | Cooling ointment DAB 6 | 19115801         | 1       |

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| Supplier | Substance              | Batch                | Spectra |
|----------|------------------------|----------------------|---------|
| Caelo    | Cooling ointment DAB 6 | 19154701             | 11      |
| Caelo    | Cooling ointment DAB 6 | 19155001             | 35      |
| Caelo    | Cooling ointment DAB 6 | 19189803             | 2       |
| Caelo    | Cooling ointment DAB 6 | 19006002             | 1       |
| Caelo    | Cooling ointment DAB 6 | 19237301             | 4       |
| Caelo    | Cooling ointment DAB 6 | 20000336001          | 24      |
| Caelo    | Cooling ointment DAB 6 | 19258102             | 1       |
| Caelo    | Cooling ointment DAB 6 | 19000579001          | 5       |
| Caelo    | Cooling ointment DAB 6 | 20000335002          | 20      |
| Caelo    | Cooling ointment DAB 6 | 19000583001          | 30      |
| Caelo    | Cooling ointment DAB 6 | 20000227001          | 6       |
| Caelo    | Cooling ointment DAB 6 | 20001262001          | 30      |
| Caelo    | Cooling ointment DAB 6 | 20001258001          | 4       |
| Caelo    | Cooling ointment DAB 6 | 17254901             | 10      |
| Caelo    | Cooling ointment DAB 6 | 182188               | 1       |
| Caelo    | Cooling ointment DAB 6 | 181046               | 2       |
| Caelo    | Cooling ointment DAB 6 | 18272802             | 9       |
| Caelo    | Cooling ointment DAB 6 | 17125002             | 15      |
| Caelo    | Cooling ointment DAB 6 | 17156901             | 15      |
| Caelo    | Cooling ointment DAB 6 | 18218601             | 34      |
| Caelo    | Cooling ointment DAB 6 | 18183401             | 18      |
| Caelo    | Cooling ointment DAB 6 | 13121701             | 8       |
| Caelo    | Cooling ointment DAB 6 | 15014701             | 1       |
| Caelo    | Cooling ointment DAB 6 | 17000601             | 58      |
| Caelo    | Cooling ointment DAB 6 | 17254801             | 8       |
| Caelo    | Cooling ointment DAB 6 | 19001401             | 10      |
| Caelo    | Cooling ointment DAB 6 | 19150201             | 28      |
| Caelo    | Cooling ointment DAB 6 | 17157101             | 16      |
| Caelo    | Cooling ointment DAB 6 | 19001403             | 5       |
| Caelo    | Cooling ointment DAB 6 | 17254301-20180206Ma1 | 1       |
| Caelo    | Cooling ointment DAB 6 | 18218503             | 13      |
| Caelo    | Cooling ointment DAB 6 | 18219401             | 26      |
| Caelo    | Cooling ointment DAB 6 | 20002951003          | 3       |
| Caelo    | Cooling ointment DAB 6 | 20004342001          | 4       |
| Caelo    | Cooling ointment DAB 6 | 13174901             | 2       |
| Caelo    | Cooling ointment DAB 6 | 13226302             | 7       |
| Caelo    | Cooling ointment DAB 6 | 17189802             | 12      |
| Caelo    | Cooling ointment DAB 6 | 18218301             | 21      |
| Caelo    | Cooling ointment DAB 6 | 200043420001         | 1       |
| Caelo    | Cooling ointment DAB 6 | 17157002             | 12      |
| Caelo    | Cooling ointment DAB 6 | 17298401             | 20      |
| Caelo    | Cooling ointment DAB 6 | 17298301             | 9       |
| Caelo    | Cooling ointment DAB 6 | 19150101             | 30      |
| Caelo    | Cooling ointment DAB 6 | 12312701             | 4       |
| Caelo    | Cooling ointment DAB 6 | 16129701             | 6       |
| Caelo    | Cooling ointment DAB 6 | 15153301             | 7       |
| Caelo    | Cooling ointment DAB 6 | 15413601             | 8       |
| Caelo    | Cooling ointment DAB 6 | 15413901             | 6       |
| Caelo    | Cooling ointment DAB 6 | 12179001             | 4       |
| Caelo    | Cooling ointment DAB 6 | 13121401             | 9       |
| Caelo    | Cooling ointment DAB 6 | 13191701             | 9       |
| Caelo    | Cooling ointment DAB 6 | 13175101             | 8       |
| Caelo    | Cooling ointment DAB 6 | 16354402             | 11      |
| Caelo    | Cooling ointment DAB 6 | 17075301             | 24      |
| Caelo    | Cooling ointment DAB 6 | 18042402             | 11      |
| Caelo    | Cooling ointment DAB 6 | 15328001             | 58      |
| Caelo    | Cooling ointment DAB 6 | 16246301             | 19      |
| Caelo    | Cooling ointment DAB 6 | 19073802             | 40      |
| Caelo    | Cooling ointment DAB 6 | 15049202             | 6       |
| Caelo    | Cooling ointment DAB 6 | 15236901             | 27      |

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| Supplier | Substance              | Batch             | Spectra |
|----------|------------------------|-------------------|---------|
| Caelo    | Cooling ointment DAB 6 | 15417301          | 6       |
| Caelo    | Cooling ointment DAB 6 | 15434401          | 25      |
| Caelo    | Cooling ointment DAB 6 | 15434502          | 22      |
| Caelo    | Cooling ointment DAB 6 | 16000501          | 10      |
| Caelo    | Cooling ointment DAB 6 | 15435101          | 22      |
| Caelo    | Cooling ointment DAB 6 | 16222401          | 1       |
| Caelo    | Cooling ointment DAB 6 | 16222402          | 1       |
| Caelo    | Cooling ointment DAB 6 | 17041301          | 4       |
| Caelo    | Cooling ointment DAB 6 | 17075201          | 61      |
| Caelo    | Cooling ointment DAB 6 | 17075101          | 31      |
| Caelo    | Cooling ointment DAB 6 | 19000580001       | 8       |
| Caelo    | Cooling ointment DAB 6 | 20001720001       | 4       |
| Caelo    | Cooling ointment DAB 6 | 18219301          | 25      |
| Caelo    | Cooling ointment DAB 6 | 13121001          | 9       |
| Caelo    | Cooling ointment DAB 6 | 17189801          | 18      |
| Caelo    | Cooling ointment DAB 6 | 18182702          | 9       |
| Caelo    | Cooling ointment DAB 6 | 16000201          | 11      |
| Caelo    | Cooling ointment DAB 6 | 16133901          | 5       |
| Caelo    | Cooling ointment DAB 6 | 19001201          | 17      |
| Caelo    | Cooling ointment DAB 6 | 19001501          | 20      |
| Caelo    | Cooling ointment DAB 6 | 15228401          | 8       |
| Caelo    | Cooling ointment DAB 6 | 20001257002       | 4       |
| Caelo    | Cooling ointment DAB 6 | 19000582002       | 15      |
| Caelo    | Cooling ointment DAB 6 | 15049201          | 22      |
| Caelo    | Cooling ointment DAB 6 | 16123501          | 1       |
| Caelo    | Cooling ointment DAB 6 | 16134001          | 9       |
| Caelo    | Cooling ointment DAB 6 | 16172701          | 10      |
| Caelo    | Cooling ointment DAB 6 | 21000666001       | 1       |
| Caelo    | Cooling ointment DAB 6 | 17117401          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18021803          | 1       |
| Caelo    | Cooling ointment DAB 6 | 15327701          | 10      |
| Caelo    | Cooling ointment DAB 6 | 17115901          | 6       |
| Caelo    | Cooling ointment DAB 6 | 13226501          | 9       |
| Caelo    | Cooling ointment DAB 6 | 15413501          | 6       |
| Caelo    | Cooling ointment DAB 6 | 13121201          | 10      |
| Caelo    | Cooling ointment DAB 6 | 15153501          | 25      |
| Caelo    | Cooling ointment DAB 6 | 1718970101        | 1       |
| Caelo    | Cooling ointment DAB 6 | 182731016x        | 1       |
| Caelo    | Cooling ointment DAB 6 | 19001301          | 15      |
| Caelo    | Cooling ointment DAB 6 | 2000023001        | 2       |
| Caelo    | Cooling ointment DAB 6 | 200012621001      | 1       |
| Caelo    | Cooling ointment DAB 6 | 17298002          | 10      |
| Caelo    | Cooling ointment DAB 6 | 19237401          | 7       |
| Caelo    | Cooling ointment DAB 6 | 17199003          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18189702          | 1       |
| Caelo    | Cooling ointment DAB 6 | 18258402          | 1       |
| Caelo    | Cooling ointment DAB 6 | 19047002          | 2       |
| Caelo    | Cooling ointment DAB 6 | 16172001          | 15      |
| Caelo    | Cooling ointment DAB 6 | 13175301          | 28      |
| Caelo    | Cooling ointment DAB 6 | 14278301          | 20      |
| Caelo    | Cooling ointment DAB 6 | 15153001          | 5       |
| Caelo    | Cooling ointment DAB 6 | 15059201          | 36      |
| Caelo    | Cooling ointment DAB 6 | 15236801          | 6       |
| Caelo    | Cooling ointment DAB 6 | 15327901          | 7       |
| Caelo    | Cooling ointment DAB 6 | 16086001          | 8       |
| Caelo    | Cooling ointment DAB 6 | 16302101          | 11      |
| Caelo    | Cooling ointment DAB 6 | 170522UL/16323101 | 1       |
| Caelo    | Cooling ointment DAB 6 | 17117402          | 5       |
| Caelo    | Cooling ointment DAB 6 | 17254301          | 7       |
| Caelo    | Cooling ointment DAB 6 | 181016186         | 2       |

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| Supplier | Substance              | Batch        | Spectra |
|----------|------------------------|--------------|---------|
| Caelo    | Cooling ointment DAB 6 | 18002802     | 1       |
| Caelo    | Cooling ointment DAB 6 | 17331001     | 28      |
| Caelo    | Cooling ointment DAB 6 | 17298701     | 17      |
| Caelo    | Cooling ointment DAB 6 | 18106401     | 4       |
| Caelo    | Cooling ointment DAB 6 | 18042801     | 31      |
| Caelo    | Cooling ointment DAB 6 | 18104501     | 26      |
| Caelo    | Cooling ointment DAB 6 | 18042401     | 52      |
| Caelo    | Cooling ointment DAB 6 | 18182301     | 48      |
| Caelo    | Cooling ointment DAB 6 | 18182701     | 52      |
| Caelo    | Cooling ointment DAB 6 | 18183201     | 23      |
| Caelo    | Cooling ointment DAB 6 | 20001263001  | 9       |
| Caelo    | Cooling ointment DAB 6 | 20003917001  | 1       |
| Caelo    | Cooling ointment DAB 6 | 13192101     | 13      |
| Caelo    | Cooling ointment DAB 6 | 14329401     | 12      |
| Caelo    | Cooling ointment DAB 6 | 15302901     | 1       |
| Caelo    | Cooling ointment DAB 6 | 16089702     | 1       |
| Caelo    | Cooling ointment DAB 6 | 17162001     | 1       |
| Caelo    | Cooling ointment DAB 6 | 16085901     | 23      |
| Caelo    | Cooling ointment DAB 6 | 16311604     | 1       |
| Caelo    | Cooling ointment DAB 6 | 17075401     | 13      |
| Caelo    | Cooling ointment DAB 6 | 17254401     | 13      |
| Caelo    | Cooling ointment DAB 6 | 17255001     | 19      |
| Caelo    | Cooling ointment DAB 6 | 17330802     | 64      |
| Caelo    | Cooling ointment DAB 6 | 18218801     | 14      |
| Caelo    | Cooling ointment DAB 6 | 18218901     | 30      |
| Caelo    | Cooling ointment DAB 6 | 19074101     | 23      |
| Caelo    | Cooling ointment DAB 6 | 19074401     | 36      |
| Caelo    | Cooling ointment DAB 6 | 19000582001  | 16      |
| Caelo    | Cooling ointment DAB 6 | 19238001     | 4       |
| Caelo    | Cooling ointment DAB 6 | 20001721001  | 3       |
| Caelo    | Cooling ointment DAB 6 | 20002950001  | 8       |
| Caelo    | Cooling ointment DAB 6 | 20004343001  | 2       |
| Caelo    | Cooling ointment DAB 6 | 152327901    | 1       |
| Caelo    | Cooling ointment DAB 6 | 14328702     | 11      |
| Caelo    | Cooling ointment DAB 6 | 15059001     | 6       |
| Caelo    | Cooling ointment DAB 6 | 15066601     | 20      |
| Caelo    | Cooling ointment DAB 6 | 14329201     | 5       |
| Caelo    | Cooling ointment DAB 6 | 14184401     | 10      |
| Caelo    | Cooling ointment DAB 6 | 15417401     | 6       |
| Caelo    | Cooling ointment DAB 6 | 15434503     | 6       |
| Caelo    | Cooling ointment DAB 6 | 16172902     | 13      |
| Caelo    | Cooling ointment DAB 6 | 1632101      | 1       |
| Caelo    | Cooling ointment DAB 6 | 17116001     | 14      |
| Caelo    | Cooling ointment DAB 6 | 17156801     | 48      |
| Caelo    | Cooling ointment DAB 6 | 17298201     | 12      |
| Caelo    | Cooling ointment DAB 6 | 18042701     | 28      |
| Caelo    | Cooling ointment DAB 6 | 18182401     | 60      |
| Caelo    | Cooling ointment DAB 6 | 18183101     | 12      |
| Caelo    | Cooling ointment DAB 6 | 18182501     | 44      |
| Caelo    | Cooling ointment DAB 6 | 311218182501 | 1       |
| Caelo    | Cooling ointment DAB 6 | 18218701     | 33      |
| Caelo    | Cooling ointment DAB 6 | 18219201     | 22      |
| Caelo    | Cooling ointment DAB 6 | 18218302     | 50      |
| Caelo    | Cooling ointment DAB 6 | 2118U-02541  | 1       |
| Caelo    | Cooling ointment DAB 6 | 19074201     | 18      |
| Caelo    | Cooling ointment DAB 6 | 19073801     | 29      |
| Caelo    | Cooling ointment DAB 6 | 19153102     | 6       |
| Caelo    | Cooling ointment DAB 6 | 20001722002  | 4       |
| Caelo    | Cooling ointment DAB 6 | 20002953001  | 5       |
| Caelo    | Cooling ointment DAB 6 | 17124901     | 22      |

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| Supplier             | Substance              | Batch        | Spectra |
|----------------------|------------------------|--------------|---------|
| Caelo                | Cooling ointment DAB 6 | 1328702      | 1       |
| Caelo                | Cooling ointment DAB 6 | 172983015595 | 1       |
| Caelo                | Cooling ointment DAB 6 | 181829015742 | 1       |
| Caelo                | Cooling ointment DAB 6 | 13226601     | 28      |
| Caelo                | Cooling ointment DAB 6 | 1608601      | 1       |
| Caelo                | Cooling ointment DAB 6 | 16322901     | 6       |
| Caelo                | Cooling ointment DAB 6 | 17115601     | 38      |
| Caelo                | Cooling ointment DAB 6 | Caelo        | 1       |
| Caelo                | Cooling ointment DAB 6 | 1733801      | 1       |
| Caelo                | Cooling ointment DAB 6 | 19073701     | 62      |
| Caelo                | Cooling ointment DAB 6 | 1915501      | 3       |
| Caelo                | Cooling ointment DAB 6 | 19155201     | 21      |
| Caelo                | Cooling ointment DAB 6 | 20000228001  | 3       |
| Caelo                | Cooling ointment DAB 6 | 20000230001  | 5       |
| Caelo                | Cooling ointment DAB 6 | 20000229001  | 7       |
| Caelo                | Cooling ointment DAB 6 | 20000335001  | 9       |
| Caelo                | Cooling ointment DAB 6 | 20001717001  | 3       |
| Caelo                | Cooling ointment DAB 6 | 17122701     | 21      |
| Caelo                | Cooling ointment DAB 6 | 17125101     | 20      |
| Caelo                | Cooling ointment DAB 6 | 17254601     | 9       |
| Caelo                | Cooling ointment DAB 6 | 2001263002   | 1       |
| Caelo                | Cooling ointment DAB 6 | 18218401     | 1       |
| Caelo                | Cooling ointment DAB 6 | 19150102     | 7       |
| Caelo                | Cooling ointment DAB 6 | 19074501     | 24      |
| Caelo                | Cooling ointment DAB 6 | 19236801     | 2       |
| Caelo                | Cooling ointment DAB 6 | 20001716001  | 1       |
| Caesar & Loretz      | Cooling ointment DAB 6 | 18042402     | 1       |
| Caesar & Loretz      | Cooling ointment DAB 6 | 18182401     | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 16222401     | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 18218302     | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 18272901     | 18      |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19006002     | 3       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19001401     | 3       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 18219401     | 5       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19001402     | 15      |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19001501     | 4       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19074401     | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 18219201     | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19153102     | 3       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19074501     | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19154801     | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19150101     | 6       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19150102     | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19237401     | 5       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19073801     | 10      |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19237501     | 3       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19238001     | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19155201     | 5       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19237901     | 10      |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19000580001  | 4       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000336001  | 7       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 19000581001  | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000227001  | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000228001  | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000335002  | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000226001  | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20000333001  | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20001259001  | 2       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20001257002  | 1       |
| Caesar & Loretz GmbH | Cooling ointment DAB 6 | 20002955001  | 1       |

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| Supplier                   | Substance              | Batch       | Spectra |
|----------------------------|------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Cooling ointment DAB 6 | 20002951001 | 1       |
| Caesar & Loretz GmbH       | Cooling ointment DAB 6 | 20004347001 | 1       |
| Caesar & Loretz GmbH       | Cooling ointment DAB 6 | 20004342001 | 1       |
| Caesar & Loretz GmbH/Al... | Cooling ointment DAB 6 | 19000582002 | 1       |
| Caesar & Loretz GmbH/Al... | Cooling ointment DAB 6 | 19000580001 | 2       |
| Caesar & Loretz GmbH/GEHE  | Cooling ointment DAB 6 | 19150101    | 1       |
| Caesar & Loretz GmbH/Je... | Cooling ointment DAB 6 | 20002951002 | 1       |
| Caesar & Loretz GmbH/Je... | Cooling ointment DAB 6 | 20002953001 | 1       |
| Caesar & Loretz/Noweda     | Cooling ointment DAB 6 | 15328001    | 1       |
| Caesar & Loretz/Noweda     | Cooling ointment DAB 6 | 16172601    | 1       |
| Caesar & Loretz/Noweda     | Cooling ointment DAB 6 | 16134201    | 1       |
| Caesar und Loretz GmbH     | Cooling ointment DAB 6 | 17157201    | 1       |
| Caesar&Loretz              | Cooling ointment DAB 6 | 17298001    | 2       |
| Caesar&Loretz              | Cooling ointment DAB 6 | 19073802    | 1       |
| Caeser&Loretz GmbH         | Cooling ointment DAB 6 | 20001263002 | 2       |
| Caleo/ Noweda              | Cooling ointment DAB 6 | 18182901    | 1       |
| Cealo                      | Cooling ointment DAB 6 | 18182701    | 1       |
| Cealo/AHD                  | Cooling ointment DAB 6 | 16011901    | 1       |
| Devesa/S                   | Cooling ointment DAB 6 | 20001262001 | 1       |
| Euro OTC                   | Cooling ointment DAB 6 | 15435101    | 2       |
| Euro OTC                   | Cooling ointment DAB 6 | 16172901    | 1       |
| Euroct/Gehe                | Cooling ointment DAB 6 | 16089701    | 2       |
| Fagron                     | Cooling ointment DAB 6 | 18106401    | 2       |
| Fagron                     | Cooling ointment DAB 6 | 17000301    | 1       |
| Fagron                     | Cooling ointment DAB 6 | 18182301    | 2       |
| Fagron                     | Cooling ointment DAB 6 | 18/182/K    | 1       |
| Fiebig                     | Cooling ointment DAB 6 | 17075101    | 1       |
| Fiebig                     | Cooling ointment DAB 6 | 18182701    | 4       |
| Fiebig                     | Cooling ointment DAB 6 | 19074301    | 1       |
| Finteler Apotheke          | Cooling ointment DAB 6 | 16244701    | 1       |
| Finteler Apotheke          | Cooling ointment DAB 6 | 17000601    | 1       |
| gehe                       | Cooling ointment DAB 6 | 15228601    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 12312601    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 14268301    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 14184501    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 15413601    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 16301901    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 17035501    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 16302001    | 1       |
| Gehe                       | Cooling ointment DAB 6 | 17254201    | 2       |
| Gehe                       | Cooling ointment DAB 6 | 19073701    | 3       |
| Caelo                      | Cooling ointment DAB 6 | 19155202    | 9       |
| Bombastus                  | Cooling ointment DAB 6 | 18005204    | 8       |
| Bombastus                  | Cooling ointment DAB 6 | 20005665    | 1       |
| Caelo                      | Cooling ointment DAB 6 | 19237901    | 26      |
| Caelo                      | Cooling ointment DAB 6 | 13051501    | 10      |
| Caelo                      | Cooling ointment DAB 6 | 18272801    | 14      |
| Caelo                      | Cooling ointment DAB 6 | 19237601    | 30      |
| Gepepharm/ Gehe            | Cooling ointment DAB 6 | 161/2601    | 1       |
| Henry Lamotte              | Cooling ointment DAB 6 | 1000010941  | 1       |
| Henry Lamotte Oils         | Cooling ointment DAB 6 | 8005213002  | 1       |
| Henry Lamotte Oils GmbH    | Cooling ointment DAB 6 | 8005213002  | 3       |
| Henry Lamotte Oils GmbH    | Cooling ointment DAB 6 | 1000011853  | 2       |
| Henry Lamotte/ Henry La... | Cooling ointment DAB 6 | 16171901    | 1       |
| hochhaus-Apotheke          | Cooling ointment DAB 6 | 17033001    | 1       |
| Hubertus Apotheke          | Cooling ointment DAB 6 | 15236901    | 1       |
| Ichthyl/Phönix             | Cooling ointment DAB 6 | 16172601    | 1       |
| Jenne                      | Cooling ointment DAB 6 | 19073701    | 1       |
| Jenne                      | Cooling ointment DAB 6 | 20001621    | 1       |
| Kehr/Henry Lamotte         | Cooling ointment DAB 6 | 1000012827  | 1       |

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| <b>Supplier</b> | <b>Substance</b>       | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------------|--------------|----------------|
| L12             | Cooling ointment DAB 6 | 17000601     | 2              |
| L12             | Cooling ointment DAB 6 | 17254101     | 3              |
| L12             | Cooling ointment DAB 6 | 17330802     | 1              |
| L12             | Cooling ointment DAB 6 | 18182501     | 1              |
| Lamotte / AHC   | Cooling ointment DAB 6 | 1000010942   | 1              |
| Lamotte/Noweda  | Cooling ointment DAB 6 | 8002112004   | 1              |
| Lamotte/Spangro | Cooling ointment DAB 6 | 8002112004   | 11             |
| Lamotte/Spangro | Cooling ointment DAB 6 | 8003478009   | 7              |
| Lamotte/Spangro | Cooling ointment DAB 6 | 6012127002   | 8              |
| Midas           | Cooling ointment DAB 6 | 17189701     | 4              |
| Midas           | Cooling ointment DAB 6 | 18182601     | 1              |
| Midas           | Cooling ointment DAB 6 | 19001402     | 1              |
| Noweda          | Cooling ointment DAB 6 | 13026301     | 1              |
| Noweda          | Cooling ointment DAB 6 | 17075102     | 1              |
| Noweda          | Cooling ointment DAB 6 | 17081801     | 1              |
| Noweda          | Cooling ointment DAB 6 | 17122801     | 6              |
| Noweda          | Cooling ointment DAB 6 | 17254101     | 1              |
| Noweda          | Cooling ointment DAB 6 | 17298701     | 1              |
| Noweda          | Cooling ointment DAB 6 | 18042403     | 1              |
| Noweda          | Cooling ointment DAB 6 | 18183201     | 1              |
| Noweda          | Cooling ointment DAB 6 | 18218302     | 3              |
| Noweda          | Cooling ointment DAB 6 | 19073801     | 2              |
| Noweda          | Cooling ointment DAB 6 | 19155001     | 4              |
| Noweda          | Cooling ointment DAB 6 | 20001262001  | 4              |
| Noweda          | Cooling ointment DAB 6 | 20001263001  | 1              |
| Caelo           | Cooling ointment DAB 6 | 14329001     | 5              |
| Caelo           | Cooling ointment DAB 6 | 14328801     | 30             |
| Caelo           | Cooling ointment DAB 6 | 14268101     | 12             |
| Caelo           | Cooling ointment DAB 6 | 16129501     | 16             |
| Caelo           | Cooling ointment DAB 6 | 19154901     | 17             |
| Caelo           | Cooling ointment DAB 6 | 20002073001  | 5              |
| Caelo           | Cooling ointment DAB 6 | 2000335001   | 1              |
| Caelo           | Cooling ointment DAB 6 | 18272601     | 4              |
| Caelo           | Cooling ointment DAB 6 | 20000232001  | 3              |
| Euro OTC        | Cooling ointment DAB 6 | 16172801     | 1              |
| Caelo           | Cooling ointment DAB 6 | 14288601     | 10             |
| Pala            | Cooling ointment DAB 6 | 18219201     | 1              |
| Pala            | Cooling ointment DAB 6 | 19150102     | 3              |
| Pala            | Cooling ointment DAB 6 | 19238001     | 2              |
| Phoenix         | Cooling ointment DAB 6 | 16000501     | 2              |
| Phoenix         | Cooling ointment DAB 6 | 17122701     | 1              |
| Phoenix         | Cooling ointment DAB 6 | 3042         | 1              |
| Phoenix         | Cooling ointment DAB 6 | 17157201     | 1              |
| Phoenix         | Cooling ointment DAB 6 | 18182301     | 2              |
| Phoenix         | Cooling ointment DAB 6 | 19073701     | 2              |
| Caelo           | Cooling ointment DAB 6 | 19074301     | 22             |
| Caelo           | Cooling ointment DAB 6 | 19072501     | 1              |
| Caelo           | Cooling ointment DAB 6 | 19513102     | 1              |
| Caelo           | Cooling ointment DAB 6 | 19236901     | 10             |
| Caelo           | Cooling ointment DAB 6 | 200004342001 | 1              |
| phönix          | Cooling ointment DAB 6 | 14329501     | 1              |
| phönix          | Cooling ointment DAB 6 | 17075201     | 1              |
| phönix          | Cooling ointment DAB 6 | 17156801     | 1              |
| Phönix          | Cooling ointment DAB 6 | 15434502     | 1              |
| Phönix          | Cooling ointment DAB 6 | 17075101     | 1              |
| Phönix          | Cooling ointment DAB 6 | 18104601     | 1              |
| Phönix          | Cooling ointment DAB 6 | 18218301     | 1              |
| Phönix          | Cooling ointment DAB 6 | 19155001     | 2              |
| Phönix          | Cooling ointment DAB 6 | 19155202     | 1              |
| Phönix          | Cooling ointment DAB 6 | 20001258001  | 1              |

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| Supplier                   | Substance              | Batch            | Spectra |
|----------------------------|------------------------|------------------|---------|
| Phönix                     | Cooling ointment DAB 6 | 20002953001      | 1       |
| Phönix                     | Cooling ointment DAB 6 | 20003305002      | 1       |
| Bombastus                  | Cooling ointment DAB 6 | 20000233         | 5       |
| Caelo                      | Cooling ointment DAB 6 | 17033001         | 66      |
| Caelo                      | Cooling ointment DAB 6 | 17124802         | 4       |
| Caelo                      | Cooling ointment DAB 6 | 19153201         | 14      |
| Phönix/Hedinger            | Cooling ointment DAB 6 | 17254101         | 1       |
| Sanacorp                   | Cooling ointment DAB 6 | 13121601         | 1       |
| Sanacorp                   | Cooling ointment DAB 6 | 13191301         | 1       |
| Sanacorp                   | Cooling ointment DAB 6 | 15066601         | 3       |
| Sanacorp                   | Cooling ointment DAB 6 | 18182601         | 1       |
| Sanacorp                   | Cooling ointment DAB 6 | 18218302         | 2       |
| Sanacorp                   | Cooling ointment DAB 6 | 18272901         | 1       |
| Sanacorp                   | Cooling ointment DAB 6 | 20000333001      | 1       |
| Caelo                      | Cooling ointment DAB 6 | 20004341002      | 1       |
| Caelo                      | Cooling ointment DAB 6 | 17298001         | 31      |
| Sanacorp W.E: 18.01.18 ... | Cooling ointment DAB 6 | 17157001         | 2       |
| Caelo                      | Cooling ointment DAB 6 | 17330801         | 21      |
| Caelo                      | Cooling ointment DAB 6 | 15435102         | 28      |
| Caelo                      | Cooling ointment DAB 6 | 182729001        | 1       |
| Caelo                      | Cooling ointment DAB 6 | 19154801         | 3       |
| Caelo                      | Cooling ointment DAB 6 | 20001259001      | 10      |
| Caelo                      | Cooling ointment DAB 6 | 16172901         | 27      |
| Caelo                      | Cooling cream DAB      | 13315101         | 26      |
| Bombastus                  | Cooling cream DAB      | 275667           | 1       |
| Bombastus                  | Cooling cream DAB      | 19001417         | 8       |
| Bombastus                  | Cooling cream DAB      |                  | 1       |
| Caelo                      | Cooling cream DAB      | 12364802         | 2       |
| Caelo                      | Cooling cream DAB      | 13051601         | 11      |
| Caelo                      | Cooling cream DAB      |                  | 12      |
| Caeser&Loretz GmbH         | Cooling cream DAB      |                  | 1       |
|                            | Cooling cream DAB      | 15L03-T06-028365 | 1       |
| Sanacorp                   | Cooling cream DAB      |                  | 1       |
|                            | Cooling cream DAB      | 14328801         | 1       |
|                            | Cooling ointment DAB 6 | 17075102         | 1       |

- 231 951 spectra from 1120 *Apo-Ident* customers from a total of 45 231 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Cooling cream / Cooling cream with rose oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Cooling cream / Cooling cream with rose oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1200          | 0              | 62 739        |
| <b>Type B</b> | 0              | 4521          | 39             | 86 931        |
| <b>Type C</b> | 0              | 9262          | 150            | 231 951       |

The substance/substance group *Cooling cream / Cooling cream with rose oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.1447 % (> 99.0789 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.4063 % (> 98.3744 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Cooling cream / Cooling cream with rose oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                        | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-----------------------------------------|-------------------------------|---------------------------------------|
| Lanolin DAB                             | 26.51                         | –                                     |
| Clotrimazole 10% Cordes <sup>®</sup> RK | 41.63                         | –                                     |
| Basis Cordes <sup>®</sup> RK            | 85.23                         | –                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Cooling cream / Cooling cream with rose oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 30889            | 31992                      | 8.43                                | 40.60                                  |
| 30890            | 32293                      | 7.65                                | 52.07                                  |
| 30921            | 31249                      | 4.98                                | 47.18                                  |
| 31052            | 31922                      | 7.42                                | 44.11                                  |
| 31224            | 31992                      | 6.35                                | 44.71                                  |
| 31249            | 31249                      | 0.00                                | 48.52                                  |
| 31922            | 31922                      | 0.00                                | 47.82                                  |
| 31992            | 31992                      | 0.00                                | 46.02                                  |
| 32293            | 32293                      | 0.00                                | 48.34                                  |
| 32294            | 32294                      | 0.00                                | 41.61                                  |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32506            | 32506                      | 0.00                                | 50.19                                  |
| 32507            | 32507                      | 0.00                                | 50.23                                  |
| 33180            | 33180                      | 0.00                                | 51.92                                  |
| 33779            | 33779                      | 0.00                                | 41.99                                  |
| 34499            | 31992                      | 20.85                               | 44.17                                  |
| 34500            | 31992                      | 14.16                               | 44.23                                  |
| 34501            | 31249                      | 9.92                                | 51.04                                  |
| 34502            | 35230                      | 24.89                               | 43.41                                  |
| 34973            | 34973                      | 0.00                                | 46.28                                  |
| 35230            | 35230                      | 0.00                                | 43.82                                  |
| 35231            | 35231                      | 0.00                                | 45.19                                  |
| 35233            | 35233                      | 0.00                                | 47.22                                  |
| 35234            | 35234                      | 0.00                                | 50.58                                  |
| 35235            | 35235                      | 0.00                                | 45.24                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Coriander oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31192-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Coriander oil; Oleum coriandri

### Special notes

When selecting the *Coriander oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Coriander oil             | 4      | 3      | 64     |

## Second-stage model

For differentiation of the substance/substance group *Coriander oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Coriander oil*:

| Supplier | Substance     | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------|----------|-----------|---------|-------------|
| Caelo    | Coriander oil | 12228509 | 31192     | 40      | 1407274     |
| Caelo    | Coriander oil | 13288109 | 31407     | 40      | 20130903    |
| Caelo    | Coriander oil | 170504   | 33913     | 40      | 20170228*   |
| Caelo    | Coriander oil | 190810   | 34648     | 40      | 20190510*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Coriander oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Coriander oil*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance     | Batch    | Sample ID | Spectra |
|----------|---------------|----------|-----------|---------|
| Caelo    | Coriander oil | 16140410 | 33253     | 40      |
| Caelo    | Coriander oil | 181257   | 34056     | 40      |
| Caelo    | Coriander oil | 192413   | 34994     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 259 spectra from 106 *Apo-Ident* customers from 66 batches from the substance/substance group *Coriander oil*.
- Among them are spectra of independent samples from 64 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance     | Batch             | Spectra |
|---------------------|---------------|-------------------|---------|
| AHD, 05.11.2013     | Coriander oil | 12228510          | 1       |
| AHD, 19.07.2013     | Coriander oil | 12228507          | 1       |
| AHD, 26.09.2013     | Coriander oil | 12228509          | 2       |
| Alliance            | Coriander oil | 192413001         | 2       |
| Alliance Healthcare | Coriander oil | 17364701          | 1       |
| Bauer/Noweda        | Coriander oil | 8008-52-4         | 1       |
| Bauer/Noweda        | Coriander oil | 84775-50-8        | 1       |
| Bombastus           | Coriander oil | 17050408          | 1       |
| Caelo               | Coriander oil | 18061201          | 1       |
| Caelo               | Coriander oil | 31081203          | 1       |
| Caelo               | Coriander oil | 7021303           | 1       |
| Caelo               | Coriander oil | 2081306           | 1       |
| Caelo               | Coriander oil | 14011403          | 1       |
| Caelo               | Coriander oil | 12061413          | 1       |
| Caelo               | Coriander oil | 12228501          | 1       |
| Caelo               | Coriander oil | 13288112          | 4       |
| Caelo               | Coriander oil | 14319902          | 3       |
| Caelo               | Coriander oil | 14319904          | 4       |
| Caelo               | Coriander oil | 15229601          | 6       |
| Caelo               | Coriander oil | 15229607          | 3       |
| Caelo               | Coriander oil | 15229608          | 1       |
| Caelo               | Coriander oil | 15229613          | 2       |
| Caelo               | Coriander oil | 1612210C/16140401 | 1       |
| Caelo               | Coriander oil | 16140406          | 2       |
| Caelo               | Coriander oil | 16140405          | 7       |
| Caelo               | Coriander oil | 17050403          | 6       |
| Caelo               | Coriander oil | 17050409          | 8       |
| Caelo               | Coriander oil | 18125703          | 15      |
| Caelo               | Coriander oil | 18125708          | 5       |
| Caelo               | Coriander oil | 18125709          | 3       |
| Caelo               | Coriander oil | 19081003          | 15      |
| Caelo               | Coriander oil | 192413004         | 1       |
| Caelo               | Coriander oil | 192413005         | 3       |
| Caelo               | Coriander oil | 20004199002       | 1       |
| Caelo               | Coriander oil | 20004201001       | 1       |

*continued on the next page*



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| Supplier                   | Substance     | Batch              | Spectra |
|----------------------------|---------------|--------------------|---------|
| Caelo                      | Coriander oil | 10293307           | 1       |
| Caelo                      | Coriander oil | 152229601          | 1       |
| Caelo                      | Coriander oil | 1711200C/17050403  | 1       |
| Caelo                      | Coriander oil | 192413002          | 9       |
| Caelo                      | Coriander oil | 16140403           | 1       |
| Caelo                      | Coriander oil | 19081002P-191022-2 | 1       |
| Caelo                      | Coriander oil | 17050408           | 15      |
| Caelo                      | Coriander oil | 11324003           | 1       |
| Caelo                      | Coriander oil | 11324002           | 1       |
| Caelo                      | Coriander oil | 11324005           | 4       |
| Caelo                      | Coriander oil | 190390404          | 1       |
| Caelo                      | Coriander oil | 16140410           | 5       |
| Caelo                      | Coriander oil | 19081002           | 18      |
| Caelo                      | Coriander oil | 16140409           | 2       |
| Caelo                      | Coriander oil | 17364701           | 10      |
| Caelo                      | Coriander oil | 15229610           | 2       |
| Caelo                      | Coriander oil | 17050404           | 1       |
| Caelo                      | Coriander oil | 17364702           | 8       |
| Caelo                      | Coriander oil | 18125704           | 5       |
| Caelo                      | Coriander oil | 11324004           | 1       |
| Caelo                      | Coriander oil | 12228503           | 2       |
| Caelo                      | Coriander oil | 13288113           | 1       |
| Caelo                      | Coriander oil | 16140401           | 4       |
| Caelo                      | Coriander oil | 18125705           | 7       |
| Caelo                      | Coriander oil | 192413001          | 3       |
| Caesar & Loretz GmbH       | Coriander oil | 18125703           | 1       |
| Caesar & Loretz GmbH       | Coriander oil | 18125708           | 2       |
| Caesar & Loretz GmbH       | Coriander oil | 18125709           | 2       |
| Caesar & Loretz GmbH       | Coriander oil | 19081002           | 10      |
| Caesar & Loretz GmbH       | Coriander oil | 19081003           | 1       |
| Caesar & Loretz GmbH       | Coriander oil | 18125711           | 1       |
| Caesar & Loretz GmbH       | Coriander oil | 192413002          | 1       |
| Caesar & Loretz GmbH       | Coriander oil | 192413005          | 2       |
| Caesar & Loretz GmbH/AHD   | Coriander oil | 20004199002        | 1       |
| Caesar & Loretz GmbH/Ph... | Coriander oil | 2281523            | 1       |
| Caesar & Loretz GmbH/Ph... | Coriander oil | 20004201001        | 1       |
| Caesar & Loretz GmbH/sp... | Coriander oil | 18125708           | 1       |
| Cealo/Sanacorp             | Coriander oil | 17364701           | 1       |
| Coelo                      | Coriander oil | 18125704           | 3       |
| GEHE                       | Coriander oil | 16140405           | 1       |
| Kaders                     | Coriander oil | 131528             | 1       |
| Noweda                     | Coriander oil | 11324005           | 1       |
| Phoenix                    | Coriander oil | 192413002          | 1       |
| Bombastus                  | Coriander oil | 18125703           | 2       |
| Sanacorp                   | Coriander oil | 16140406           | 1       |
| Caelo                      | Coriander oil | 190810001          | 1       |
| Taoasis                    | Coriander oil | 32040-108625       | 1       |
| Taoasis                    | Coriander oil | 31920-1111173      | 1       |
| Taoasis                    | Coriander oil | 33485-112618       | 1       |
| Taoasis                    | Coriander oil | 104709-125892      | 1       |
| VDI                        | Coriander oil | 14319902           | 1       |
| Caelo                      | Coriander oil | 13288109           | 4       |
| Caelo                      | Coriander oil | 12228509           | 1       |

- 241 104 spectra from 1121 *Apo-Ident* customers from a total of 46 940 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#),

the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Coriander oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Coriander oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 160           | 0              | 63 779        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 257           | 2              | 241 104       |

The substance/substance group *Coriander oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.2278 % (> 98.0695 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Coriander oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in<br>main model | Distance in<br>second-stage model |
|--------------|---------------------------|-----------------------------------|
| Lavender oil | 46.38                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Coriander oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31192     | 31192               | 0.00                         | 72.66                           |
| 31407     | 33913               | 4.99                         | 65.39                           |
| 33913     | 33913               | 0.00                         | 65.16                           |
| 34648     | 34648               | 0.00                         | 66.71                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **D-alpha tocopherol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30485-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

D-alpha tocopherol; alpha-Tocopherolum

### Special notes

When selecting the *D-alpha tocopherol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| D-alpha tocopherol        | 5      | 3      | 60     |

## Second-stage model

For differentiation of the substance/substance group *D-alpha tocopherol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *D-alpha tocopherol*:

| Supplier | Substance          | Batch            | Sample ID | Spectra | Certificate |
|----------|--------------------|------------------|-----------|---------|-------------|
| Caelo    | D-alpha tocopherol | 13248808         | 31501     | 60      | 1507770     |
| Caelo    | D-alpha tocopherol | 16005002         | 32072     | 60      | 20160203    |
| Caelo    | D-alpha tocopherol | 21001924         | 35728     | 50      | 20210824*   |
| Fagron   | D-alpha tocopherol | 16D14-B05-324514 | 32725     | 40      | 20160422    |
| Fagron   | D-alpha tocopherol | 16H29-B08-334064 | 33418     | 40      | 20161027    |
| Fagron   | D-alpha tocopherol | 16H29-B08-334064 | 33419     | 40      | 20161027    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 290 spectra of 6 reference samples from the substance/substance group *D-alpha tocopherol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 649 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 140 spectra of 3 reference samples from the substance/substance group *D-alpha tocopherol*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance          | Batch            | Sample ID | Spectra |
|----------|--------------------|------------------|-----------|---------|
| Caelo    | D-alpha tocopherol | 21001944         | 35729     | 50      |
| Fagron   | D-alpha tocopherol | 17B14-B02-336290 | 34036     | 40      |
| Fagron   | D-alpha tocopherol | 21D06-T06-088532 | 35588     | 50      |

- 91 351 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 136 spectra from 82 *Apo-Ident* customers from 63 batches from the substance/substance group *D-alpha tocopherol*.
- Among them are spectra of independent samples from 60 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance          | Batch            | Spectra |
|-----------------------|--------------------|------------------|---------|
| Caelo                 | D-alpha tocopherol | 18220801         | 6       |
| Alte Apotheke         | D-alpha tocopherol | 16D14B05324514   | 1       |
| Audor Pharma          | D-alpha tocopherol | 16D14-B05-322951 | 1       |
| Caela/Phönix 05.07.18 | D-alpha tocopherol | 17057509         | 1       |
| Caelo                 | D-alpha tocopherol | 14159303         | 1       |
| Caelo                 | D-alpha tocopherol | 5012I-03257      | 1       |
| Caelo                 | D-alpha tocopherol | 12106901         | 1       |
| Caelo                 | D-alpha tocopherol | 12106907         | 2       |
| Caelo                 | D-alpha tocopherol | 11313308         | 3       |
| Caelo                 | D-alpha tocopherol | 12106910         | 2       |
| Caelo                 | D-alpha tocopherol | 13248802         | 2       |
| Caelo                 | D-alpha tocopherol | 11313311         | 2       |
| Caelo                 | D-alpha tocopherol | 12106908         | 1       |
| Caelo                 | D-alpha tocopherol | 13248803         | 1       |
| Caelo                 | D-alpha tocopherol | 14159302         | 1       |
| Caelo                 | D-alpha tocopherol | 712015           | 1       |
| Caelo                 | D-alpha tocopherol | 14353802         | 1       |
| Caelo                 | D-alpha tocopherol | 18068402         | 1       |
| Caelo                 | D-alpha tocopherol | 17057508         | 1       |
| Caelo                 | D-alpha tocopherol | 18220810         | 7       |
| Caelo                 | D-alpha tocopherol | 18220805         | 3       |
| Caelo                 | D-alpha tocopherol | 191384003        | 1       |
| Caelo                 | D-alpha tocopherol | 20000859006      | 1       |
| Caelo                 | D-alpha tocopherol | 191384002        | 1       |
| Caelo                 | D-alpha tocopherol | 18220813         | 4       |
| Caelo                 | D-alpha tocopherol | 11313309         | 1       |
| Caelo                 | D-alpha tocopherol | 13248804         | 1       |
| Caelo                 | D-alpha tocopherol | 15102611         | 1       |
| Caelo                 | D-alpha tocopherol | 14159305         | 1       |
| Caelo                 | D-alpha tocopherol | 16187606         | 1       |
| Caelo                 | D-alpha tocopherol | 11313302         | 1       |
| Caelo                 | D-alpha tocopherol | 11313301         | 1       |
| Caelo                 | D-alpha tocopherol | 8705007          | 1       |
| Caelo                 | D-alpha tocopherol | 132488003        | 1       |
| Caelo                 | D-alpha tocopherol | 16187608         | 1       |

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| Supplier             | Substance          | Batch            | Spectra |
|----------------------|--------------------|------------------|---------|
| Caelo                | D-alpha tocopherol | 17057501         | 5       |
| Caelo                | D-alpha tocopherol | 13248801         | 1       |
| Caelo                | D-alpha tocopherol | 15102606         | 2       |
| Caelo                | D-alpha tocopherol | 16H29-B08-327045 | 1       |
| Caelo                | D-alpha tocopherol | 16187604         | 10      |
| Caesar & Loretz GmbH | D-alpha tocopherol | 18220813         | 1       |
| Caesar & Loretz GmbH | D-alpha tocopherol | 191384003        | 1       |
| Euro/Phönix          | D-alpha tocopherol | 16187606         | 1       |
| Fagron               | D-alpha tocopherol | 20170816-03257   | 1       |
| Fagron               | D-alpha tocopherol | 17J31-B01-342312 | 2       |
| Fagron               | D-alpha tocopherol | 17J31-B01        | 1       |
| Fagron               | D-alpha tocopherol | 19E20-B07-193116 | 1       |
| Fagron               | D-alpha tocopherol | UT19040020       | 1       |
| Fagron               | D-alpha tocopherol | 17B14-B02        | 2       |
| Fagron               | D-alpha tocopherol | 20H04-B04-201937 | 2       |
| Fagron               | D-alpha tocopherol | 20A13-B09-200891 | 1       |
| Fagron               | D-alpha tocopherol | 17B14-B02336290  | 1       |
| Fagron               | D-alpha tocopherol | UT107060047      | 1       |
| Fagron               | D-alpha tocopherol | 818A-02500       | 1       |
| Fagron               | D-alpha tocopherol | 17J31-b01-342    | 1       |
| Frago/Gehe           | D-alpha tocopherol | 17J31-B01        | 1       |
| Frago/Noweda         | D-alpha tocopherol | 17B14-B02        | 1       |
| Gehe                 | D-alpha tocopherol | 16187606         | 1       |
| Gehe                 | D-alpha tocopherol | 18220810         | 1       |
| Gehe                 | D-alpha tocopherol | 18220813         | 1       |
| Caelo                | D-alpha tocopherol | 14353806         | 3       |
| Caelo                | D-alpha tocopherol | 18068403         | 7       |
| Klosterring          | D-alpha tocopherol | 18220813         | 1       |
| Kögl                 | D-alpha tocopherol | 16005006         | 1       |
| Kögl                 | D-alpha tocopherol | 17B14B02334704   | 2       |
| Kögl                 | D-alpha tocopherol | 17B14B02         | 1       |
| Kögl                 | D-alpha tocopherol | 18220801         | 1       |
| Midas                | D-alpha tocopherol | 17057509         | 1       |
| Sanacorp             | D-alpha tocopherol | 13248801         | 1       |
| Sanacorp             | D-alpha tocopherol | 17J31-B01-347339 | 1       |
| Sigma-Aldrich        | D-alpha tocopherol | BCCB3893         | 1       |
| Sigma-Aldrich        | D-alpha tocopherol | 19E20-B07        | 2       |
| Caelo                | D-alpha tocopherol | 16005002         | 12      |
| Fagron               | D-alpha tocopherol | 16D14-B05-324514 | 2       |
| Caelo                | D-alpha tocopherol |                  | 1       |

- 241 227 spectra from 1121 *Apo-Ident* customers from a total of 46 944 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *D-alpha tocopherol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *D-alpha tocopherol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 290           | 0              | 63 649        |
| Type B | 0              | 140           | 0              | 91 351        |
| Type C | 0              | 136           | 0              | 241 227       |

The substance/substance group *D-alpha tocopherol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.9310 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.7143 %) |
| Type C | 100.0000 % (> 99.6849 %) | 100.0000 % (> 95.5882 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *D-alpha tocopherol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Guaiazulene 25%, water-soluble            | 44.09                  | —                              |
| Matricaria oil, rich in (-)-alpha-bisa... | 47.14                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *D-alpha tocopherol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31501     | 31501               | 0.00                         | 52.89                           |
| 32072     | 31501               | 6.18                         | 53.58                           |
| 32725     | 31501               | 17.98                        | 66.45                           |
| 33418     | 31501               | 26.84                        | 72.21                           |
| 33419     | 31501               | 26.62                        | 70.48                           |
| 35728     | 35728               | 0.00                         | 52.08                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dexpanthenol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30884-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dexpanthenol; Dexpanthenolum

### Special notes

When selecting the *Dexpanthenol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Dexpanthenol              | 10     | 15     | 701    |

## Second-stage model

For differentiation of the substance/substance group *Dexpanthenol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dexpanthenol*:

| Supplier | Substance    | Batch            | Sample ID | Spectra | Certificate        |
|----------|--------------|------------------|-----------|---------|--------------------|
| Caelo    | Dexpanthenol | 12018707         | 30884     | 40      | 20120207           |
| Caelo    | Dexpanthenol | 14051903         | 31317     | 40      | 20140319           |
| Caelo    | Dexpanthenol | 171721           | 33716     | 40      | 20170711*          |
| Caelo    | Dexpanthenol | 172877           | 33903     | 40      | 20171109*          |
| Caelo    | Dexpanthenol | 191068           | 34637     | 40      | 20190424*          |
| Caelo    | Dexpanthenol | 190888           | 34639     | 40      | 20190410*          |
| Euro OTC | Dexpanthenol | 1309030-03       | 31532     | 60      | AR-15-FG-005869-01 |
| Euro OTC | Dexpanthenol | 1510008          | 31769     | 57      | 20151102*          |
| Fagron   | Dexpanthenol | 17B06-B04-332078 | 33239     | 40      | 20170315           |
| Fagron   | Dexpanthenol | 19F10-B08-191442 | 34596     | 40      | 20190619           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 437 spectra of 10 reference samples from the substance/substance group *Dexpanthenol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 10 different batches.
- 63 502 spectra from a total of 1297 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 600 spectra of 15 reference samples from the substance/substance group *Dexpanthenol*.
- Among them are spectra of independent samples from 15 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance    | Batch      | Sample ID | Spectra |
|----------|--------------|------------|-----------|---------|
| Caelo    | Dexpanthenol | 190087     | 34337     | 40      |
| Caelo    | Dexpanthenol | 190101     | 34479     | 40      |
| Caelo    | Dexpanthenol | 191070     | 34638     | 40      |
| Caelo    | Dexpanthenol | 20004104   | 35298     | 40      |
| Euro OTC | Dexpanthenol | 1606015    | 32465     | 40      |
| Euro OTC | Dexpanthenol | 1607027    | 32467     | 40      |
| Euro OTC | Dexpanthenol | 1610041    | 32829     | 40      |
| Euro OTC | Dexpanthenol | 1703029    | 33238     | 40      |
| Euro OTC | Dexpanthenol | 1708013    | 33664     | 40      |
| Euro OTC | Dexpanthenol | 1801011    | 33929     | 40      |
| Euro OTC | Dexpanthenol | 1803008    | 34090     | 40      |
| Euro OTC | Dexpanthenol | 1806019-01 | 34210     | 40      |
| Euro OTC | Dexpanthenol | 1808007    | 34217     | 40      |
| Euro OTC | Dexpanthenol | 2001014    | 34814     | 40      |
| Euro OTC | Dexpanthenol | 2001015    | 34815     | 40      |

- 90 891 spectra from a total of 2001 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4004 spectra from 830 *Apo-Ident* customers from 729 batches from the substance/substance group *Dexpanthenol*.
- Among them are spectra of independent samples from 703 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance    | Batch            | Spectra |
|----------|--------------|------------------|---------|
| Caelo    | Dexpanthenol | 1457005          | 1       |
| Caelo    | Dexpanthenol | 19062103         | 16      |
| 14356201 | Dexpanthenol | 14356201         | 1       |
| A.H.D.   | Dexpanthenol | 13D22-N12        | 1       |
| A.H.D.   | Dexpanthenol | 14E01-B11-300068 | 1       |
| Caelo    | Dexpanthenol | 18197202         | 30      |
| ACM      | Dexpanthenol | KNC0684J15       | 1       |
| ACM      | Dexpanthenol | KNC1152J15       | 1       |
| AHD      | Dexpanthenol | 191835010        | 1       |
| Caelo    | Dexpanthenol | TL01508051       | 1       |
| Caelo    | Dexpanthenol | 20001457008      | 6       |
| ALH      | Dexpanthenol | 1510008-02       | 1       |
| Alliance | Dexpanthenol | 1301009-01       | 1       |
| Alliance | Dexpanthenol | 15F26-B01-317520 | 2       |
| Alliance | Dexpanthenol | 16D07-B04-323097 | 1       |
| Alliance | Dexpanthenol | 15F26-B01-319991 | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Alliance H.                | Dexpanthenol     | 15260905         | 1              |
| Alliance H.                | Dexpanthenol     | 16311605         | 2              |
| Alliance health            | Dexpanthenol     | 1204010-01       | 1              |
| Alliance Health 03.12.2... | Dexpanthenol     | 1309030-03       | 1              |
| Alliance Health 27.03.2... | Dexpanthenol     | 1407039-02       | 1              |
| Caelo                      | Dexpanthenol     | 13342611         | 4              |
| Caelo                      | Dexpanthenol     | 14214511         | 5              |
| Caelo                      | Dexpanthenol     | 14214512         | 5              |
| Allianz                    | Dexpanthenol     | 1801011-01       | 2              |
| anzag                      | Dexpanthenol     | 14E01-B11-293624 | 7              |
| Anzag                      | Dexpanthenol     | 12E11-N02        | 3              |
| Anzag                      | Dexpanthenol     | 12K27-N04        | 1              |
| Anzag                      | Dexpanthenol     | 12126705         | 2              |
| Anzag                      | Dexpanthenol     | 12H28-N07        | 1              |
| Anzag                      | Dexpanthenol     | 13/04-N04        | 1              |
| Anzag                      | Dexpanthenol     | 12J30-B03-287502 | 1              |
| Anzag                      | Dexpanthenol     | 13j29-B05-287527 | 1              |
| Anzag                      | Dexpanthenol     | 14E01-B11-295534 | 3              |
| Anzag                      | Dexpanthenol     | 14H05-B02-305656 | 3              |
| Anzag                      | Dexpanthenol     | 14H05-B02-300067 | 1              |
| Anzag                      | Dexpanthenol     | 64778675L0       | 1              |
| Anzag                      | Dexpanthenol     | 1610041-02       | 1              |
| Anzag                      | Dexpanthenol     | 1703029          | 1              |
| Anzag                      | Dexpanthenol     | 1708013-01       | 1              |
| Anzag                      | Dexpanthenol     | 17335104         | 1              |
| Anzag                      | Dexpanthenol     | 18197204         | 1              |
| apo ident                  | Dexpanthenol     | 1703029-01       | 1              |
| Apo Ident                  | Dexpanthenol     | 180300801        | 1              |
| apomix AMH Niemann GmbH... | Dexpanthenol     | 180619-01        | 1              |
| apomix/Holdermann          | Dexpanthenol     | 14H05-B02-300066 | 1              |
| apomix/Holdermann          | Dexpanthenol     | 16D07-B04-323096 | 2              |
| Bären Apotheke             | Dexpanthenol     | 1703020-01       | 1              |
| BASF                       | Dexpanthenol     | 2181             | 1              |
| BASF                       | Dexpanthenol     | 1407039-01       | 1              |
| BASF AG                    | Dexpanthenol     | 1309030-01       | 1              |
| BASF AG                    | Dexpanthenol     | 94515888Q0       | 1              |
| BASF AG/Noweda             | Dexpanthenol     | 1510008-01       | 1              |
| BASF AG/Noweda             | Dexpanthenol     | 1607027-01       | 1              |
| BASF AG/PHOENIX            | Dexpanthenol     | 140703902        | 1              |
| BASF/ Phönix               | Dexpanthenol     | 1502019-02       | 2              |
| BASF/Noweda                | Dexpanthenol     | 5116I-01082      | 1              |
| beyvers                    | Dexpanthenol     | 1703029-01       | 1              |
| Bombastus                  | Dexpanthenol     | 13342605         | 1              |
| Bombastus                  | Dexpanthenol     | 1502019-02       | 2              |
| Bombastus                  | Dexpanthenol     | 1803008-01       | 1              |
| Bombastus                  | Dexpanthenol     | 16043506         | 2              |
| Bombastus                  | Dexpanthenol     | 1808007-01       | 1              |
| Caelo                      | Dexpanthenol     | 20061203         | 1              |
| Caelo                      | Dexpanthenol     | 14H05_B02_300069 | 1              |
| Caelo                      | Dexpanthenol     | 10869002         | 1              |
| Caelo                      | Dexpanthenol     | 1897203          | 1              |
| Caelo                      | Dexpanthenol     | B191835003       | 1              |
| Caelo                      | Dexpanthenol     | 11293507         | 4              |
| Caelo                      | Dexpanthenol     | 12018706         | 2              |
| Caelo                      | Dexpanthenol     | 20071205         | 1              |
| Caelo                      | Dexpanthenol     | 9081206          | 1              |
| Caelo                      | Dexpanthenol     | 12018703         | 8              |
| Caelo                      | Dexpanthenol     | 3101202          | 1              |
| Caelo                      | Dexpanthenol     | 25101203         | 1              |
| Caelo                      | Dexpanthenol     | 12018713         | 4              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Dexpanthenol     | 24111201     | 1              |
| Caelo           | Dexpanthenol     | 12126704     | 5              |
| Caelo           | Dexpanthenol     | 19121204     | 1              |
| Caelo           | Dexpanthenol     | 19121205     | 1              |
| Caelo           | Dexpanthenol     | 20261012-1   | 1              |
| Caelo           | Dexpanthenol     | 12126705     | 11             |
| Caelo           | Dexpanthenol     | 18011303     | 1              |
| Caelo           | Dexpanthenol     | 12018715     | 1              |
| Caelo           | Dexpanthenol     | 13021305     | 1              |
| Caelo           | Dexpanthenol     | 22021304     | 1              |
| Caelo           | Dexpanthenol     | 25031305     | 1              |
| Caelo           | Dexpanthenol     | 12285211     | 7              |
| Caelo           | Dexpanthenol     | 12126706     | 1              |
| Caelo           | Dexpanthenol     | 3051305      | 1              |
| Caelo           | Dexpanthenol     | 5061306      | 1              |
| Caelo           | Dexpanthenol     | 13084706     | 6              |
| Caelo           | Dexpanthenol     | 15071304     | 1              |
| Caelo           | Dexpanthenol     | 13084707     | 2              |
| Caelo           | Dexpanthenol     | 13084703     | 7              |
| Caelo           | Dexpanthenol     | 3713A-01082  | 1              |
| Caelo           | Dexpanthenol     | 13091309     | 1              |
| Caelo           | Dexpanthenol     | 2101303      | 1              |
| Caelo           | Dexpanthenol     | 16101305     | 1              |
| Caelo           | Dexpanthenol     | 18111306     | 1              |
| Caelo           | Dexpanthenol     | 3121303      | 1              |
| Caelo           | Dexpanthenol     | 13189506     | 8              |
| Caelo           | Dexpanthenol     | 13189503     | 13             |
| Caelo           | Dexpanthenol     | 20121301     | 1              |
| Caelo           | Dexpanthenol     | 16021307     | 1              |
| Caelo           | Dexpanthenol     | 13342601     | 5              |
| Caelo           | Dexpanthenol     | 13342603     | 2              |
| Caelo           | Dexpanthenol     | 25021405     | 1              |
| Caelo           | Dexpanthenol     | 14031410     | 1              |
| Caelo           | Dexpanthenol     | 23041401     | 1              |
| Caelo           | Dexpanthenol     | 13342610     | 6              |
| Caelo           | Dexpanthenol     | 2187         | 1              |
| Caelo           | Dexpanthenol     | 14051905     | 7              |
| Caelo           | Dexpanthenol     | 26081401     | 1              |
| Caelo           | Dexpanthenol     | 1309030-03   | 1              |
| Caelo           | Dexpanthenol     | 14214504     | 6              |
| Caelo           | Dexpanthenol     | 14051913     | 1              |
| Caelo           | Dexpanthenol     | 1407039-01   | 2              |
| Caelo           | Dexpanthenol     | 14214508     | 2              |
| Caelo           | Dexpanthenol     | 22011511     | 1              |
| Caelo           | Dexpanthenol     | 142141508    | 1              |
| Caelo           | Dexpanthenol     | 14214510     | 3              |
| Caelo           | Dexpanthenol     | 4031502      | 1              |
| Caelo           | Dexpanthenol     | 14051909     | 2              |
| Caelo           | Dexpanthenol     | 14356203     | 2              |
| Caelo           | Dexpanthenol     | 14356204     | 5              |
| Caelo           | Dexpanthenol     | 1502019-01   | 2              |
| Caelo           | Dexpanthenol     | 15097703     | 10             |
| Caelo           | Dexpanthenol     | 15097709     | 6              |
| Caelo           | Dexpanthenol     | 15097714     | 24             |
| Caelo           | Dexpanthenol     | 15097713     | 8              |
| Caelo           | Dexpanthenol     | 15097711     | 15             |
| Caelo           | Dexpanthenol     | 15260907     | 9              |
| Caelo           | Dexpanthenol     | 15395502     | 12             |
| Caelo           | Dexpanthenol     | 15097712     | 3              |
| Caelo           | Dexpanthenol     | 12031602     | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Dexpanthenol     | 1560907          | 1              |
| Caelo           | Dexpanthenol     | 1235899          | 1              |
| Caelo           | Dexpanthenol     | 15395506         | 3              |
| Caelo           | Dexpanthenol     | 15395504         | 9              |
| Caelo           | Dexpanthenol     | 16043505         | 9              |
| Caelo           | Dexpanthenol     | 16043506         | 9              |
| Caelo           | Dexpanthenol     | 15260901         | 2              |
| Caelo           | Dexpanthenol     | 23081602         | 1              |
| Caelo           | Dexpanthenol     | 23081603         | 1              |
| Caelo           | Dexpanthenol     | 1604305          | 1              |
| Caelo           | Dexpanthenol     | 16043504         | 4              |
| Caelo           | Dexpanthenol     | 16043502         | 12             |
| Caelo           | Dexpanthenol     | 117M-01082       | 1              |
| Caelo           | Dexpanthenol     | 1606015-01       | 1              |
| Caelo           | Dexpanthenol     | 16164816         | 2              |
| Caelo           | Dexpanthenol     | 16311610         | 9              |
| Caelo           | Dexpanthenol     | 17065403         | 6              |
| Caelo           | Dexpanthenol     | 17065407         | 5              |
| Caelo           | Dexpanthenol     | 17065404         | 14             |
| Caelo           | Dexpanthenol     | 17065411         | 19             |
| Caelo           | Dexpanthenol     | 170654060        | 1              |
| Caelo           | Dexpanthenol     | 17065413         | 3              |
| Caelo           | Dexpanthenol     | 17172110         | 5              |
| Caelo           | Dexpanthenol     | 17172105         | 12             |
| Caelo           | Dexpanthenol     | 17172111         | 14             |
| Caelo           | Dexpanthenol     | 17172107         | 17             |
| Caelo           | Dexpanthenol     | 4121701          | 1              |
| Caelo           | Dexpanthenol     | 171172107        | 1              |
| Caelo           | Dexpanthenol     | 172587709        | 1              |
| Caelo           | Dexpanthenol     | 17287701         | 4              |
| Caelo           | Dexpanthenol     | 17335103         | 16             |
| Caelo           | Dexpanthenol     | 17287705         | 22             |
| Caelo           | Dexpanthenol     | 17336104         | 1              |
| Caelo           | Dexpanthenol     | 17335101         | 4              |
| Caelo           | Dexpanthenol     | 17172113         | 9              |
| Caelo           | Dexpanthenol     | 30041803         | 1              |
| Caelo           | Dexpanthenol     | 27041801         | 1              |
| Caelo           | Dexpanthenol     | 17335102         | 3              |
| Caelo           | Dexpanthenol     | 17339106         | 1              |
| Caelo           | Dexpanthenol     | 18069003         | 1              |
| Caelo           | Dexpanthenol     | 18069001         | 32             |
| Caelo           | Dexpanthenol     | 1806019-01       | 1              |
| Caelo           | Dexpanthenol     | 17335114         | 1              |
| Caelo           | Dexpanthenol     | 18069103         | 3              |
| Caelo           | Dexpanthenol     | 18176605         | 7              |
| Caelo           | Dexpanthenol     | 18176603         | 2              |
| Caelo           | Dexpanthenol     | 1808007-01       | 2              |
| Caelo           | Dexpanthenol     | 19008704         | 7              |
| Caelo           | Dexpanthenol     | 18C20-B07-353895 | 1              |
| Caelo           | Dexpanthenol     | 19006705         | 1              |
| Caelo           | Dexpanthenol     | 18c20-b07-353896 | 1              |
| Caelo           | Dexpanthenol     | 19045002         | 1              |
| Caelo           | Dexpanthenol     | 19045006         | 5              |
| Caelo           | Dexpanthenol     | 19045004         | 10             |
| Caelo           | Dexpanthenol     | 19065802         | 4              |
| Caelo           | Dexpanthenol     | 1908708          | 1              |
| Caelo           | Dexpanthenol     | 19008701         | 1              |
| Caelo           | Dexpanthenol     | 9008707          | 1              |
| Caelo           | Dexpanthenol     | 19088802         | 5              |
| Caelo           | Dexpanthenol     | 18L25-B04-357388 | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Caelo           | Dexpanthenol     | 19106804           | 9              |
| Caelo           | Dexpanthenol     | 19107003           | 1              |
| Caelo           | Dexpanthenol     | 19106810           | 7              |
| Caelo           | Dexpanthenol     | 19016808           | 1              |
| Caelo           | Dexpanthenol     | 1910606810         | 1              |
| Caelo           | Dexpanthenol     | 19106807           | 9              |
| Caelo           | Dexpanthenol     | 191069010          | 1              |
| Caelo           | Dexpanthenol     | 19107001           | 14             |
| Caelo           | Dexpanthenol     | 191835002          | 1              |
| Caelo           | Dexpanthenol     | 191070002          | 1              |
| Caelo           | Dexpanthenol     | 191835005          | 11             |
| Caelo           | Dexpanthenol     | 191835001          | 3              |
| Caelo           | Dexpanthenol     | 2001015-01         | 1              |
| Caelo           | Dexpanthenol     | 191835             | 1              |
| Caelo           | Dexpanthenol     | 20001457006        | 5              |
| Caelo           | Dexpanthenol     | 19000648003        | 9              |
| Caelo           | Dexpanthenol     | 20001457005        | 5              |
| Caelo           | Dexpanthenol     | 20001457003        | 1              |
| Caelo           | Dexpanthenol     | 90006480031        | 1              |
| Caelo           | Dexpanthenol     | 20004231007        | 3              |
| Caelo           | Dexpanthenol     | 20004104002        | 1              |
| Caelo           | Dexpanthenol     | 1806001            | 1              |
| Caelo           | Dexpanthenol     | 191344             | 2              |
| Caelo           | Dexpanthenol     | 191835007          | 2              |
| Caelo           | Dexpanthenol     | 12018702           | 1              |
| Caelo           | Dexpanthenol     | 13342605           | 10             |
| Caelo           | Dexpanthenol     | 191835010          | 13             |
| Caelo           | Dexpanthenol     | 11293501           | 2              |
| Caelo           | Dexpanthenol     | 12285201           | 6              |
| Caelo           | Dexpanthenol     | 15260908           | 1              |
| Caelo           | Dexpanthenol     | 17355108           | 1              |
| Caelo           | Dexpanthenol     | 19197203           | 1              |
| Caelo           | Dexpanthenol     | 18197201           | 4              |
| Caelo           | Dexpanthenol     | 12E11-N02          | 1              |
| Caelo           | Dexpanthenol     | 17B06-B04-332076   | 1              |
| Caelo           | Dexpanthenol     | 17172112           | 10             |
| Caelo           | Dexpanthenol     | 17121-B01-340264   | 1              |
| Caelo           | Dexpanthenol     | 18009109           | 1              |
| Caelo           | Dexpanthenol     | 1302009            | 1              |
| Caelo           | Dexpanthenol     | 1304023            | 1              |
| Caelo           | Dexpanthenol     | 14051908           | 1              |
| Caelo           | Dexpanthenol     | TL01503022         | 1              |
| Caelo           | Dexpanthenol     | 19062102           | 16             |
| Caelo           | Dexpanthenol     | 14H05-B02-300069   | 1              |
| Caelo           | Dexpanthenol     | 16D07-B04-322110   | 1              |
| Caelo           | Dexpanthenol     | 17065406           | 12             |
| Caelo           | Dexpanthenol     | 19045007           | 8              |
| Caelo           | Dexpanthenol     | 19183501           | 12             |
| Caelo           | Dexpanthenol     | 12126702           | 13             |
| Caelo           | Dexpanthenol     | 13084705           | 3              |
| Caelo           | Dexpanthenol     | 15260905           | 10             |
| Caelo           | Dexpanthenol     | 1801011-01         | 5              |
| Caelo           | Dexpanthenol     | 19045005           | 7              |
| Caelo           | Dexpanthenol     | 17121-b01-340266   | 1              |
| Caelo           | Dexpanthenol     | 19008705           | 8              |
| Caelo           | Dexpanthenol     | 191835008          | 10             |
| Caelo           | Dexpanthenol     | 13084704           | 6              |
| Caelo           | Dexpanthenol     | 13084711           | 1              |
| Caelo           | Dexpanthenol     | 12126707           | 2              |
| Caelo           | Dexpanthenol     | 17335106P-180827-8 | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|------------------|---------------------|----------------|
| Caelo           | Dexpanthenol     | 18197202P-181107-1  | 1              |
| Caelo           | Dexpanthenol     | 18069110P-181228-3  | 1              |
| Caelo           | Dexpanthenol     | 18069110P-190226-7  | 1              |
| Caelo           | Dexpanthenol     | 19062102P-190516-3  | 1              |
| Caelo           | Dexpanthenol     | 19183502P-200206-6  | 1              |
| Caelo           | Dexpanthenol     | 191835008P-200514-4 | 1              |
| Caelo           | Dexpanthenol     | 19065801P-190516-4  | 1              |
| Caelo           | Dexpanthenol     | 19008707P-190325-5  | 1              |
| Caelo           | Dexpanthenol     | 16043511            | 14             |
| Caelo           | Dexpanthenol     | 11293503            | 1              |
| Caelo           | Dexpanthenol     | 12285203            | 4              |
| Caelo           | Dexpanthenol     | 122852211           | 1              |
| Caelo           | Dexpanthenol     | 19008708            | 11             |
| Caelo           | Dexpanthenol     | 1914406             | 1              |
| Caelo           | Dexpanthenol     | 16043510            | 16             |
| Caelo           | Dexpanthenol     | 1703029-01          | 2              |
| Caelo           | Dexpanthenol     | 14051901            | 1              |
| Caelo           | Dexpanthenol     | 18197203            | 26             |
| Caelo           | Dexpanthenol     | 15097716            | 1              |
| Caelo           | Dexpanthenol     | 17287708            | 11             |
| Caelo           | Dexpanthenol     | 19045008            | 4              |
| Caelo           | Dexpanthenol     | 4082001             | 1              |
| Caelo           | Dexpanthenol     | 191835011           | 9              |
| Caelo           | Dexpanthenol     | 2001457004          | 2              |
| Caelo           | Dexpanthenol     | 3280                | 1              |
| Caelo           | Dexpanthenol     | 14356210            | 5              |
| Caelo           | Dexpanthenol     | 20001457004         | 7              |
| Caelo           | Dexpanthenol     | 13342608            | 1              |
| Caelo           | Dexpanthenol     | 17287707            | 15             |
| Caelo           | Dexpanthenol     | 19183502            | 18             |
| Caelo           | Dexpanthenol     | 14051904            | 7              |
| Caelo           | Dexpanthenol     | 16164808            | 10             |
| Caelo           | Dexpanthenol     | 16164809            | 10             |
| Caelo           | Dexpanthenol     | 16164810            | 12             |
| Caelo           | Dexpanthenol     | 3815464             | 1              |
| Caelo           | Dexpanthenol     | 20004231001         | 6              |
| Caelo           | Dexpanthenol     | 15097710            | 8              |
| Caelo           | Dexpanthenol     | 19008706            | 10             |
| Caelo           | Dexpanthenol     | 12L28-N03           | 1              |
| Caelo           | Dexpanthenol     | 13J29-B05-287526    | 1              |
| Caelo           | Dexpanthenol     | 18069002            | 18             |
| Caelo           | Dexpanthenol     | 18069110            | 15             |
| Caelo           | Dexpanthenol     | 1910684             | 1              |
| Caelo           | Dexpanthenol     | 19106803            | 33             |
| Caelo           | Dexpanthenol     | 17065412            | 19             |
| Caelo           | Dexpanthenol     | 17B06-B04-332078    | 2              |
| Caelo           | Dexpanthenol     | 13342602            | 4              |
| Caelo           | Dexpanthenol     | 1301009-02          | 1              |
| Caelo           | Dexpanthenol     | 12285205            | 1              |
| Caelo           | Dexpanthenol     | 15097705            | 5              |
| Caelo           | Dexpanthenol     | 1510008-01          | 3              |
| Caelo           | Dexpanthenol     | 16D07-B04-323096    | 1              |
| Caelo           | Dexpanthenol     | 16311604            | 12             |
| Caelo           | Dexpanthenol     | 17065405            | 6              |
| Caelo           | Dexpanthenol     | 1735105             | 1              |
| Caelo           | Dexpanthenol     | 191835003           | 15             |
| Caelo           | Dexpanthenol     | 20004231003         | 5              |
| Caelo           | Dexpanthenol     | 19106901            | 9              |
| Caelo           | Dexpanthenol     | 13J29B05-287528     | 1              |
| Caelo           | Dexpanthenol     | 14E01-B11-300068    | 3              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Dexpanthenol     | 17172103          | 20             |
| Caelo           | Dexpanthenol     | 91 (18197202)     | 1              |
| Caelo           | Dexpanthenol     | 19088801          | 32             |
| Caelo           | Dexpanthenol     | 191835004         | 14             |
| Caelo           | Dexpanthenol     | 19106805          | 23             |
| Caelo           | Dexpanthenol     | 12285212          | 3              |
| Caelo           | Dexpanthenol     | 13342606          | 15             |
| Caelo           | Dexpanthenol     | 13084702          | 15             |
| Caelo           | Dexpanthenol     | 14214507          | 3              |
| Caelo           | Dexpanthenol     | 14356201          | 10             |
| Caelo           | Dexpanthenol     | 13022-N12         | 1              |
| Caelo           | Dexpanthenol     | 15260906          | 11             |
| Caelo           | Dexpanthenol     | 15395508          | 10             |
| Caelo           | Dexpanthenol     | 1616488           | 1              |
| Caelo           | Dexpanthenol     | 16311605          | 19             |
| Caelo           | Dexpanthenol     | 17172102          | 2              |
| Caelo           | Dexpanthenol     | 17065410          | 2              |
| Caelo           | Dexpanthenol     | 27335103          | 1              |
| Caelo           | Dexpanthenol     | 17287702          | 3              |
| Caelo           | Dexpanthenol     | 17335106          | 32             |
| Caelo           | Dexpanthenol     | 14I21-B01-340267  | 1              |
| Caelo           | Dexpanthenol     | 17335110          | 2              |
| Caelo           | Dexpanthenol     | 18069101          | 1              |
| Caelo           | Dexpanthenol     | 18176602          | 3              |
| Caelo           | Dexpanthenol     | 180669107         | 1              |
| Caelo           | Dexpanthenol     | 17K30-B01-343821  | 1              |
| Caelo           | Dexpanthenol     | 19088803          | 4              |
| Caelo           | Dexpanthenol     | 19106802          | 8              |
| Caelo           | Dexpanthenol     | 19134404          | 3              |
| Caelo           | Dexpanthenol     | 1917001           | 1              |
| Caelo           | Dexpanthenol     | TL01808073        | 1              |
| Caelo           | Dexpanthenol     | 20002329003       | 1              |
| Caelo           | Dexpanthenol     | 2001457008        | 1              |
| Caelo           | Dexpanthenol     | 16311603          | 12             |
| Caelo           | Dexpanthenol     | TL01110076        | 1              |
| Caelo           | Dexpanthenol     | 12285204          | 4              |
| Caelo           | Dexpanthenol     | 19008703          | 11             |
| Caelo           | Dexpanthenol     | 3432              | 1              |
| Caelo           | Dexpanthenol     | 14214505          | 5              |
| Caelo           | Dexpanthenol     | 14H05-B02-3000066 | 1              |
| Caelo           | Dexpanthenol     | 15097708          | 11             |
| Caelo           | Dexpanthenol     | 15395507          | 5              |
| Caelo           | Dexpanthenol     | 1708013-01        | 1              |
| Caelo           | Dexpanthenol     | 190621206         | 1              |
| Caelo           | Dexpanthenol     | 19106902          | 18             |
| Caelo           | Dexpanthenol     | 19106806          | 14             |
| Caelo           | Dexpanthenol     | 19107002          | 18             |
| Caelo           | Dexpanthenol     | 19183504          | 1              |
| Caelo           | Dexpanthenol     | 191835012         | 6              |
| Caelo           | Dexpanthenol     | 190006480003      | 1              |
| Caelo           | Dexpanthenol     | 20004104007       | 1              |
| Caelo           | Dexpanthenol     | 82729498          | 1              |
| Caelo           | Dexpanthenol     | 2614E-01082       | 1              |
| Caelo           | Dexpanthenol     | 1421508           | 1              |
| Caelo           | Dexpanthenol     | 1502019           | 1              |
| Caelo           | Dexpanthenol     | 16043512          | 13             |
| Caelo           | Dexpanthenol     | 15F26-B01-317520  | 1              |
| Caelo           | Dexpanthenol     | 16164811          | 4              |
| Caelo           | Dexpanthenol     | 16311606          | 5              |
| Caelo           | Dexpanthenol     | 16311608          | 2              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------|------------------|------------------|----------------|
| Caelo                | Dexpanthenol     | 16311611         | 2              |
| Caelo                | Dexpanthenol     | 17287709         | 5              |
| Caelo                | Dexpanthenol     | 17335104         | 13             |
| Caelo                | Dexpanthenol     | 17335107         | 6              |
| Caelo                | Dexpanthenol     | 17287703         | 1              |
| Caelo                | Dexpanthenol     | 8069002          | 1              |
| Caelo                | Dexpanthenol     | 18069107         | 18             |
| Caelo                | Dexpanthenol     | 18197204         | 40             |
| Caelo                | Dexpanthenol     | 18C20-B07-351396 | 1              |
| Caelo                | Dexpanthenol     | 19008707         | 12             |
| Caelo                | Dexpanthenol     | 19065804         | 13             |
| Caelo                | Dexpanthenol     | 19106808         | 21             |
| Caelo                | Dexpanthenol     | 19107004         | 10             |
| Caelo                | Dexpanthenol     | 19134401         | 8              |
| Caelo                | Dexpanthenol     | 19134405         | 9              |
| Caelo                | Dexpanthenol     | 1906807          | 1              |
| Caelo                | Dexpanthenol     | 191835009        | 7              |
| Caelo                | Dexpanthenol     | 191835013        | 10             |
| Caelo                | Dexpanthenol     | 20001457002      | 1              |
| Caelo                | Dexpanthenol     | 13084709         | 5              |
| Caelo                | Dexpanthenol     | 15097701         | 8              |
| Caelo                | Dexpanthenol     | 16164802         | 3              |
| Caelo                | Dexpanthenol     | 17172106         | 21             |
| Caelo                | Dexpanthenol     | 3383488Q0        | 1              |
| Caelo                | Dexpanthenol     | 17335108         | 36             |
| Caelo                | Dexpanthenol     | 1806103          | 1              |
| Caelo                | Dexpanthenol     | 19106809         | 13             |
| Caelo                | Dexpanthenol     | 191344001        | 2              |
| Caelo                | Dexpanthenol     | 19H20-B06-194493 | 2              |
| Caelo                | Dexpanthenol     | 19000648005      | 4              |
| Caelo                | Dexpanthenol     | 20004104004      | 2              |
| Caelo                | Dexpanthenol     | 1213A-01082      | 1              |
| Caelo                | Dexpanthenol     | 1513F-01082      | 1              |
| Caelo                | Dexpanthenol     | 17287704         | 23             |
| Caelo                | Dexpanthenol     | 15097704         | 10             |
| Caelo                | Dexpanthenol     | 14H05-B02-305656 | 1              |
| Caeol/Phönix         | Dexpanthenol     | 17287704         | 3              |
| caesar               | Dexpanthenol     | 16043512         | 1              |
| Caesar & Lorenz GmbH | Dexpanthenol     | 19106807         | 1              |
| Caesar & Lorenz GmbH | Dexpanthenol     | 19107002         | 1              |
| Caesar & Lorenz GmbH | Dexpanthenol     | 19183502         | 1              |
| Caesar & Lorenz GmbH | Dexpanthenol     | 19183501         | 1              |
| Caesar & Lorenz GmbH | Dexpanthenol     | 19000648003      | 1              |
| Caelo                | Dexpanthenol     | 2004231001       | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 18069002         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 18069001         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19008706         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 18069110         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19008708         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 18197204         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19045004         | 2              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19045005         | 2              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19045007         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19045008         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19065802         | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19008703         | 2              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19045006         | 2              |
| Caesar & Loretz GmbH | Dexpanthenol     | 18J25-B04-357387 | 1              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19088802         | 2              |
| Caesar & Loretz GmbH | Dexpanthenol     | 19062103         | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH       | Dexpanthenol     | 19008705         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19062102         | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19065804         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19088801         | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106804         | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106805         | 6              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19008704         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106810         | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106808         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106803         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106902         | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106809         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106806         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106807         | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19106901         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19134401         | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19107001         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19183501         | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19107004         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19107002         | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19134406         | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19134405         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19H20-B06        | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19134404         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835005        | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19183502         | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835001        | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835008        | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835004        | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19183503         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835009        | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835010        | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835013        | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20001457006      | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20001457004      | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835012        | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20001457         | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19000651001      | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19000648003      | 6              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 19000648004      | 5              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20001457005      | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20001457008      | 3              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20004231003      | 2              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20004231007      | 4              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 191835007        | 1              |
| Caesar & Loretz GmbH       | Dexpanthenol     | 20004104005      | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 19045004         | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 191835003        | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 19088801         | 2              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 19106804         | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 191835004        | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 18069107         | 1              |
| Caesar & Loretz GmbH / ... | Dexpanthenol     | 19107001         | 1              |
| Caesar & Loretz GmbH Hi... | Dexpanthenol     | 15097714         | 2              |
| Caesar & Loretz GmbH Sa... | Dexpanthenol     | 20001457006      | 1              |
| Caesar & Loretz GmbH, P... | Dexpanthenol     | 19106806         | 1              |
| Caesar & Loretz GmbH/ J... | Dexpanthenol     | 19000648003      | 1              |
| Caesar & Loretz GmbH/AHD   | Dexpanthenol     | 19106807         | 1              |
| Caesar & Loretz GmbH/AHD   | Dexpanthenol     | 20016-T16-080049 | 1              |
| Caesar & Loretz GmbH/AHD   | Dexpanthenol     | T16-0800409      | 2              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH/AHD    | Dexpanthenol     | 20001457008      | 1              |
| Caesar & Loretz GmbH/An...  | Dexpanthenol     | 19106804         | 1              |
| Caesar & Loretz GmbH/AN...  | Dexpanthenol     | 19106804         | 1              |
| Caesar & Loretz GmbH/E      | Dexpanthenol     | 19106807         | 1              |
| Caesar & Loretz GmbH/Gehe   | Dexpanthenol     | 19008707         | 1              |
| Caesar & Loretz GmbH/Gehe   | Dexpanthenol     | 19106902         | 1              |
| Caesar & Loretz GmbH/Gehe   | Dexpanthenol     | 19107002         | 1              |
| Caesar & Loretz GmbH/Gehe   | Dexpanthenol     | 191835004        | 1              |
| Caesar & Loretz GmbH/Gehe   | Dexpanthenol     | 191835013        | 2              |
| Caesar & Loretz GmbH/GEHE   | Dexpanthenol     | 19106902         | 1              |
| Caesar & Loretz GmbH/Je...  | Dexpanthenol     | 191835008        | 2              |
| Caesar & Loretz GmbH/Kehr   | Dexpanthenol     | 19106901         | 1              |
| Caesar & Loretz GmbH/Kehr   | Dexpanthenol     | 19183501         | 4              |
| Caesar & Loretz GmbH/Kehr   | Dexpanthenol     | 191835009        | 1              |
| Caesar & Loretz GmbH/Kr...  | Dexpanthenol     | 19106901         | 1              |
| Caesar & Loretz GmbH/Kr...  | Dexpanthenol     | 19107002         | 1              |
| Caesar & Loretz GmbH/Ph...  | Dexpanthenol     | 19106806         | 1              |
| Caesar & Loretz GmbH/Ph...  | Dexpanthenol     | 19106806         | 1              |
| Caesar & Loretz GmbH/Ph...  | Dexpanthenol     | 19134401         | 1              |
| Caesar & Loretz GmbH/Ph...  | Dexpanthenol     | 19183501         | 1              |
| Caesar & Loretz GmbH/Ph...  | Dexpanthenol     | 191835010        | 1              |
| Caesar & Loretz GmbH/Sana   | Dexpanthenol     | 191835010        | 1              |
| Caesar & Loretz GmbH/Sa...  | Dexpanthenol     | 19106803         | 1              |
| Caesar & Loretz GmbH/Sa...  | Dexpanthenol     | 19106901         | 1              |
| Caesar & Loretz GmbH/Sa...  | Dexpanthenol     | 1918350005       | 1              |
| Caesar & Loretz Hilden      | Dexpanthenol     | 19062102         | 1              |
| Caesar & Loretz Hilden      | Dexpanthenol     | 19088801         | 1              |
| Caesar & Loretz Hilden      | Dexpanthenol     | 20001457008      | 1              |
| Caesar & Loretz Hilden/...  | Dexpanthenol     | 19045005         | 1              |
| Caesar und Loretz           | Dexpanthenol     | 19106806         | 3              |
| Caesar&Lorenz / Gehe        | Dexpanthenol     | 19106810         | 1              |
| Caesar&Loretz               | Dexpanthenol     | 19106810         | 1              |
| Caesar&Loretz GmbH/Fiebig   | Dexpanthenol     | 17172105         | 1              |
| Caesar&lorenz,Phoenix       | Dexpanthenol     | 12285201         | 1              |
| Caesar/Gehe                 | Dexpanthenol     | 19088801         | 1              |
| Caesar/Noweda               | Dexpanthenol     | 4811A-01082      | 1              |
| Caesar/Noweda               | Dexpanthenol     | 13084709         | 2              |
| Caleo/Gehe                  | Dexpanthenol     | 19107001         | 1              |
| Calo                        | Dexpanthenol     | 19008707         | 1              |
| Caolo                       | Dexpanthenol     | 15395506         | 1              |
| Cealo                       | Dexpanthenol     | 17335106         | 1              |
| Cealo                       | Dexpanthenol     | 19088801         | 1              |
| Cealo                       | Dexpanthenol     | 19065802         | 1              |
| Cealo/Sanacorp              | Dexpanthenol     | 15395506         | 1              |
| cesar&lorenz/Phönix         | Dexpanthenol     | 12285203         | 1              |
| Daiichi Fine Chemicals      | Dexpanthenol     | 1301009-01       | 1              |
| DSM                         | Dexpanthenol     | 19106901         | 1              |
| DSM / Noweda                | Dexpanthenol     | 191835013        | 1              |
| DSM / Sanacorp              | Dexpanthenol     | 20001457005      | 1              |
| Fagron                      | Dexpanthenol     | 18C20-B07-350624 | 5              |
| DSM Nutritional Products UK | Dexpanthenol     | 15F26-B01-314370 | 1              |
| DSM Nutritional Prod./...   | Dexpanthenol     | TL01212052       | 1              |
| DSM Nutritional Prod./...   | Dexpanthenol     | 16043505         | 1              |
| DSM Nutritional Prod./...   | Dexpanthenol     | 16311610         | 1              |
| DSM Nutritional Prod./...   | Dexpanthenol     | 17065412         | 1              |
| DSM Nutritional products    | Dexpanthenol     | 19F10-B08-191445 | 1              |
| DSM Nutritional Products    | Dexpanthenol     | 191835009        | 1              |
| DSM Nutritional Product...  | Dexpanthenol     | 19106804         | 1              |
| DSM Nutritional Product...  | Dexpanthenol     | 19134401         | 1              |
| DSM Nutritional Product...  | Dexpanthenol     | 19H20-B06-194494 | 1              |

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| Supplier      | Substance    | Batch              | Spectra |
|---------------|--------------|--------------------|---------|
| DSM/Noweda    | Dexpanthenol | TL01903036         | 2       |
| DSM/Noweda    | Dexpanthenol | 2001015-01         | 1       |
| DSM/Noweda    | Dexpanthenol | TL019003036        | 1       |
| DSM/Noweda    | Dexpanthenol | TL02007076         | 1       |
| DSM/Phoenix   | Dexpanthenol | TL01907089         | 2       |
| Eurho         | Dexpanthenol | 1610041-01         | 1       |
| Eurho         | Dexpanthenol | 170302901          | 1       |
| Eurho         | Dexpanthenol | 1801011-01         | 3       |
| EuRho         | Dexpanthenol | 1110032-01         | 1       |
| EuRho         | Dexpanthenol | 1107023-01         | 1       |
| EuRho         | Dexpanthenol | 1204010-02         | 1       |
| EuRho         | Dexpanthenol | 1301009-01         | 4       |
| EuRho         | Dexpanthenol | 1309030-01         | 1       |
| EuRho         | Dexpanthenol | 23223009T0         | 1       |
| EuRho         | Dexpanthenol | 1801011-01         | 1       |
| EuRho/ Phönix | Dexpanthenol | 1801011-01         | 1       |
| EuRho/Noweda  | Dexpanthenol | 1407039-02         | 1       |
| EuRho/Noweda  | Dexpanthenol | 1801011-01         | 2       |
| EuRho/Phönix  | Dexpanthenol | 1801011-01         | 1       |
| EuRho/Phönix  | Dexpanthenol | 4485006D0          | 1       |
| EuRho/Phönix  | Dexpanthenol | 1808007-01         | 1       |
| Euro          | Dexpanthenol | 2091710            | 1       |
| Euro Gehe     | Dexpanthenol | 1801011-01         | 1       |
| Euro OTC      | Dexpanthenol | 160601501          | 2       |
| Euro OTC      | Dexpanthenol | 1204010-02         | 12      |
| Euro OTC      | Dexpanthenol | 1301009-02         | 17      |
| Euro OTC      | Dexpanthenol | 130100902          | 2       |
| Euro OTC      | Dexpanthenol | 130903002          | 1       |
| Euro OTC      | Dexpanthenol | 2081403            | 1       |
| Euro OTC      | Dexpanthenol | 17091401           | 1       |
| Euro OTC      | Dexpanthenol | 23101409           | 1       |
| Euro OTC      | Dexpanthenol | 14070399-01        | 1       |
| Euro OTC      | Dexpanthenol | 1111406            | 1       |
| Euro OTC      | Dexpanthenol | 309030-03          | 1       |
| Euro OTC      | Dexpanthenol | 140703901          | 3       |
| Euro OTC      | Dexpanthenol | 28111404           | 1       |
| Euro OTC      | Dexpanthenol | 7011503            | 1       |
| Euro OTC      | Dexpanthenol | 11021503           | 1       |
| Euro OTC      | Dexpanthenol | 27031503           | 1       |
| Euro OTC      | Dexpanthenol | 10061508           | 1       |
| Euro OTC      | Dexpanthenol | 150201901          | 1       |
| Euro OTC      | Dexpanthenol | 4091514            | 1       |
| Euro OTC      | Dexpanthenol | 1502019-02         | 17      |
| Euro OTC      | Dexpanthenol | 150201902          | 2       |
| Euro OTC      | Dexpanthenol | 15100008-02        | 2       |
| Euro OTC      | Dexpanthenol | 160702701          | 4       |
| Euro OTC      | Dexpanthenol | 161220D/1606015-01 | 1       |
| Euro OTC      | Dexpanthenol | 17B06-B04-332077   | 2       |
| Euro OTC      | Dexpanthenol | 14071702           | 1       |
| Euro OTC      | Dexpanthenol | 14703029-01        | 1       |
| Euro OTC      | Dexpanthenol | 1801011-01         | 57      |
| Euro OTC      | Dexpanthenol | 28031801           | 1       |
| Euro OTC      | Dexpanthenol | 17335108           | 1       |
| Euro OTC      | Dexpanthenol | 180619-01          | 1       |
| Euro OTC      | Dexpanthenol | 12091801           | 1       |
| Euro OTC      | Dexpanthenol | 1808007-01         | 12      |
| Euro OTC      | Dexpanthenol | 180300802          | 1       |
| Euro OTC      | Dexpanthenol | 5121807            | 1       |
| Euro OTC      | Dexpanthenol | 5121806            | 1       |
| Euro OTC      | Dexpanthenol | 1510008-02         | 22      |

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| <b>Supplier</b>     | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|---------------------|------------------|--------------------|----------------|
| Euro OTC            | Dexpanthenol     | 1806019-01         | 22             |
| Euro OTC            | Dexpanthenol     | 73709736W0         | 1              |
| Euro OTC            | Dexpanthenol     | 1610041-02         | 16             |
| Euro OTC            | Dexpanthenol     | 1803008-01         | 15             |
| Euro OTC            | Dexpanthenol     | 180101101          | 1              |
| Euro OTC            | Dexpanthenol     | 1703029-02         | 5              |
| Euro OTC            | Dexpanthenol     | 2077006D0          | 1              |
| Euro OTC            | Dexpanthenol     | 151000801          | 2              |
| Euro OTC            | Dexpanthenol     | EOEIE22902         | 1              |
| Euro OTC            | Dexpanthenol     | 1301009-01         | 18             |
| Euro OTC            | Dexpanthenol     | 28071501           | 1              |
| Euro OTC            | Dexpanthenol     | 151008-01          | 2              |
| Euro OTC            | Dexpanthenol     | 15100008-01        | 1              |
| Euro OTC            | Dexpanthenol     | 9031703            | 1              |
| Euro OTC            | Dexpanthenol     | 28041729           | 1              |
| Euro OTC            | Dexpanthenol     | 16311610           | 1              |
| Euro OTC            | Dexpanthenol     | 19H20-B06-194494   | 1              |
| Euro OTC            | Dexpanthenol     | 1708013-01         | 23             |
| Euro OTC            | Dexpanthenol     | 190621             | 2              |
| Euro OTC            | Dexpanthenol     | 140703902          | 1              |
| Euro OTC            | Dexpanthenol     | 160041-01          | 1              |
| Euro OTC            | Dexpanthenol     | EOEJD41902         | 1              |
| Euro OTC            | Dexpanthenol     | 95700556P0         | 2              |
| Euro OTC            | Dexpanthenol     | 140739             | 1              |
| Euro OTC            | Dexpanthenol     | 1502010-02         | 1              |
| Euro OTC            | Dexpanthenol     | 1510008-01         | 38             |
| Euro OTC            | Dexpanthenol     | 150219-02          | 1              |
| Euro OTC            | Dexpanthenol     | 151000802          | 1              |
| Euro OTC            | Dexpanthenol     | 15260908           | 1              |
| Euro OTC            | Dexpanthenol     | 161004101          | 3              |
| Euro OTC            | Dexpanthenol     | 1801011            | 1              |
| Euro OTC            | Dexpanthenol     | 1309030-01         | 10             |
| Euro OTC            | Dexpanthenol     | 86539509T0         | 1              |
| Euro OTC            | Dexpanthenol     | 200101501          | 1              |
| Euro OTC            | Dexpanthenol     | 4485006D0          | 1              |
| Euro OTC            | Dexpanthenol     | 23223009T0         | 3              |
| Euro OTC            | Dexpanthenol     | 15F26-B01-314370   | 1              |
| Euro OTC            | Dexpanthenol     | 171106D/1703029-01 | 1              |
| Euro OTC            | Dexpanthenol     | 1301009            | 1              |
| Euro OTC            | Dexpanthenol     | 130903001          | 2              |
| Euro OTC            | Dexpanthenol     | 1607027-01         | 17             |
| Euro OTC            | Dexpanthenol     | 2001015-01         | 15             |
| Euro OTC            | Dexpanthenol     | 1407039-1          | 1              |
| Euro OTC            | Dexpanthenol     | 14H05-B02-300069   | 2              |
| Euro OTC            | Dexpanthenol     | 1309030-02         | 9              |
| Euro/ Phönix        | Dexpanthenol     | 5117E-01082        | 1              |
| EUro/AHD            | Dexpanthenol     | 1301009-01         | 2              |
| Euro/Noweda         | Dexpanthenol     | 1610041-01         | 3              |
| Euro/Noweda         | Dexpanthenol     | 180300802          | 1              |
| Euro/Noweda30.01.17 | Dexpanthenol     | 1606015-01         | 1              |
| Euro OTC            | Dexpanthenol     | 5051504            | 1              |
| Euroo/Ebert         | Dexpanthenol     | 3813E-01082        | 1              |
| Euro OTC            | Dexpanthenol     | 1502010-01         | 1              |
| Euro OTC            | Dexpanthenol     | 31071501           | 1              |
| Euro OTC            | Dexpanthenol     | 13011809           | 1              |
| Euro OTC            | Dexpanthenol     | 57545077L0         | 2              |
| Euro OTC            | Dexpanthenol     | 4717Q-01082        | 1              |
| Euro OTC            | Dexpanthenol     | 1407039-01         | 10             |
| Euro OTC            | Dexpanthenol     | 1808001-01         | 1              |
| Euro OTC            | Dexpanthenol     | 129401002          | 1              |

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| Supplier         | Substance    | Batch             | Spectra |
|------------------|--------------|-------------------|---------|
| Euro OTC         | Dexpanthenol | 64778675L0        | 1       |
| Euro OTC         | Dexpanthenol | 130100901         | 2       |
| Euro OTC         | Dexpanthenol | 1407039-02        | 7       |
| Euro OTC         | Dexpanthenol | 1801011-11        | 1       |
| Euro OTC         | Dexpanthenol | 1301009-001       | 1       |
| Euro OTC         | Dexpanthenol | 14070390          | 1       |
| Euro OTC         | Dexpanthenol | 1502019-01        | 24      |
| Euro OTC         | Dexpanthenol | 1803008-02        | 13      |
| Euro OTC         | Dexpanthenol | 1610041-01        | 41      |
| Euro OTC         | Dexpanthenol | TL01903036        | 2       |
| Euro OTC         | Dexpanthenol | 1606015-01        | 32      |
| Euro OTC         | Dexpanthenol | 170302901         | 1       |
| Euro OTC         | Dexpanthenol | 17335105          | 1       |
| Europ Ots Pharma | Dexpanthenol | 13084705          | 1       |
| europharm/gehe   | Dexpanthenol | 1610041-01        | 1       |
| europharm/gehe   | Dexpanthenol | 1801011-01        | 2       |
| Fagron           | Dexpanthenol | 1721-B01-340266   | 1       |
| Fagron / Gehe    | Dexpanthenol | 18J25-B04-3575388 | 1       |
| Fagron           | Dexpanthenol | 13/29-B05-287528  | 1       |
| Fagron           | Dexpanthenol | 11h26-n03         | 1       |
| Fagron           | Dexpanthenol | 12E11-N02         | 22      |
| Fagron           | Dexpanthenol | TL01110074        | 1       |
| Fagron           | Dexpanthenol | TL01110074        | 4       |
| Fagron           | Dexpanthenol | 12e11-no2         | 1       |
| Fagron           | Dexpanthenol | 12E11-No2         | 1       |
| Fagron           | Dexpanthenol | 12K27-N04         | 6       |
| Fagron           | Dexpanthenol | 13D22-N12         | 14      |
| Fagron           | Dexpanthenol | TL01212052        | 1       |
| Fagron           | Dexpanthenol | 8572983           | 1       |
| Fagron           | Dexpanthenol | 12e11-N02         | 1       |
| Fagron           | Dexpanthenol | 12K27-N04         | 1       |
| Fagron           | Dexpanthenol | TL01212052        | 1       |
| Fagron           | Dexpanthenol | 13I04-N04         | 16      |
| Fagron           | Dexpanthenol | 12I04-N04         | 1       |
| Fagron           | Dexpanthenol | 12L28-No3         | 1       |
| Fagron           | Dexpanthenol | 13J29-B05-287526  | 8       |
| Fagron           | Dexpanthenol | 13J04-N04         | 2       |
| Fagron           | Dexpanthenol | 13J29-B05         | 9       |
| Fagron           | Dexpanthenol | 1309030-02        | 1       |
| Fagron           | Dexpanthenol | 13J29-b05-287526  | 1       |
| Fagron           | Dexpanthenol | 13J29-B05-287527  | 2       |
| Fagron           | Dexpanthenol | 246019-0001       | 1       |
| Fagron           | Dexpanthenol | 13L02-B04         | 2       |
| Fagron           | Dexpanthenol | 13L02-BB04-292067 | 1       |
| Fagron           | Dexpanthenol | 13j29-B05-287525  | 1       |
| Fagron           | Dexpanthenol | 14E01-B11-293624  | 2       |
| Fagron           | Dexpanthenol | TL01312070        | 1       |
| Fagron           | Dexpanthenol | 13L02-B04-292067  | 2       |
| Fagron           | Dexpanthenol | 14E01-B11-295544  | 3       |
| Fagron           | Dexpanthenol | 14E01-B11-295534  | 1       |
| Fagron           | Dexpanthenol | 13J29-B05-287525  | 1       |
| Fagron           | Dexpanthenol | 14214510          | 1       |
| Fagron           | Dexpanthenol | 14e01-b11-293623  | 1       |
| Fagron           | Dexpanthenol | 14E01-B11-300068  | 12      |
| Fagron           | Dexpanthenol | 14E01-B11-295578  | 11      |
| Fagron           | Dexpanthenol | 14E01-b11-295544  | 1       |
| Fagron           | Dexpanthenol | 14H05-B02-300066  | 2       |
| Fagron           | Dexpanthenol | 14Eo1-B11-300068  | 1       |
| Fagron           | Dexpanthenol | 14H05-B02-300069  | 13      |
| Fagron           | Dexpanthenol | 2803              | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Fagron          | Dexpanthenol     | 14H05-B02_300069 | 1              |
| Fagron          | Dexpanthenol     | TL01503022       | 4              |
| Fagron          | Dexpanthenol     | 15395502         | 3              |
| Fagron          | Dexpanthenol     | TL01408058       | 1              |
| Fagron          | Dexpanthenol     | TL01601003       | 1              |
| Fagron          | Dexpanthenol     | 17B06-B04-332077 | 3              |
| Fagron          | Dexpanthenol     | 17B06-B04-332075 | 12             |
| Fagron          | Dexpanthenol     | 15F26-B01        | 1              |
| Fagron          | Dexpanthenol     | 17B0619          | 1              |
| Fagron          | Dexpanthenol     | 17B06-B04-332076 | 1              |
| Fagron          | Dexpanthenol     | TL01706056       | 4              |
| Fagron          | Dexpanthenol     | 17I21-B01        | 4              |
| Fagron          | Dexpanthenol     | 7/21-B01-3402651 | 1              |
| Fagron          | Dexpanthenol     | 17I21-B01-340269 | 3              |
| Fagron          | Dexpanthenol     | 17/21-B01-340264 | 3              |
| Fagron          | Dexpanthenol     | 17I21B01-340266  | 1              |
| Fagron          | Dexpanthenol     | 17I21B01340267   | 1              |
| Fagron          | Dexpanthenol     | 17K30-B01-344320 | 3              |
| Fagron          | Dexpanthenol     | 17k30-B01-343821 | 1              |
| Fagron          | Dexpanthenol     | 17i21-B01-340265 | 1              |
| Fagron          | Dexpanthenol     | 17B0619-0003     | 1              |
| Fagron          | Dexpanthenol     | 18C20-B07-348241 | 10             |
| Fagron          | Dexpanthenol     | 1803008-02       | 1              |
| Fagron          | Dexpanthenol     | 17I21-B01-343249 | 1              |
| Fagron          | Dexpanthenol     | 5021904          | 1              |
| Fagron          | Dexpanthenol     | TL017006056      | 1              |
| Fagron          | Dexpanthenol     | 18C20-B07-248242 | 1              |
| Fagron          | Dexpanthenol     | 18C20-B07-355377 | 2              |
| Fagron          | Dexpanthenol     | 18c20-B07-353894 | 1              |
| Fagron          | Dexpanthenol     | 19H20-B06-194496 | 16             |
| Fagron          | Dexpanthenol     | TL019004049      | 1              |
| Fagron          | Dexpanthenol     | 19H20-B06194493  | 1              |
| Fagron          | Dexpanthenol     | 19H20-B06-194496 | 1              |
| Fagron          | Dexpanthenol     | TL02001009       | 1              |
| Fagron          | Dexpanthenol     | 194496           | 1              |
| Fagron          | Dexpanthenol     | 20F24-T01-081118 | 1              |
| Fagron          | Dexpanthenol     | 14E01-811-295577 | 1              |
| Fagron          | Dexpanthenol     | 295544           | 1              |
| Fagron          | Dexpanthenol     | 13i04-n04        | 1              |
| Fagron          | Dexpanthenol     | 17/21-B01-340265 | 1              |
| Fagron          | Dexpanthenol     | 16D07-B04-323096 | 5              |
| Fagron          | Dexpanthenol     | 17B06-B04-332612 | 1              |
| Fagron          | Dexpanthenol     | 17J21-B01-340267 | 1              |
| Fagron          | Dexpanthenol     | 18J25-B04-357388 | 3              |
| Fagron          | Dexpanthenol     | 14E01-B11-295533 | 1              |
| Fagron          | Dexpanthenol     | 13D11-N12        | 1              |
| Fagron          | Dexpanthenol     | 14H05-B02-305656 | 2              |
| Fagron          | Dexpanthenol     | 12H28-N07        | 5              |
| Fagron          | Dexpanthenol     | 14E01-B11-300065 | 2              |
| Fagron          | Dexpanthenol     | 14E01-B11-293623 | 1              |
| Fagron          | Dexpanthenol     | 17I21-B01-340266 | 1              |
| Fagron          | Dexpanthenol     | 18C20-B07-353895 | 2              |
| Fagron          | Dexpanthenol     | 19B26-B01-361217 | 7              |
| Fagron          | Dexpanthenol     | 19H20-806-194496 | 2              |
| Fagron          | Dexpanthenol     | 20D16-T16080047  | 1              |
| Fagron          | Dexpanthenol     | 17K30-B01-343821 | 11             |
| Fagron          | Dexpanthenol     | 19H20-b06-194494 | 1              |
| Fagron          | Dexpanthenol     | 12L28-N03        | 6              |
| Fagron          | Dexpanthenol     | 20016-T16-080047 | 1              |
| Fagron          | Dexpanthenol     | 17B06_B04_332076 | 1              |

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| Supplier | Substance    | Batch             | Spectra |
|----------|--------------|-------------------|---------|
| Fagron   | Dexpanthenol | B06-1944906       | 1       |
| Fagron   | Dexpanthenol | 15F26-B01-319991  | 7       |
| Fagron   | Dexpanthenol | 16D07-B04-323097  | 2       |
| Fagron   | Dexpanthenol | 14H05-B02-0001    | 1       |
| Fagron   | Dexpanthenol | 18C20-B07-350623  | 1       |
| Fagron   | Dexpanthenol | 12L28-N02         | 1       |
| Fagron   | Dexpanthenol | 19088801          | 1       |
| Fagron   | Dexpanthenol | 19B26-B01-361218  | 4       |
| Fagron   | Dexpanthenol | 18C20-B07-349943  | 2       |
| Fagron   | Dexpanthenol | 17I21-B01-340274  | 1       |
| Fagron   | Dexpanthenol | 18C20-B07-349944  | 9       |
| Fagron   | Dexpanthenol | 20D16-T16-080047  | 4       |
| Fagron   | Dexpanthenol | 18C20-B07-349243  | 5       |
| Fagron   | Dexpanthenol | 17/21-B01-340266  | 2       |
| Fagron   | Dexpanthenol | 18J25-B04-357388  | 1       |
| Fagron   | Dexpanthenol | 20D16-T16-079844  | 1       |
| Fagron   | Dexpanthenol | 20F24-T01-061118  | 1       |
| Fagron   | Dexpanthenol | 18J25-B04-357387  | 5       |
| Fagron   | Dexpanthenol | 11B21-N01         | 1       |
| Fagron   | Dexpanthenol | 19H20-B06-194493  | 23      |
| Fagron   | Dexpanthenol | 20016-T16-080048  | 1       |
| Fagron   | Dexpanthenol | T16-0800407       | 1       |
| Fagron   | Dexpanthenol | TL01305030        | 8       |
| Fagron   | Dexpanthenol | 16D07-B04         | 1       |
| Fagron   | Dexpanthenol | 17I21-B01-340265  | 4       |
| Fagron   | Dexpanthenol | 17I21-B01-340267  | 4       |
| Fagron   | Dexpanthenol | 18C20-B07-349242  | 16      |
| Fagron   | Dexpanthenol | 18C20-B07-351396  | 6       |
| Fagron   | Dexpanthenol | 18C20-B07-350625  | 2       |
| Fagron   | Dexpanthenol | B06-1944903       | 3       |
| Fagron   | Dexpanthenol | 20D16-T16-080048  | 7       |
| Fagron   | Dexpanthenol | 19H20-B06-194496  | 1       |
| Fagron   | Dexpanthenol | 19H20-B6-194493   | 1       |
| Fagron   | Dexpanthenol | 15F26-B01-317519  | 2       |
| Fagron   | Dexpanthenol | 17K30-B01         | 1       |
| Fagron   | Dexpanthenol | 12L28-N03         | 1       |
| Fagron   | Dexpanthenol | 14E01B11293623    | 1       |
| Fagron   | Dexpanthenol | TL01812120        | 1       |
| Fagron   | Dexpanthenol | 16D07-B04-322110  | 7       |
| Fagron   | Dexpanthenol | 14E01-B11         | 8       |
| Fagron   | Dexpanthenol | 18C20-B07-348242  | 8       |
| Fagron   | Dexpanthenol | 19H20-B06-194494  | 12      |
| Fagron   | Dexpanthenol | 194494            | 2       |
| Fagron   | Dexpanthenol | 19H20-B06-1944904 | 1       |
| Fagron   | Dexpanthenol | 11B21-N01         | 1       |
| Fagron   | Dexpanthenol | TL01203018        | 3       |
| Fagron   | Dexpanthenol | 13/04-N04         | 3       |
| Fagron   | Dexpanthenol | 13J29B05287526    | 1       |
| Fagron   | Dexpanthenol | 13L02-B04-292068  | 8       |
| Fagron   | Dexpanthenol | 14051908          | 2       |
| Fagron   | Dexpanthenol | 13J29-B05-287528  | 1       |
| Fagron   | Dexpanthenol | 2914E-01082       | 1       |
| Fagron   | Dexpanthenol | 14E01-B11-3000068 | 1       |
| Fagron   | Dexpanthenol | 16D07-B04322508   | 1       |
| Fagron   | Dexpanthenol | 190820508         | 1       |
| Fagron   | Dexpanthenol | 19F10-B08-191444  | 2       |
| Fagron   | Dexpanthenol | TL01904049        | 3       |
| Fagron   | Dexpanthenol | 19G019-0004       | 1       |
| Fagron   | Dexpanthenol | 16007-804-322508  | 1       |
| Fagron   | Dexpanthenol | 18C20_B07_349243  | 1       |

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| <b>Supplier</b>    | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|--------------------|------------------|--------------------|----------------|
| Fagron             | Dexpanthenol     | 16d07-b04          | 1              |
| Fagron             | Dexpanthenol     | 17b06-b04-332076   | 2              |
| Fagron             | Dexpanthenol     | 17k30-b01-343821   | 1              |
| Fagron             | Dexpanthenol     | 20D16-T16          | 1              |
| Fagron             | Dexpanthenol     | 14e01-811-300068   | 1              |
| Fagron             | Dexpanthenol     | 16D07-B04-327322   | 7              |
| Fagron             | Dexpanthenol     | TL01904049         | 1              |
| Fagron             | Dexpanthenol     | 11H26-N03          | 4              |
| Fagron             | Dexpanthenol     | 12B13-N07          | 2              |
| Fagron             | Dexpanthenol     | 14E01-B11-295577   | 5              |
| Fagron             | Dexpanthenol     | TL01611112         | 1              |
| Fagron             | Dexpanthenol     | 171120D/TL01601003 | 1              |
| Fagron             | Dexpanthenol     | 17B06-B04-3322078  | 1              |
| Fagron             | Dexpanthenol     | 17I21-B01-340264   | 6              |
| Fagron             | Dexpanthenol     | 17121-B01          | 1              |
| Fagron             | Dexpanthenol     | TL01801002         | 3              |
| Fagron             | Dexpanthenol     | 18C20-B07          | 1              |
| Fagron             | Dexpanthenol     | 18C20-B07-353896   | 2              |
| Fagron             | Dexpanthenol     | 15f26b01_319991    | 1              |
| Fagron             | Dexpanthenol     | 19G02-B16-194495   | 11             |
| Fagron             | Dexpanthenol     | 14H05-B02          | 2              |
| Fagron             | Dexpanthenol     | 17I21-B01-340268   | 2              |
| Fagron             | Dexpanthenol     | 191090810          | 1              |
| Fagron             | Dexpanthenol     | 19H20-B06          | 1              |
| Fagron             | Dexpanthenol     | 20D16-T16-080049   | 7              |
| Fagron             | Dexpanthenol     | T16-0800408        | 1              |
| Fagron             | Dexpanthenol     | 20D16-T16-0800408  | 1              |
| Fagron             | Dexpanthenol     | 12E11-N02          | 1              |
| Fagron             | Dexpanthenol     | 12J30-B03-287502   | 1              |
| Fagron             | Dexpanthenol     | 15F26-B01-317520   | 1              |
| Fagron             | Dexpanthenol     | 18C20-B07          | 6              |
| Fagron             | Dexpanthenol     | 18069103           | 1              |
| Fagron             | Dexpanthenol     | 18C20-B07-353894   | 9              |
| Fagron             | Dexpanthenol     | 19F-10_B08-191444  | 1              |
| Fagron             | Dexpanthenol     | 81-13-0            | 1              |
| Fagron             | Dexpanthenol     | B16-1944905        | 1              |
| Fagron             | Dexpanthenol     | 20D16-T16-080048   | 1              |
| Fagron             | Dexpanthenol     | 13L02B04292068     | 1              |
| Fagron             | Dexpanthenol     | 15F26-B01-314370   | 11             |
| Fagron             | Dexpanthenol     | 16D07-B04-322508   | 13             |
| Fagron             | Dexpanthenol     | 17B06-B04          | 7              |
| Fagron             | Dexpanthenol     | 17121-B01-340264   | 2              |
| Fagron             | Dexpanthenol     | 1703029-01         | 1              |
| Fagron             | Dexpanthenol     | 1801011-01         | 3              |
| Fagron             | Dexpanthenol     | 17K30-B01-343822   | 4              |
| Fagron             | Dexpanthenol     | 1721-B01-340264    | 1              |
| Fagron             | Dexpanthenol     | 18C20-B07-356956   | 2              |
| Fagron             | Dexpanthenol     | 19F10-B08-191443   | 1              |
| Fagron             | Dexpanthenol     | 19F20-B08-191442   | 1              |
| Fagron             | Dexpanthenol     | 20B12-T14-079950   | 1              |
| Fagron             | Dexpanthenol     | 18176605           | 1              |
| fargon             | Dexpanthenol     | 19H20B06194496     | 1              |
| Fargon             | Dexpanthenol     | 17K30-B01-344320   | 1              |
| Fargon             | Dexpanthenol     | 18C20-B07-348241   | 1              |
| Fargon             | Dexpanthenol     | 19H20-B06-194494   | 1              |
| Fargon/AHD         | Dexpanthenol     | 18C20-B07          | 1              |
| Fargon/Alliance HC | Dexpanthenol     | 14E01-B11295578    | 1              |
| Fargon/Gehe        | Dexpanthenol     | 19H20-B06-194496   | 1              |
| fargon/Sanacorp    | Dexpanthenol     | 12E11-N02          | 1              |
| Fargon             | Dexpanthenol     | 9L10/N01           | 1              |

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| Supplier           | Substance    | Batch              | Spectra |
|--------------------|--------------|--------------------|---------|
| Fiebig             | Dexpanthenol | 19008708           | 1       |
| Fiebig             | Dexpanthenol | 19106804           | 1       |
| Fiebig/ BASF AG    | Dexpanthenol | 1803008-02         | 1       |
| Fragron            | Dexpanthenol | 12E11-N02          | 1       |
| Gatt-Koller        | Dexpanthenol | 1900112            | 1       |
| Gehe               | Dexpanthenol | 12E11-N02          | 2       |
| Gehe               | Dexpanthenol | 12285203           | 1       |
| Gehe               | Dexpanthenol | 11293501           | 1       |
| Gehe               | Dexpanthenol | 15097705           | 1       |
| Gehe               | Dexpanthenol | 15097709           | 1       |
| Gehe               | Dexpanthenol | 15097704           | 1       |
| Gehe               | Dexpanthenol | 15260901           | 1       |
| Gehe               | Dexpanthenol | 16043504           | 1       |
| Gehe               | Dexpanthenol | 16164809           | 1       |
| Gehe               | Dexpanthenol | 1703029-01         | 1       |
| Gehe               | Dexpanthenol | 17065411           | 1       |
| Gehe               | Dexpanthenol | 17065403           | 1       |
| Gehe               | Dexpanthenol | 170065407          | 1       |
| Gehe               | Dexpanthenol | 17B06-B04-332075   | 1       |
| Gehe               | Dexpanthenol | 17B06-B04-332077   | 1       |
| Gehe               | Dexpanthenol | 17065405           | 1       |
| Gehe               | Dexpanthenol | 17I21-B01          | 1       |
| Gehe               | Dexpanthenol | 17287708           | 1       |
| Gehe               | Dexpanthenol | 17335103           | 1       |
| Gehe               | Dexpanthenol | 17335105           | 2       |
| Gehe               | Dexpanthenol | 17/21-B01-340266   | 1       |
| Gehe               | Dexpanthenol | 17I21-B01-340266   | 1       |
| Gehe               | Dexpanthenol | 1801011-01         | 1       |
| Gehe               | Dexpanthenol | 17K30-B01-343822   | 2       |
| Gehe               | Dexpanthenol | 17335106           | 2       |
| Gehe               | Dexpanthenol | 18069002           | 1       |
| Gehe               | Dexpanthenol | 18C20-B07-349944   | 1       |
| Gehe               | Dexpanthenol | 18C20-B07          | 2       |
| Gehe               | Dexpanthenol | 18069110           | 2       |
| Gehe               | Dexpanthenol | 18C20-B07-351396   | 2       |
| Gehe               | Dexpanthenol | 19065801           | 1       |
| Gehe               | Dexpanthenol | 19088801           | 1       |
| Gehe               | Dexpanthenol | 19106804           | 1       |
| Gehe               | Dexpanthenol | 19106810           | 1       |
| Gehe               | Dexpanthenol | 19F10-B08-191444   | 1       |
| Gehe               | Dexpanthenol | 19106901           | 1       |
| Gehe               | Dexpanthenol | 191835009          | 1       |
| GEHE               | Dexpanthenol | 161004101          | 1       |
| GEHE               | Dexpanthenol | 17065413           | 1       |
| GEHE               | Dexpanthenol | 1607027-01         | 1       |
| GEHE               | Dexpanthenol | 18069002           | 1       |
| Caelo              | Dexpanthenol | 19000648004        | 6       |
| GEHE 17.06.2014    | Dexpanthenol | 13342610           | 1       |
| Gehe 29.5.18       | Dexpanthenol | 17335108           | 1       |
| Gehe amax          | Dexpanthenol | 19106805           | 1       |
| Caelo              | Dexpanthenol | 18c20-b07-349242   | 1       |
| Caelo              | Dexpanthenol | 18C20-B07-50625    | 1       |
| Caelo              | Dexpanthenol | 18C20-B07-350625   | 1       |
| Gehe/ Euro         | Dexpanthenol | 1510008-01         | 1       |
| Caelo              | Dexpanthenol | 12285214           | 6       |
| Caelo              | Dexpanthenol | 1193507            | 1       |
| Gehe/Euro 30.06.15 | Dexpanthenol | 1502019-01         | 1       |
| Fagron             | Dexpanthenol | 13J2029-B05-287528 | 1       |
| Hedinger           | Dexpanthenol | 16043505           | 1       |
| Hedinger/AHD       | Dexpanthenol | 1301009-02         | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Hedinger/Alliance Healt... | Dexpanthenol     | 1703029-02       | 1              |
| hochhaus-Apotheke          | Dexpanthenol     | 1610041-01       | 1              |
| Holdermann                 | Dexpanthenol     | 13/04-N04        | 1              |
| Ichtyol gesellschaft GmbH  | Dexpanthenol     | 16043511         | 1              |
| Jenne                      | Dexpanthenol     | 18176605         | 1              |
| Caelo                      | Dexpanthenol     | 19134406         | 17             |
| Kehr                       | Dexpanthenol     | 16D07-B04-327322 | 1              |
| Kehr                       | Dexpanthenol     | 17335106         | 1              |
| Caelo                      | Dexpanthenol     | 17335105         | 24             |
| Kehr/Fargon                | Dexpanthenol     | 18C20-B07-350625 | 1              |
| Kögl                       | Dexpanthenol     | 402211160217     | 1              |
| Kögl                       | Dexpanthenol     | 442812161017     | 1              |
| Kögl                       | Dexpanthenol     | 442812161517     | 2              |
| Kögl                       | Dexpanthenol     | KNC1672J16       | 1              |
| Kögl                       | Dexpanthenol     | 240707172717     | 1              |
| Kögl                       | Dexpanthenol     | 20172407         | 2              |
| Kögl                       | Dexpanthenol     | 1701687          | 2              |
| Kögl                       | Dexpanthenol     | 1800586          | 2              |
| Kögl                       | Dexpanthenol     | 1802261          | 3              |
| Krieger                    | Dexpanthenol     | 17172105         | 1              |
| Krieger                    | Dexpanthenol     | 17335108         | 2              |
| L10/apo-ident              | Dexpanthenol     | 1607027-01       | 2              |
| L12                        | Dexpanthenol     | 17287704         | 1              |
| L12                        | Dexpanthenol     | TL01706056       | 1              |
| Euro OTC                   | Dexpanthenol     | 1703029-01       | 41             |
| Midas                      | Dexpanthenol     | 16311611         | 1              |
| Midas                      | Dexpanthenol     | 17287707         | 1              |
| Midas                      | Dexpanthenol     | 17335105         | 2              |
| Midas                      | Dexpanthenol     | 17335107         | 1              |
| Midas                      | Dexpanthenol     | 17335108         | 1              |
| Midas                      | Dexpanthenol     | 18176605         | 1              |
| Midas                      | Dexpanthenol     | 18197204         | 1              |
| MIDAS                      | Dexpanthenol     | 16164811         | 1              |
| Midas Göttingen            | Dexpanthenol     | 17335106         | 2              |
| Nachprüfung                | Dexpanthenol     | 1407039-01       | 1              |
| Noweda                     | Dexpanthenol     | 11010703         | 1              |
| Noweda                     | Dexpanthenol     | 12285211         | 2              |
| Noweda                     | Dexpanthenol     | 12E11-N02        | 2              |
| Noweda                     | Dexpanthenol     | 13342601         | 1              |
| Noweda                     | Dexpanthenol     | 13342605         | 1              |
| Noweda                     | Dexpanthenol     | 13342606         | 1              |
| Noweda                     | Dexpanthenol     | 15097712         | 1              |
| Noweda                     | Dexpanthenol     | 16043505         | 1              |
| Noweda                     | Dexpanthenol     | 16D07B04322508   | 1              |
| Noweda                     | Dexpanthenol     | 17B06-B04-332078 | 2              |
| Noweda                     | Dexpanthenol     | 1510008          | 1              |
| Noweda                     | Dexpanthenol     | 17D07-B04-322508 | 1              |
| Noweda                     | Dexpanthenol     | 17B06-B04-322078 | 1              |
| Noweda                     | Dexpanthenol     | 17/21-B01-340264 | 1              |
| Noweda                     | Dexpanthenol     | 1708013-01       | 2              |
| Noweda                     | Dexpanthenol     | 17287701         | 1              |
| Noweda                     | Dexpanthenol     | 17I21B01340269   | 1              |
| Noweda                     | Dexpanthenol     | 1801011-01       | 2              |
| Noweda                     | Dexpanthenol     | 17335105         | 1              |
| Noweda                     | Dexpanthenol     | 17/21-B01-340269 | 1              |
| Noweda                     | Dexpanthenol     | 17I21-B01-340268 | 1              |
| Noweda                     | Dexpanthenol     | 18069001         | 1              |
| Noweda                     | Dexpanthenol     | 1808007-07       | 1              |
| Noweda                     | Dexpanthenol     | 18197202         | 1              |
| Noweda                     | Dexpanthenol     | 19008707         | 1              |

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| Supplier                   | Substance    | Batch             | Spectra |
|----------------------------|--------------|-------------------|---------|
| Noweda                     | Dexpanthenol | 18C20-B07-356956  | 1       |
| Noweda                     | Dexpanthenol | 19008708          | 1       |
| Noweda                     | Dexpanthenol | 18176603          | 1       |
| Noweda                     | Dexpanthenol | 19065804          | 1       |
| Noweda                     | Dexpanthenol | 19088801          | 1       |
| Noweda                     | Dexpanthenol | 19106806          | 1       |
| Noweda                     | Dexpanthenol | 19106802          | 2       |
| Noweda                     | Dexpanthenol | 19107004          | 1       |
| Noweda                     | Dexpanthenol | 19106810          | 1       |
| Noweda                     | Dexpanthenol | 19134404          | 1       |
| Noweda                     | Dexpanthenol | 191835008         | 1       |
| Noweda                     | Dexpanthenol | 191344001         | 1       |
| Noweda                     | Dexpanthenol | 20001457004       | 1       |
| Noweda                     | Dexpanthenol | 19183503          | 1       |
| Noweda                     | Dexpanthenol | 20001457005       | 1       |
| Noweda                     | Dexpanthenol | 19000648004       | 1       |
| Noweda                     | Dexpanthenol | 19000651001       | 1       |
| Caelo                      | Dexpanthenol | 19183503          | 1       |
| Noweda/ Caesar&Lorenz G... | Dexpanthenol | 19106901          | 1       |
| Euro OTC                   | Dexpanthenol | 1204010-01        | 10      |
| Caelo                      | Dexpanthenol | 16D07-804-322508  | 1       |
| Caelo                      | Dexpanthenol | 14214501          | 3       |
| Caelo                      | Dexpanthenol | 16043503          | 11      |
| Caelo                      | Dexpanthenol | 16164813          | 16      |
| Caelo                      | Dexpanthenol | 19065801          | 7       |
| Noweda/EuRo                | Dexpanthenol | 1610041-01        | 1       |
| Fagron                     | Dexpanthenol | 15097709          | 1       |
| Fagron                     | Dexpanthenol | 20D16-T16-0800407 | 1       |
| Fagron                     | Dexpanthenol | 17B06_B04         | 1       |
| Euro OTC                   | Dexpanthenol | 17041503          | 1       |
| Pharmachem Pößneck/AHD     | Dexpanthenol | 18C20-B07-351396  | 1       |
| Pharmachem/Phoenix         | Dexpanthenol | 1803008-01        | 1       |
| phoenix                    | Dexpanthenol | 18C20-B07-348241  | 1       |
| phoenix                    | Dexpanthenol | 18069002          | 1       |
| Phoenix                    | Dexpanthenol | 1510008-02        | 1       |
| Phoenix                    | Dexpanthenol | 17065412          | 1       |
| Phoenix                    | Dexpanthenol | 1801011-01        | 1       |
| Phoenix                    | Dexpanthenol | 17335103          | 2       |
| Phoenix                    | Dexpanthenol | 1806019-01        | 1       |
| Phoenix                    | Dexpanthenol | 19106807          | 1       |
| Phoenix                    | Dexpanthenol | 200030901         | 1       |
| Phoenix                    | Dexpanthenol | 200341604         | 1       |
| Phoenix                    | Dexpanthenol | 200221902         | 1       |
| Phoenix goettin            | Dexpanthenol | 14214512          | 1       |
| Caelo                      | Dexpanthenol | 13189504          | 2       |
| Phoenix/Fragon             | Dexpanthenol | 2001015-01        | 1       |
| phönix                     | Dexpanthenol | 16D07-B04-322110  | 1       |
| Phönix                     | Dexpanthenol | 12285204          | 1       |
| Phönix                     | Dexpanthenol | 1301009-02        | 1       |
| Phönix                     | Dexpanthenol | 1309030-01        | 1       |
| Phönix                     | Dexpanthenol | 13J29-B05287525   | 1       |
| Phönix                     | Dexpanthenol | 16311603          | 1       |
| Phönix                     | Dexpanthenol | 1721b01-340264    | 1       |
| Phönix                     | Dexpanthenol | TL01706056        | 1       |
| Phönix                     | Dexpanthenol | 3184              | 1       |
| Phönix                     | Dexpanthenol | 1803008-01        | 1       |
| Phönix                     | Dexpanthenol | 19062102          | 1       |
| Phönix                     | Dexpanthenol | 19106804          | 1       |
| Phönix                     | Dexpanthenol | 19134401          | 1       |
| Phönix                     | Dexpanthenol | 191835013         | 2       |

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| Supplier                | Substance    | Batch            | Spectra |
|-------------------------|--------------|------------------|---------|
| Phönix                  | Dexpanthenol | 20001457008      | 1       |
| PHÖNIX                  | Dexpanthenol | 1801011-01       | 2       |
| Caelo                   | Dexpanthenol | 1717203          | 1       |
| Phönix Gotha            | Dexpanthenol | 1204010-01       | 1       |
| Phönix Gotha            | Dexpanthenol | 1502019-01       | 1       |
| Phönix Gotha            | Dexpanthenol | 1502019-02       | 1       |
| Caelo                   | Dexpanthenol | 12285202         | 7       |
| Caelo                   | Dexpanthenol | 13189502         | 3       |
| Caelo                   | Dexpanthenol | 200773107        | 1       |
| Euro OTC                | Dexpanthenol | 19062103         | 1       |
| Phönix/Fagon            | Dexpanthenol | 15F26-B01-317519 | 1       |
| Raben-Apotheke Mildenau | Dexpanthenol | 1309030-03       | 1       |
| sanacorb                | Dexpanthenol | 18176605         | 1       |
| Sanacorp                | Dexpanthenol | 36/AKD22         | 1       |
| Sanacorp                | Dexpanthenol | 13342601         | 1       |
| Sanacorp                | Dexpanthenol | 1407039-02       | 1       |
| Sanacorp                | Dexpanthenol | 2/AKD4           | 1       |
| Sanacorp                | Dexpanthenol | 14E01-B11        | 1       |
| Sanacorp                | Dexpanthenol | 15097714         | 1       |
| Sanacorp                | Dexpanthenol | 160601501        | 1       |
| Sanacorp                | Dexpanthenol | 1703029-01       | 1       |
| Sanacorp                | Dexpanthenol | 1610041-02       | 1       |
| Sanacorp                | Dexpanthenol | 16311605         | 1       |
| Sanacorp                | Dexpanthenol | 17172106         | 1       |
| Sanacorp                | Dexpanthenol | 17172107         | 1       |
| Sanacorp                | Dexpanthenol | 1801011-01       | 1       |
| Sanacorp                | Dexpanthenol | 19008707         | 1       |
| Sanacorp                | Dexpanthenol | 19B26-B01-361218 | 1       |
| Sanacorp                | Dexpanthenol | 19106901         | 1       |
| Sanacorp                | Dexpanthenol | 19183501         | 2       |
| Sanacorp                | Dexpanthenol | 20001457004      | 1       |
| Caelo                   | Dexpanthenol | 14E01-B11        | 1       |
| Caelo                   | Dexpanthenol | 20004104005      | 1       |
| Sanacorp/ euRho         | Dexpanthenol | 1103053-01       | 1       |
| Euro OTC                | Dexpanthenol | 20001457008      | 1       |
| Caelo                   | Dexpanthenol | 11293506         | 3       |
| Caelo                   | Dexpanthenol | 14214502         | 5       |
| sanaEuro                | Dexpanthenol | 311V-01082       | 1       |
| Sanaorp                 | Dexpanthenol | 17B06-B04-332077 | 2       |
| siehe Protokoll         | Dexpanthenol | 16043502         | 1       |
| Spinnrad                | Dexpanthenol | 18069107         | 1       |
| THC Pharm/Gehe          | Dexpanthenol | 19134406         | 1       |
| Caelo                   | Dexpanthenol | 1610041-01       | 4       |
|                         | Dexpanthenol | 13J29-B05-287527 | 6       |
|                         | Dexpanthenol | 13J29B05287527   | 1       |
|                         | Dexpanthenol | 17287705         | 1       |
| Caelo                   | Dexpanthenol |                  | 3       |
| Caelo                   | Dexpanthenol | 12018707         | 4       |
| Caelo                   | Dexpanthenol | 14051903         | 5       |
|                         | Dexpanthenol | 1407039-02       | 2       |
| Euro OTC                | Dexpanthenol |                  | 2       |
| Euro OTC                | Dexpanthenol | 1309030-03       | 3       |
| Fagron                  | Dexpanthenol | 17B06-B04-332078 | 6       |
| Fagron                  | Dexpanthenol | 19F10-B08-191442 | 7       |
| Fagron                  | Dexpanthenol |                  | 1       |
| Sanacorp                | Dexpanthenol |                  | 1       |

- 237 359 spectra from 1121 *Apo-Ident* customers from a total of 46 289 batches from a further

342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Dexpanthenol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Dexpanthenol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 437           | 0              | 63 502        |
| <b>Type B</b> | 0              | 600           | 0              | 90 891        |
| <b>Type C</b> | 0              | 3999          | 5              | 237 359       |

The substance/substance group *Dexpanthenol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.6270 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 99.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.8751 % (> 99.8002 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dexpanthenol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in main model | Distance in second-stage model |
|------------------------------|------------------------|--------------------------------|
| Dexpanthenol concentrate 50% | 83.06                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dexpanthenol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested

reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30884     | 31769               | 2.81                         | 126.74                          |
| 31317     | 31532               | 1.65                         | 136.48                          |
| 31532     | 31532               | 0.00                         | 140.50                          |
| 31769     | 31769               | 0.00                         | 128.45                          |
| 33239     | 31532               | 1.92                         | 136.21                          |
| 33716     | 33716               | 0.00                         | 120.04                          |
| 33903     | 33903               | 0.00                         | 125.22                          |
| 34596     | 31532               | 2.58                         | 138.39                          |
| 34637     | 34637               | 0.00                         | 98.33                           |
| 34639     | 34639               | 0.00                         | 100.78                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dexpanthenol concentrate 50%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30492-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dexpanthenol concentrate 50%; Pantothenum 50%

### Special notes

When selecting the *Dexpanthenol concentrate 50%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Dexpanthenol concentrate 50% | 8      | 11     | 147    |

## Second-stage model

For differentiation of the substance/substance group *Dexpanthenol concentrate 50%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dexpanthenol concentrate 50%*:

| Supplier | Substance             | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------------|----------|-----------|---------|-------------|
| Caelo    | Dexpanthenol con. . . | 12171803 | 30664     | 40      | 20120724    |
| Caelo    | Dexpanthenol con. . . | 15408002 | 31835     | 60      | 20151211    |
| Caelo    | Dexpanthenol con. . . | 153314   | 31879     | 60      | 20151014*   |
| Caelo    | Dexpanthenol con. . . | 162483   | 32579     | 40      | 20160901*   |
| Caelo    | Dexpanthenol con. . . | 173261   | 33974     | 40      | 20171207*   |
| Caelo    | Dexpanthenol con. . . | 172781   | 33975     | 40      | 20171114*   |
| Caelo    | Dexpanthenol con. . . | 18050802 | 34130     | 40      | 20180213    |
| Caelo    | Dexpanthenol con. . . | 190581   | 34533     | 40      | 20190319*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 360 spectra of 8 reference samples from the substance/substance group *Dexpanthenol concentrate 50%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 8 different batches.
- 63 579 spectra from a total of 1299 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 490 spectra of 11 reference samples from the substance/substance group *Dexpanthenol concentrate 50%*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 11 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                    | Batch    | Sample ID | Spectra |
|----------|------------------------------|----------|-----------|---------|
| Caelo    | Dexpanthenol concentrate 50% | 14116302 | 31461     | 60      |
| Caelo    | Dexpanthenol concentrate 50% | 163336   | 33161     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 192306   | 34773     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 20001532 | 34970     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 20003068 | 35161     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 20003069 | 35172     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 20004284 | 35318     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 20004286 | 35319     | 40      |
| Caelo    | Dexpanthenol concentrate 50% | 21001026 | 35554     | 50      |
| Caelo    | Dexpanthenol concentrate 50% | 21001588 | 35601     | 50      |
| Caelo    | Dexpanthenol concentrate 50% | 21001589 | 35602     | 50      |

- 91 001 spectra from a total of 2005 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1574 spectra from 386 *Apo-Ident* customers from 152 batches from the substance/substance group *Dexpanthenol concentrate 50%*.
- Among them are spectra of independent samples from 146 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                    | Batch         | Spectra |
|---------------------|------------------------------|---------------|---------|
| AHD                 | Dexpanthenol concentrate 50% | 20004284001   | 1       |
| Alliance            | Dexpanthenol concentrate 50% | 17194601      | 1       |
| Alliance Health     | Dexpanthenol concentrate 50% | 13068003      | 1       |
| Alliance Healthcare | Dexpanthenol concentrate 50% | 12256001      | 1       |
| Alliance Healthcare | Dexpanthenol concentrate 50% | 13174703      | 1       |
| Alliance Healthcare | Dexpanthenol concentrate 50% | 16136503      | 2       |
| Anzag               | Dexpanthenol concentrate 50% | 14020803      | 2       |
| Caelo               | Dexpanthenol concentrate 50% | 13174702      | 7       |
| Apomix/Noweda       | Dexpanthenol concentrate 50% | 17059203      | 1       |
| Audor Pharma        | Dexpanthenol concentrate 50% | AP83943088QOP | 1       |
| Audor Pharma        | Dexpanthenol concentrate 50% | AP83943088QOP | 1       |
| Audor Pharma        | Dexpanthenol concentrate 50% | AP65524488QOP | 2       |
| Audor Pharma        | Dexpanthenol concentrate 50% | AP36716516KOP | 1       |
| Bombastus           | Dexpanthenol concentrate 50% | 16025303      | 1       |
| Bombastus           | Dexpanthenol concentrate 50% | 17135702      | 1       |
| Bombastus           | Dexpanthenol concentrate 50% | 17059202      | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 14275203      | 9       |
| Caelo               | Dexpanthenol concentrate 50% | 11279706      | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 11358202      | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 11279703      | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 12256002      | 4       |
| Caelo               | Dexpanthenol concentrate 50% | 12256001      | 4       |

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| Supplier | Substance                    | Batch        | Spectra |
|----------|------------------------------|--------------|---------|
| Caelo    | Dexpanthenol concentrate 50% | 13019203     | 8       |
| Caelo    | Dexpanthenol concentrate 50% | 13068003     | 5       |
| Caelo    | Dexpanthenol concentrate 50% | D-050413-2   | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 13019204     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 12127003     | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 13068004     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 13174703     | 5       |
| Caelo    | Dexpanthenol concentrate 50% | 13305003     | 9       |
| Caelo    | Dexpanthenol concentrate 50% | 13305004     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 11358201     | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 13382102     | 3       |
| Caelo    | Dexpanthenol concentrate 50% | 14116302     | 6       |
| Caelo    | Dexpanthenol concentrate 50% | 14199101     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 12081406     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 2101404      | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 15050801     | 3       |
| Caelo    | Dexpanthenol concentrate 50% | 13100408     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 15196202     | 11      |
| Caelo    | Dexpanthenol concentrate 50% | 1514902      | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 15331404     | 18      |
| Caelo    | Dexpanthenol concentrate 50% | 15331402     | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 1508002      | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 16136503     | 22      |
| Caelo    | Dexpanthenol concentrate 50% | 16336303     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 17031301     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 170313035279 | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 1633603      | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 17135701     | 10      |
| Caelo    | Dexpanthenol concentrate 50% | 703291       | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 17135702     | 22      |
| Caelo    | Dexpanthenol concentrate 50% | 17194602     | 10      |
| Caelo    | Dexpanthenol concentrate 50% | 17194603     | 18      |
| Caelo    | Dexpanthenol concentrate 50% | 17278101     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 11121706     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 17326102     | 39      |
| Caelo    | Dexpanthenol concentrate 50% | 7051805      | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 173261012x   | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 18131403     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 18204509     | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 19058102     | 27      |
| Caelo    | Dexpanthenol concentrate 50% | 19058101     | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 182048001    | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 19106202     | 18      |
| Caelo    | Dexpanthenol concentrate 50% | 19106204     | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 19158302     | 6       |
| Caelo    | Dexpanthenol concentrate 50% | 20001533002  | 12      |
| Caelo    | Dexpanthenol concentrate 50% | 20001533003  | 5       |
| Caelo    | Dexpanthenol concentrate 50% | 20003068001  | 17      |
| Caelo    | Dexpanthenol concentrate 50% | 20003069002  | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 20004284001  | 7       |
| Caelo    | Dexpanthenol concentrate 50% | 20001532002  | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 20003069003  | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 20004286004  | 2       |
| Caelo    | Dexpanthenol concentrate 50% | 14275204     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 15408003     | 12      |
| Caelo    | Dexpanthenol concentrate 50% | 19230801     | 4       |
| Caelo    | Dexpanthenol concentrate 50% | 18050803(2)  | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 18131301     | 59      |
| Caelo    | Dexpanthenol concentrate 50% | 2000075001   | 1       |
| Caelo    | Dexpanthenol concentrate 50% | 18050803     | 27      |

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| Supplier             | Substance                    | Batch        | Spectra |
|----------------------|------------------------------|--------------|---------|
| Caelo                | Dexpanthenol concentrate 50% | 19140303     | 27      |
| Caelo                | Dexpanthenol concentrate 50% | 16333602     | 28      |
| Caelo                | Dexpanthenol concentrate 50% | 17059202     | 27      |
| Caelo                | Dexpanthenol concentrate 50% | 17059201     | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 14020803     | 7       |
| Caelo                | Dexpanthenol concentrate 50% | 14116301     | 6       |
| Caelo                | Dexpanthenol concentrate 50% | 16333603     | 56      |
| Caelo                | Dexpanthenol concentrate 50% | 14198101     | 16      |
| Caelo                | Dexpanthenol concentrate 50% | 15142902     | 5       |
| Caelo                | Dexpanthenol concentrate 50% | 19140301     | 41      |
| Caelo                | Dexpanthenol concentrate 50% | 14373302     | 8       |
| Caelo                | Dexpanthenol concentrate 50% | 11279704     | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 1805082      | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 1813101      | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 12340302     | 3       |
| Caelo                | Dexpanthenol concentrate 50% | 14275202     | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 20000753002  | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 14198103     | 4       |
| Caelo                | Dexpanthenol concentrate 50% | 1602503      | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 16315102     | 12      |
| Caelo                | Dexpanthenol concentrate 50% | 17278103     | 11      |
| Caelo                | Dexpanthenol concentrate 50% | 3417Q-03868  | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 16136505     | 11      |
| Caelo                | Dexpanthenol concentrate 50% | 14275207     | 4       |
| Caelo                | Dexpanthenol concentrate 50% | 7194602      | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 20000752001  | 31      |
| Caelo                | Dexpanthenol concentrate 50% | 16248303     | 30      |
| Caelo                | Dexpanthenol concentrate 50% | 171494601    | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 18248001     | 46      |
| Caelo                | Dexpanthenol concentrate 50% | 18050804     | 8       |
| Caelo                | Dexpanthenol concentrate 50% | 2x19140303   | 2       |
| Caelo                | Dexpanthenol concentrate 50% | 200000753001 | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 2000753081   | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 18247901     | 31      |
| Caelo                | Dexpanthenol concentrate 50% | 14373301     | 4       |
| Caelo                | Dexpanthenol concentrate 50% | 16025303     | 17      |
| Caelo                | Dexpanthenol concentrate 50% | 16248301     | 42      |
| Caelo                | Dexpanthenol concentrate 50% | 17194601     | 27      |
| Caelo                | Dexpanthenol concentrate 50% | 18028901     | 2       |
| Caelo                | Dexpanthenol concentrate 50% | 20000753001  | 20      |
| Caelo                | Dexpanthenol concentrate 50% | 14020804     | 7       |
| Caelo                | Dexpanthenol concentrate 50% | 15050802     | 21      |
| Caelo                | Dexpanthenol concentrate 50% | 15142901     | 10      |
| Caelo                | Dexpanthenol concentrate 50% | 15196203     | 14      |
| Caelo                | Dexpanthenol concentrate 50% | 18247902     | 4       |
| Caelo                | Dexpanthenol concentrate 50% | 19106201     | 9       |
| Caelo                | Dexpanthenol concentrate 50% | 1908102      | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 18131402     | 24      |
| Caelo                | Dexpanthenol concentrate 50% | 19230601     | 31      |
| Caelo                | Dexpanthenol concentrate 50% | 19230701     | 18      |
| Caelo                | Dexpanthenol concentrate 50% | 200000752001 | 1       |
| Caelo                | Dexpanthenol concentrate 50% | 20001532001  | 6       |
| Caesar & Lorenz GmbH | Dexpanthenol concentrate 50% | 17194601     | 2       |
| Caesar & Lorenz GmbH | Dexpanthenol concentrate 50% | 17326102     | 1       |
| Caesar & Lorenz GmbH | Dexpanthenol concentrate 50% | 19230601     | 1       |
| Caesar & Lorenz GmbH | Dexpanthenol concentrate 50% | 19230701     | 1       |
| Caesar & Loretz      | Dexpanthenol concentrate 50% | 18050803     | 1       |
| Caesar & Loretz GmbH | Dexpanthenol concentrate 50% | 16248301     | 1       |
| Caesar & Loretz GmbH | Dexpanthenol concentrate 50% | 16315102     | 2       |
| Caesar & Loretz GmbH | Dexpanthenol concentrate 50% | 16248303     | 2       |

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| Supplier                   | Substance                    | Batch        | Spectra |
|----------------------------|------------------------------|--------------|---------|
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 16333603     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 17135701     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 17135702     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 18050803     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 18247901     | 4       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 18131301     | 2       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 18248001     | 2       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19058102     | 4       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19106204     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19140301     | 7       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19140303     | 3       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19230601     | 5       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19158302     | 2       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19106202     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19230702     | 7       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19230701     | 2       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19230301     | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 19230801     | 5       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20000753001  | 4       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20000752001  | 5       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20000753002  | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20001532002  | 3       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20001533003  | 1       |
| Caesar & Loretz GmbH       | Dexpanthenol concentrate 50% | 20003068001  | 1       |
| Caesar & Loretz GmbH / ... | Dexpanthenol concentrate 50% | 19230601     | 1       |
| Caesar & Loretz GmbH / ... | Dexpanthenol concentrate 50% | 19230701     | 1       |
| Caesar & Loretz GmbH / ... | Dexpanthenol concentrate 50% | 20000752001  | 3       |
| Caesar & Loretz GmbH / ... | Dexpanthenol concentrate 50% | 15331402     | 1       |
| Caesar & Loretz GmbH / ... | Dexpanthenol concentrate 50% | 19158302     | 1       |
| Caesar & Loretz GmbH Gehe  | Dexpanthenol concentrate 50% | 19230701     | 3       |
| Caesar & Loretz GmbH/ G... | Dexpanthenol concentrate 50% | 20001533002  | 3       |
| Caesar & Loretz GmbH/Fi... | Dexpanthenol concentrate 50% | 19230702     | 1       |
| Caesar & Loretz GmbH/Gehe  | Dexpanthenol concentrate 50% | 19140303     | 4       |
| Caesar & Loretz GmbH/Gehe  | Dexpanthenol concentrate 50% | 19230601     | 2       |
| Caesar & Loretz GmbH/Gehe  | Dexpanthenol concentrate 50% | 20000752001  | 2       |
| Caesar & Loretz GmbH/Ge... | Dexpanthenol concentrate 50% | 20001533002  | 1       |
| Caesar & Loretz GmbH/Ge... | Dexpanthenol concentrate 50% | 20003068001  | 1       |
| Caesar & Loretz GmbH/Je... | Dexpanthenol concentrate 50% | 19058102     | 3       |
| Caesar & Loretz GmbH/No... | Dexpanthenol concentrate 50% | 19230702     | 1       |
| Caesar & Loretz GmbH/Sa... | Dexpanthenol concentrate 50% | 20004286002  | 1       |
| Caesar und Loretz GmbH     | Dexpanthenol concentrate 50% | 200001533993 | 1       |
| Caesar&Loretz              | Dexpanthenol concentrate 50% | 19140303     | 1       |
| Caesar&Loretz GmbH         | Dexpanthenol concentrate 50% | 15408003     | 1       |
| Caesar&Loretz GmbH,27.0... | Dexpanthenol concentrate 50% | 17059203     | 1       |
| caesar&Loretz GmbH,AHC,... | Dexpanthenol concentrate 50% | 16248301     | 1       |
| Caesar&Loretz GmbH,Phön... | Dexpanthenol concentrate 50% | 15408002     | 1       |
| Caesar&loretz,Phoenix      | Dexpanthenol concentrate 50% | 14116302     | 2       |
| Caleo                      | Dexpanthenol concentrate 50% | 16136503     | 1       |
| Caolo                      | Dexpanthenol concentrate 50% | 19230702     | 1       |
| Cealo                      | Dexpanthenol concentrate 50% | 17059203     | 1       |
| Cealo                      | Dexpanthenol concentrate 50% | 18248001     | 1       |
| Ebert & Jacobi 01.06. ...  | Dexpanthenol concentrate 50% | 16025303     | 1       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 15408003     | 2       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 17326101     | 1       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 16333603     | 2       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 15142902     | 1       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 17059203     | 1       |
| Euro OTC                   | Dexpanthenol concentrate 50% | 18247901     | 1       |
| Fagron                     | Dexpanthenol concentrate 50% | 16333603     | 1       |
| Fagron                     | Dexpanthenol concentrate 50% | 17059202     | 1       |

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| Supplier                | Substance                    | Batch            | Spectra |
|-------------------------|------------------------------|------------------|---------|
| Fagron                  | Dexpanthenol concentrate 50% | 17194601         | 1       |
| Fagron                  | Dexpanthenol concentrate 50% | 18131402         | 1       |
| Fagron                  | Dexpanthenol concentrate 50% | 17194602         | 1       |
| Fagron                  | Dexpanthenol concentrate 50% | 14198103         | 1       |
| Fiebig                  | Dexpanthenol concentrate 50% | 2000306801       | 1       |
| Finteler Apotheke       | Dexpanthenol concentrate 50% | 17031303         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 11358204         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 13019203         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 13019204         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 14373302         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 15050802         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 16333602         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 17059203         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 18050803         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 18131301         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 18248001         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 19058102         | 1       |
| Gehe                    | Dexpanthenol concentrate 50% | 19106202         | 1       |
| GEHE                    | Dexpanthenol concentrate 50% | 17326102         | 1       |
| Gehe 17.06.2014         | Dexpanthenol concentrate 50% | 13382102         | 1       |
| gehe 31.01.2014         | Dexpanthenol concentrate 50% | 13068004         | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 16248301/1210217 | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 1021117/17059203 | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 1220218/17194603 | 1       |
| Gehe/Hedinger           | Dexpanthenol concentrate 50% | 18248001         | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 17031303         | 2       |
| Caelo                   | Dexpanthenol concentrate 50% | 1905812          | 1       |
| Kehr                    | Dexpanthenol concentrate 50% | 18050803         | 3       |
| Lamotte                 | Dexpanthenol concentrate 50% | AP83943088QOP    | 1       |
| Lamotte/ Sanacorp       | Dexpanthenol concentrate 50% | 17326102         | 1       |
| Nachprüfung             | Dexpanthenol concentrate 50% | 13019203         | 1       |
| Nachprüfung             | Dexpanthenol concentrate 50% | 15142902         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 12171802         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 12340303         | 2       |
| Noweda                  | Dexpanthenol concentrate 50% | 12340302         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 15196202         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 15408002         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 18248001         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 19106204         | 1       |
| Noweda                  | Dexpanthenol concentrate 50% | 19158302         | 1       |
| Noweda 21.10.2019       | Dexpanthenol concentrate 50% | 19140303         | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 16136504         | 22      |
| Caelo                   | Dexpanthenol concentrate 50% | 1402003          | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 19230702         | 30      |
| Noweda_01.08.2019       | Dexpanthenol concentrate 50% | 19106202         | 1       |
| Phoenix                 | Dexpanthenol concentrate 50% | 18131402         | 1       |
| Phoenix                 | Dexpanthenol concentrate 50% | 19106201         | 1       |
| Phoenix                 | Dexpanthenol concentrate 50% | 20000752001      | 2       |
| Caelo                   | Dexpanthenol concentrate 50% | 17059203/2230418 | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 17059203         | 40      |
| Phönix                  | Dexpanthenol concentrate 50% | 16248301         | 1       |
| Phönix                  | Dexpanthenol concentrate 50% | 18050802         | 1       |
| Phönix                  | Dexpanthenol concentrate 50% | 19230701         | 3       |
| Caelo                   | Dexpanthenol concentrate 50% | 17194605         | 1       |
| Caelo                   | Dexpanthenol concentrate 50% | 2090817/17135701 | 1       |
| Raben-Apotheke Mildenau | Dexpanthenol concentrate 50% | 14116302         | 1       |
| Rondell Apotheke        | Dexpanthenol concentrate 50% | 15331404         | 1       |
| sanacorp                | Dexpanthenol concentrate 50% | 14116301         | 1       |
| sanacorp                | Dexpanthenol concentrate 50% | 14198103         | 1       |
| Sanacorp                | Dexpanthenol concentrate 50% | 12340302         | 1       |

continued on the next page



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| Supplier            | Substance                    | Batch    | Spectra |
|---------------------|------------------------------|----------|---------|
| Sanacorp            | Dexpanthenol concentrate 50% | AKD29    | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 14116302 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 16136505 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 17326101 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 1805083  | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 18050802 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 18131301 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19106201 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19106204 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19106202 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19140303 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19230601 | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% | 19230702 | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 17326101 | 48      |
| Caelo               | Dexpanthenol concentrate 50% | 19131402 | 1       |
| Sanakop             | Dexpanthenol concentrate 50% | 18050802 | 1       |
| Sonnenberg-Apotheke | Dexpanthenol concentrate 50% | 13305004 | 1       |
| Taoasis             | Dexpanthenol concentrate 50% | 18050804 | 1       |
| VDL                 | Dexpanthenol concentrate 50% | 14020804 | 1       |
| Caelo               | Dexpanthenol concentrate 50% | 18050802 | 29      |
| Caelo               | Dexpanthenol concentrate 50% | 12171803 | 2       |
| Caelo               | Dexpanthenol concentrate 50% | 15408002 | 16      |
| Caelo               | Dexpanthenol concentrate 50% | 162483   | 1       |
| Caelo               | Dexpanthenol concentrate 50% |          | 1       |
| Sanacorp            | Dexpanthenol concentrate 50% |          | 1       |

- 239 789 spectra from 1121 *Apo-Ident* customers from a total of 46 858 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Dexpanthenol concentrate 50%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Dexpanthenol concentrate 50%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 360           | 0              | 63 579        |
| Type B | 0              | 490           | 0              | 91 001        |
| Type C | 0              | 1561          | 13             | 239 789       |

The substance/substance group *Dexpanthenol concentrate 50%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.3333 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.7755 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.1741 % (> 98.9835 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several

new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dexpanthenol concentrate 50%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance        | Distance in main model | Distance in second-stage model |
|------------------|------------------------|--------------------------------|
| Dexpanthenol     | 21.73                  | —                              |
| Propylene glycol | 33.50                  | —                              |
| 1,3-butanediol   | 94.37                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dexpanthenol concentrate 50%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30664     | 34533               | 15.23                        | 50.49                           |
| 31835     | 32579               | 2.75                         | 49.36                           |
| 31879     | 31879               | 0.00                         | 41.12                           |
| 32579     | 32579               | 0.00                         | 48.00                           |
| 33974     | 33974               | 0.00                         | 45.04                           |
| 33975     | 33975               | 0.00                         | 46.80                           |
| 34130     | 31879               | 2.33                         | 42.54                           |
| 34533     | 34533               | 0.00                         | 44.51                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dextrorotary lactic acid 20%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30740-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dextrorotary lactic acid 20%; Acidum L (+)-lacticum 20%

### Special notes

When selecting the *Dextrorotary lactic acid 20%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Dextrorotary lactic acid 20% | 5      | 3      | 12     |

## Second-stage model

For differentiation of the substance/substance group *Dextrorotary lactic acid 20%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dextrorotary lactic acid 20%*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Dextrorotary lac... | 12105501 | 30740     | 40      | 1405101     |
| Caelo    | Dextrorotary lac... | 15113303 | 31720     | 60      | 20150622    |
| Caelo    | Dextrorotary lac... | 161639   | 32341     | 40      | 20160805*   |
| Caelo    | Dextrorotary lac... | 162572   | 33318     | 40      | 20170216*   |
| Caelo    | Dextrorotary lac... | 191837   | 34731     | 40      | 20191014*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Dextrorotary lactic acid 20%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Dextrorotary lactic acid 20%*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                    | Batch    | Sample ID | Spectra |
|----------|------------------------------|----------|-----------|---------|
| Caelo    | Dextrorotary lactic acid 20% | 172086   | 33711     | 40      |
| Caelo    | Dextrorotary lactic acid 20% | 181763   | 34343     | 40      |
| Caelo    | Dextrorotary lactic acid 20% | 20000754 | 35016     | 40      |
| Caelo    | Dextrorotary lactic acid 20% | 172086   | 34083     | 40      |

- 91 331 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 86 spectra from 10 *Apo-Ident* customers from 15 batches from the substance/substance group *Dextrorotary lactic acid 20%*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance                    | Batch    | Spectra |
|----------------------|------------------------------|----------|---------|
| Caelo                | Dextrorotary lactic acid 20% | 17208601 | 1       |
| Caelo                | Dextrorotary lactic acid 20% | 16257206 | 3       |
| Caelo                | Dextrorotary lactic acid 20% | 172086   | 13      |
| Caelo                | Dextrorotary lactic acid 20% | 181763   | 31      |
| Caelo                | Dextrorotary lactic acid 20% | 18176303 | 4       |
| Caelo                | Dextrorotary lactic acid 20% | 17208603 | 6       |
| Caelo                | Dextrorotary lactic acid 20% | 18176308 | 1       |
| Caelo                | Dextrorotary lactic acid 20% | 17208605 | 4       |
| Caelo                | Dextrorotary lactic acid 20% | 16257201 | 2       |
| Caelo                | Dextrorotary lactic acid 20% | 15334302 | 1       |
| Caelo                | Dextrorotary lactic acid 20% | 18176304 | 1       |
| Caesar & Loretz GmbH | Dextrorotary lactic acid 20% | 18176302 | 1       |
| Caelo                | Dextrorotary lactic acid 20% | 15113303 | 2       |
| Caelo                | Dextrorotary lactic acid 20% | 162572   | 6       |
| Caelo                | Dextrorotary lactic acid 20% | 191837   | 10      |

- 241 277 spectra from 1121 *Apo-Ident* customers from a total of 46 991 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Dextrorotary lactic acid 20%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Dextrorotary lactic acid 20%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).



|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 220           | 0              | 63 719        |
| Type B | 0              | 160           | 0              | 91 331        |
| Type C | 0              | 83            | 3              | 241 277       |

The substance/substance group *Dextrorotary lactic acid 20%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| Type C | 100.0000 % (> 99.6850 %) | 96.5116 % (> 93.0233 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dextrorotary lactic acid 20%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Aluminium acetotartrate solution          | 17.02                  | —                              |
| Chlorhexidine digluconate solution        | 22.65                  | —                              |
| Hydrophilic base emulsion (NRF p.25)      | 23.13                  | —                              |
| Water                                     | 33.58                  | —                              |
| Non-ionic hydrous liniment SR/DAC (NRF... | 34.57                  | —                              |
| Gel basis Audor <sup>®</sup>              | 35.74                  | —                              |
| Chest elixir                              | 35.99                  | —                              |
| Polyhexanide solution 20%                 | 36.58                  | —                              |
| Oral suspension base                      | 41.20                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)       | 41.78                  | —                              |
| Hydrophilic cream, non-ionic SR (NRF p... | 43.30                  | —                              |
| Acetic acid 30%                           | 44.35                  | —                              |
| Hydrophilic cream, non-ionic without p... | 48.53                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)   | 52.16                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dextrorotary lactic acid 20%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30740     | 30740               | 0.00                         | 19.04                           |
| 31720     | 30740               | 3.61                         | 17.02                           |
| 32341     | 32341               | 0.00                         | 17.94                           |
| 33318     | 33318               | 0.00                         | 20.42                           |
| 34731     | 34731               | 0.00                         | 18.41                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dimethyl sulfoxide**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31498-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dimethyl sulfoxide; Dimethylis sulfoxidum

### Special notes

When selecting the *Dimethyl sulfoxide* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Dimethyl sulfoxide        | 9      | 24     | 233    |

## Second-stage model

For differentiation of the substance/substance group *Dimethyl sulfoxide* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dimethyl sulfoxide*:

| Supplier | Substance          | Batch           | Sample ID | Spectra | Certificate        |
|----------|--------------------|-----------------|-----------|---------|--------------------|
| Caelo    | Dimethyl sulfoxide | 181976          | 34221     | 40      | 20180815*          |
| Caelo    | Dimethyl sulfoxide | 20003727003     | 35285     | 40      | 20201118           |
| Euro OTC | Dimethyl sulfoxide | 131000802       | 31498     | 60      | AR-15-FG-002774-01 |
| Euro OTC | Dimethyl sulfoxide | 1508018         | 31734     | 60      | 0000010817         |
| Euro OTC | Dimethyl sulfoxide | 1511013         | 31803     | 60      | 20151124*          |
| Euro OTC | Dimethyl sulfoxide | 1511028         | 31813     | 60      | 20151202*          |
| Euro OTC | Dimethyl sulfoxide | 1601048         | 31848     | 60      | 20160129*          |
| Euro OTC | Dimethyl sulfoxide | 1604010         | 32280     | 40      | 20160513*          |
| Fagron   | Dimethyl sulfoxide | 15A16-C01-16194 | 31732     | 60      | 20150130           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 480 spectra of 9 reference samples from the substance/substance group *Dimethyl sulfoxide*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 459 spectra from a total of 1298 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 980 spectra of 24 reference samples from the substance/substance group *Dimethyl sulfoxide*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 24 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance          | Batch    | Sample ID | Spectra |
|----------|--------------------|----------|-----------|---------|
| Caelo    | Dimethyl sulfoxide | 21001308 | 35551     | 60      |
| Euro OTC | Dimethyl sulfoxide | 1606007  | 32460     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1608009  | 32707     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1608029  | 32708     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1609006  | 32713     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1610015  | 32835     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1701006  | 33233     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1705025  | 33451     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1705005  | 33452     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1709010  | 33666     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1710001  | 33667     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1801008  | 33925     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1711020  | 33933     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1803015  | 34097     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1805002  | 34181     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1806021  | 34193     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1808012  | 34216     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1809024  | 34301     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1809025  | 34305     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1902028  | 34427     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1903021  | 34494     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1906016  | 34657     | 40      |
| Euro OTC | Dimethyl sulfoxide | 1908024  | 34698     | 40      |
| Euro OTC | Dimethyl sulfoxide | 2007016  | 35059     | 40      |

- 90 511 spectra from a total of 1992 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 2033 spectra from 661 *Apo-Ident* customers from 237 batches from the substance/substance group *Dimethyl sulfoxide*.
- Among them are spectra of independent samples from 229 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance          | Batch      | Spectra |
|---------------------|--------------------|------------|---------|
| Euro OTC            | Dimethyl sulfoxide | 190302101  | 1       |
| AHD                 | Dimethyl sulfoxide | 151102801  | 1       |
| AHD                 | Dimethyl sulfoxide | 1906016-02 | 1       |
| AHD,17.10.13        | Dimethyl sulfoxide | 1306010-02 | 1       |
| Alliance            | Dimethyl sulfoxide | 1601048-02 | 1       |
| Alliance            | Dimethyl sulfoxide | 1606007-01 | 1       |
| Alliance            | Dimethyl sulfoxide | 1705025-01 | 1       |
| Alliance Healthcare | Dimethyl sulfoxide | 1210059-01 | 1       |
| Alliance Healthcare | Dimethyl sulfoxide | 1604010-01 | 1       |

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| <b>Supplier</b>     | <b>Substance</b>   | <b>Batch</b>  | <b>Spectra</b> |
|---------------------|--------------------|---------------|----------------|
| Alliance Healthcare | Dimethyl sulfoxide | SYN190114     | 1              |
| Alte Apotheke       | Dimethyl sulfoxide | 1606007-01    | 1              |
| Anzag               | Dimethyl sulfoxide | 1606007-01    | 2              |
| Euro OTC            | Dimethyl sulfoxide | 1806012-01    | 1              |
| Euro OTC            | Dimethyl sulfoxide | 180602101     | 3              |
| Euro OTC            | Dimethyl sulfoxide | 171102001     | 3              |
| apo ident           | Dimethyl sulfoxide | 1610015-01    | 1              |
| apoident            | Dimethyl sulfoxide | 1806021-01    | 1              |
| apo-ident           | Dimethyl sulfoxide | 1609006-01    | 1              |
| apo-ident           | Dimethyl sulfoxide | 1705025-01    | 1              |
| apo-ident           | Dimethyl sulfoxide | 1806021-01    | 1              |
| apo-ident           | Dimethyl sulfoxide | 1805002-02    | 2              |
| apo-ident/ AHD      | Dimethyl sulfoxide | 1808012-01    | 1              |
| apoident/AHD        | Dimethyl sulfoxide | 1906016-01    | 1              |
| Apo-ident/Alliance  | Dimethyl sulfoxide | 1906016-01    | 6              |
| apo-ident/Noweda    | Dimethyl sulfoxide | 1903021-01    | 1              |
| Audor Pharma        | Dimethyl sulfoxide | AP1306010-01D | 3              |
| Audor Pharma        | Dimethyl sulfoxide | 1111059-01D   | 1              |
| Audor Pharma        | Dimethyl sulfoxide | 1306010-01D   | 1              |
| Audor Pharma        | Dimethyl sulfoxide | AP1210059-01D | 1              |
| Audor Pharma        | Dimethyl sulfoxide | AP1303010-01D | 1              |
| Bombastus           | Dimethyl sulfoxide | 1601048-02    | 1              |
| Bombastus           | Dimethyl sulfoxide | 1606007-01    | 2              |
| Bombastus           | Dimethyl sulfoxide | 1705025-01    | 1              |
| Bombastus           | Dimethyl sulfoxide | 1710001-01    | 1              |
| Bombastus           | Dimethyl sulfoxide | 1805002       | 1              |
| Caelo               | Dimethyl sulfoxide | 29081202      | 1              |
| Caelo               | Dimethyl sulfoxide | 1210059-01    | 5              |
| Caelo               | Dimethyl sulfoxide | 140403101     | 1              |
| Caelo               | Dimethyl sulfoxide | 1404031-02    | 1              |
| Caelo               | Dimethyl sulfoxide | 1508018-01    | 3              |
| Caelo               | Dimethyl sulfoxide | 130601002     | 1              |
| Caelo               | Dimethyl sulfoxide | 2814          | 1              |
| Caelo               | Dimethyl sulfoxide | 1601048-01    | 1              |
| Caelo               | Dimethyl sulfoxide | 1206010-01    | 1              |
| Caelo               | Dimethyl sulfoxide | 1606007-01    | 3              |
| Caelo               | Dimethyl sulfoxide | 1610015-01    | 2              |
| Caelo               | Dimethyl sulfoxide | 1610015-02    | 7              |
| Caelo               | Dimethyl sulfoxide | 160015-02     | 1              |
| Caelo               | Dimethyl sulfoxide | 1705025       | 2              |
| Caelo               | Dimethyl sulfoxide | 1806021-01    | 4              |
| Caelo               | Dimethyl sulfoxide | SYN180319     | 1              |
| Caelo               | Dimethyl sulfoxide | 18197601      | 5              |
| Caelo               | Dimethyl sulfoxide | 18197602      | 5              |
| Caelo               | Dimethyl sulfoxide | 7111807       | 1              |
| Caelo               | Dimethyl sulfoxide | 17111806      | 1              |
| Caelo               | Dimethyl sulfoxide | 1808012-01    | 5              |
| Caelo               | Dimethyl sulfoxide | 18197609      | 1              |
| Caelo               | Dimethyl sulfoxide | 18197616      | 2              |
| Caelo               | Dimethyl sulfoxide | 18197621      | 6              |
| Caelo               | Dimethyl sulfoxide | 1903021-02    | 1              |
| Caelo               | Dimethyl sulfoxide | 19220801      | 2              |
| Caelo               | Dimethyl sulfoxide | 190616-01     | 1              |
| Caelo               | Dimethyl sulfoxide | 20002329001   | 1              |
| Caelo               | Dimethyl sulfoxide | 19220803      | 1              |
| Caelo               | Dimethyl sulfoxide | 20001543010   | 1              |
| Caelo               | Dimethyl sulfoxide | 17075702      | 1              |
| Caelo               | Dimethyl sulfoxide | 171000101     | 1              |
| Caelo               | Dimethyl sulfoxide | 192208002     | 3              |
| Caelo               | Dimethyl sulfoxide | 1310008-02    | 1              |

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| <b>Supplier</b>            | <b>Substance</b>   | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|--------------------|--------------|----------------|
| Caelo                      | Dimethyl sulfoxide | 161001502    | 2              |
| Caelo                      | Dimethyl sulfoxide | 1601048-02   | 1              |
| Caelo                      | Dimethyl sulfoxide | 1809024-01   | 3              |
| Caelo                      | Dimethyl sulfoxide | 1610015_02   | 1              |
| Caelo                      | Dimethyl sulfoxide | 1411039-02   | 2              |
| Caelo                      | Dimethyl sulfoxide | 18197620     | 1              |
| Caelo                      | Dimethyl sulfoxide | 3256         | 1              |
| Caelo                      | Dimethyl sulfoxide | 3342         | 1              |
| Caelo                      | Dimethyl sulfoxide | 3343         | 1              |
| Caelo                      | Dimethyl sulfoxide | 18197617     | 2              |
| Caelo                      | Dimethyl sulfoxide | 1805002-01   | 2              |
| Caelo                      | Dimethyl sulfoxide | 1306010-01   | 3              |
| Caelo                      | Dimethyl sulfoxide | 1306010-02   | 1              |
| Caelo                      | Dimethyl sulfoxide | 18197610     | 2              |
| Caelo                      | Dimethyl sulfoxide | 1404031-01   | 3              |
| Caelo                      | Dimethyl sulfoxide | 180500202    | 1              |
| Caelo                      | Dimethyl sulfoxide | 106007-01    | 1              |
| Caelo                      | Dimethyl sulfoxide | 170901001    | 1              |
| Caelo                      | Dimethyl sulfoxide | 19220802     | 1              |
| Caelo                      | Dimethyl sulfoxide | 192208003    | 6              |
| Caelo                      | Dimethyl sulfoxide | 20002329003  | 2              |
| Caelo                      | Dimethyl sulfoxide | 1508018-02   | 5              |
| Caelo                      | Dimethyl sulfoxide | 192208005    | 2              |
| Caelo                      | Dimethyl sulfoxide | 1511028-01   | 1              |
| Caelo                      | Dimethyl sulfoxide | 1609006-01   | 2              |
| Caelo                      | Dimethyl sulfoxide | 1705025-01   | 4              |
| Caelo                      | Dimethyl sulfoxide | 1505021-01   | 1              |
| Caelo                      | Dimethyl sulfoxide | 1710001-01   | 2              |
| Caelo                      | Dimethyl sulfoxide | 1711020-01   | 4              |
| Caelo                      | Dimethyl sulfoxide | 1903021-01   | 2              |
| Caelo                      | Dimethyl sulfoxide | 19220804     | 1              |
| Caelo                      | Dimethyl sulfoxide | 18197615     | 3              |
| Caerol / Gehe              | Dimethyl sulfoxide | 1508018-01   | 1              |
| Caerol                     | Dimethyl sulfoxide | 1310008-01   | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197610     | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197612     | 2              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197602     | 2              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197616     | 2              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197613     | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 18197621     | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 19220806     | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 19220802     | 4              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 192208003    | 9              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 19220803     | 1              |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 192208005    | 12             |
| Caesar & Loretz GmbH       | Dimethyl sulfoxide | 20002329003  | 1              |
| Caesar & Loretz GmbH / G   | Dimethyl sulfoxide | 18197621     | 1              |
| Caesar & Loretz GmbH/AHD   | Dimethyl sulfoxide | 19220802     | 2              |
| Caesar & Loretz GmbH/AHD   | Dimethyl sulfoxide | 192208003    | 1              |
| Caesar & Loretz Hilden     | Dimethyl sulfoxide | 18197620     | 1              |
| Caesar & Loretz Hilden     | Dimethyl sulfoxide | 19220802     | 1              |
| Caesar & Loretz Hilden     | Dimethyl sulfoxide | 192208006    | 1              |
| Caesar & Loretz Hilden/... | Dimethyl sulfoxide | 18197616     | 1              |
| Caesar & Loretz Hilden/... | Dimethyl sulfoxide | 192208005    | 1              |
| Caesar & Loretz Hilden/... | Dimethyl sulfoxide | 192208003    | 1              |
| CeloAnzag                  | Dimethyl sulfoxide | 18197602     | 1              |
| Chemical Corp.             | Dimethyl sulfoxide | 1404031-02   | 1              |
| Chemical corp. / Noweda    | Dimethyl sulfoxide | 1306010-02   | 1              |
| Chemical Corp./Sanacorp    | Dimethyl sulfoxide | 1310008-02   | 1              |
| Ebert 09.08.16 KKH         | Dimethyl sulfoxide | 1604010-01   | 1              |

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| <b>Supplier</b>            | <b>Substance</b>   | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|--------------------|--------------|----------------|
| Ebert 12.08.16             | Dimethyl sulfoxide | 1604040-01   | 1              |
| Ebert KKH29.09.16          | Dimethyl sulfoxide | 16060074-01  | 1              |
| eurho                      | Dimethyl sulfoxide | 170901010-01 | 1              |
| EuRho                      | Dimethyl sulfoxide | 1111059-02   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1210059-01   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1303010-01   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1411039-02   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1606007-01   | 2              |
| EuRho                      | Dimethyl sulfoxide | 1610015-02   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1705025      | 1              |
| EuRho                      | Dimethyl sulfoxide | SYN160216    | 1              |
| EuRho                      | Dimethyl sulfoxide | 1709010-01   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1805002-02   | 1              |
| EuRho                      | Dimethyl sulfoxide | 1809024-01   | 2              |
| EuRho                      | Dimethyl sulfoxide | 1906016-01   | 2              |
| EuRho                      | Dimethyl sulfoxide | 1906016-02   | 1              |
| EuRho                      | Dimethyl sulfoxide | 2007016-01   | 2              |
| EuRho                      | Dimethyl sulfoxide | 1809024-01   | 1              |
| EuRho / Alliance Health... | Dimethyl sulfoxide | SYN160215    | 1              |
| EuRho AHC                  | Dimethyl sulfoxide | 1610015-02   | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1508018-01   | 31             |
| EuRho/ Phönix              | Dimethyl sulfoxide | 1903021-01   | 1              |
| EuRho/AHD                  | Dimethyl sulfoxide | 2007016-01   | 1              |
| EuRho/Fiebig               | Dimethyl sulfoxide | SYN150525    | 1              |
| EuRho/Fiebig               | Dimethyl sulfoxide | 1903021      | 1              |
| EuRho/Gehe                 | Dimethyl sulfoxide | 1805002-02   | 1              |
| EuRho/Noweda               | Dimethyl sulfoxide | 1601048-01   | 2              |
| EuRho/Noweda               | Dimethyl sulfoxide | 1610015-02   | 1              |
| EuRho/Noweda               | Dimethyl sulfoxide | 1903021-01   | 1              |
| Eurho/Phoenix              | Dimethyl sulfoxide | SYN180709    | 1              |
| EuRho/Phoenix              | Dimethyl sulfoxide | 1705025-01   | 4              |
| EuRho/Phoenix              | Dimethyl sulfoxide | 1711020-01   | 2              |
| EuRho/Phönix               | Dimethyl sulfoxide | 1310008-02   | 1              |
| Eurho/Sanacorp             | Dimethyl sulfoxide | 1808012-01   | 1              |
| Eurho/Sanacorp             | Dimethyl sulfoxide | 1805002-02   | 1              |
| Eurho/Sanacorp             | Dimethyl sulfoxide | 1906016-01   | 3              |
| EuRho/sanacorp             | Dimethyl sulfoxide | 1906016-01   | 1              |
| EuRho/Sanacorp             | Dimethyl sulfoxide | 1610015-02   | 1              |
| EuRho/Sanacorp             | Dimethyl sulfoxide | 1805002-01   | 2              |
| euro                       | Dimethyl sulfoxide | 1903021-02   | 1              |
| Euro                       | Dimethyl sulfoxide | 140403-01    | 1              |
| Euro OT/Phönix             | Dimethyl sulfoxide | SYN1608022   | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 170502501    | 3              |
| Euro OTC                   | Dimethyl sulfoxide | 1805002      | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 160104801    | 2              |
| Euro OTC                   | Dimethyl sulfoxide | 17100001-01  | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1004041-01   | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 12101202     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 26011301     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1210059-01   | 14             |
| Euro OTC                   | Dimethyl sulfoxide | 613A-01336   | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1303010-01   | 15             |
| Euro OTC                   | Dimethyl sulfoxide | 13011403     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 130008-01    | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 14051404     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1404031      | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 15011503     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1411039-2    | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 160048-02    | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1604010-01   | 25             |

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| <b>Supplier</b> | <b>Substance</b>   | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|--------------------|---------------------|----------------|
| Euro OTC        | Dimethyl sulfoxide | 1606007             | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1610015-02          | 62             |
| Euro OTC        | Dimethyl sulfoxide | 16099006-01         | 1              |
| Euro OTC        | Dimethyl sulfoxide | 4817A-01336         | 1              |
| Euro OTC        | Dimethyl sulfoxide | 160900601           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1710001_01          | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1711020             | 1              |
| Euro OTC        | Dimethyl sulfoxide | 29091809            | 1              |
| Euro OTC        | Dimethyl sulfoxide | 5121810             | 1              |
| Euro OTC        | Dimethyl sulfoxide | 19011906            | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1809024-01          | 56             |
| Euro OTC        | Dimethyl sulfoxide | 6021902             | 1              |
| Euro OTC        | Dimethyl sulfoxide | 161001502           | 2              |
| Euro OTC        | Dimethyl sulfoxide | 189024-01           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 180902401           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 180500-02           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 2007016-01          | 48             |
| Euro OTC        | Dimethyl sulfoxide | 1908024-01          | 5              |
| Euro OTC        | Dimethyl sulfoxide | 1310008-01          | 12             |
| Euro OTC        | Dimethyl sulfoxide | 1310008-02          | 8              |
| Euro OTC        | Dimethyl sulfoxide | 170522DS/1610015-01 | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1705025-01          | 57             |
| Euro OTC        | Dimethyl sulfoxide | 1809024-21          | 1              |
| Euro OTC        | Dimethyl sulfoxide | 170001-01           | 1              |
| Euro OTC        | Dimethyl sulfoxide | SYN190325           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 180801201           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1609006-01          | 27             |
| Euro OTC        | Dimethyl sulfoxide | 130601001           | 2              |
| Euro OTC        | Dimethyl sulfoxide | 110600601           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 13003010-01         | 1              |
| Euro OTC        | Dimethyl sulfoxide | PHS111205           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1404031-02          | 11             |
| Euro OTC        | Dimethyl sulfoxide | 141103902           | 2              |
| Euro OTC        | Dimethyl sulfoxide | 169006-01           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 150801802           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 17525-01            | 1              |
| Euro OTC        | Dimethyl sulfoxide | 17F28-B04           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 190302102           | 2              |
| Euro OTC        | Dimethyl sulfoxide | 1906016-02          | 81             |
| Euro OTC        | Dimethyl sulfoxide | 1906016-1           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1709010-01          | 56             |
| Euro OTC        | Dimethyl sulfoxide | 1710001-01          | 55             |
| Euro OTC        | Dimethyl sulfoxide | 1805002-01          | 54             |
| Euro OTC        | Dimethyl sulfoxide | 1808012-01          | 56             |
| Euro OTC        | Dimethyl sulfoxide | 1805002-02          | 48             |
| Euro OTC        | Dimethyl sulfoxide | 1903021-01          | 72             |
| Euro OTC        | Dimethyl sulfoxide | 1903021-02          | 90             |
| Euro OTC        | Dimethyl sulfoxide | 1106006-01          | 4              |
| Euro OTC        | Dimethyl sulfoxide | 170502              | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1709090-01          | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1806021-01          | 52             |
| Euro OTC        | Dimethyl sulfoxide | 190601602           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 171001-01           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1709010-010         | 1              |
| Euro OTC        | Dimethyl sulfoxide | 140403102           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1207008-02          | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1511028-01          | 5              |
| Euro OTC        | Dimethyl sulfoxide | 1601048-01          | 14             |
| Euro OTC        | Dimethyl sulfoxide | 180602-01           | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1404031-01          | 10             |

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| <b>Supplier</b> | <b>Substance</b>   | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|--------------------|---------------|----------------|
| Euro OTC        | Dimethyl sulfoxide | 14H28-M01     | 2              |
| Euro OTC        | Dimethyl sulfoxide | 1505021       | 1              |
| Euro OTC        | Dimethyl sulfoxide | 15111028-01   | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1601048-02    | 10             |
| Euro OTC        | Dimethyl sulfoxide | SYN180319     | 5              |
| Euro OTC        | Dimethyl sulfoxide | 160401001     | 2              |
| Euro OTC        | Dimethyl sulfoxide | 141039-02     | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1411039-02    | 10             |
| Euro OTC        | Dimethyl sulfoxide | 1903021       | 5              |
| Euro OTC        | Dimethyl sulfoxide | 1906016       | 2              |
| Euro OTC        | Dimethyl sulfoxide | 8597061       | 1              |
| Euro OTC        | Dimethyl sulfoxide | 16110015-02   | 1              |
| Euro OTC        | Dimethyl sulfoxide | 170901001     | 3              |
| Euro OTC        | Dimethyl sulfoxide | 1207008-01    | 2              |
| Euro OTC        | Dimethyl sulfoxide | 1606007-01    | 43             |
| Euro OTC        | Dimethyl sulfoxide | 815M-01336    | 1              |
| Euro OTC        | Dimethyl sulfoxide | 170505-01     | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1804621-01    | 1              |
| Euro OTC        | Dimethyl sulfoxide | 13063010-01   | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1711020-01    | 67             |
| Euro OTC        | Dimethyl sulfoxide | 1906016-03    | 12             |
| Euro OTC        | Dimethyl sulfoxide | 180500201     | 3              |
| Euro OTG/ AHD   | Dimethyl sulfoxide | 1411039-02    | 1              |
| Euro OTG/ AHD   | Dimethyl sulfoxide | 1705025-01    | 3              |
| Euro OTG/ AHD   | Dimethyl sulfoxide | 1711020-01    | 1              |
| Euro/ Fiebig    | Dimethyl sulfoxide | 1306010-02    | 1              |
| Euro/ Gehe      | Dimethyl sulfoxide | 1404031-02    | 1              |
| Euro/ Phönix    | Dimethyl sulfoxide | 1711020-01    | 1              |
| euro//Noweda    | Dimethyl sulfoxide | 1705025-01    | 2              |
| Euro/Gehe       | Dimethyl sulfoxide | 1601048-01    | 1              |
| Euro/Noweda     | Dimethyl sulfoxide | 1610015-01    | 1              |
| Euro/phö        | Dimethyl sulfoxide | 1906016-02    | 1              |
| Euro/phönix     | Dimethyl sulfoxide | 1411039-01    | 1              |
| Euro/Phönix     | Dimethyl sulfoxide | 1711020-01    | 1              |
| Euro/Phönix     | Dimethyl sulfoxide | 1805002-01    | 1              |
| Euro/Phönix     | Dimethyl sulfoxide | 1903021-02    | 1              |
| EURO/Sana       | Dimethyl sulfoxide | 1906016-01    | 1              |
| Euro/Sanacorp   | Dimethyl sulfoxide | 1906016-02    | 1              |
| Euro/Sanacorp   | Dimethyl sulfoxide | 2007016-01    | 1              |
| Euroct/Gehe     | Dimethyl sulfoxide | 1508018-02    | 1              |
| Euro-CTC/Phönix | Dimethyl sulfoxide | 1705025-01    | 1              |
| Euro-CTC/Phönix | Dimethyl sulfoxide | 1709010-01    | 3              |
| Euro OTC        | Dimethyl sulfoxide | 1508012-02    | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1610015-01    | 39             |
| Euro OTC        | Dimethyl sulfoxide | 700119        | 3              |
| Euro OTC        | Dimethyl sulfoxide | SYN190114     | 3              |
| Euro OTC        | Dimethyl sulfoxide | 175025-01     | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1906016-01    | 102            |
| Euro OTC        | Dimethyl sulfoxide | 1306010-01    | 26             |
| Euro OTC        | Dimethyl sulfoxide | 151102801     | 2              |
| Euro OTC        | Dimethyl sulfoxide | SYN160215     | 2              |
| Euro OTC        | Dimethyl sulfoxide | 1508018-02    | 28             |
| Euro OTC        | Dimethyl sulfoxide | 150801801     | 1              |
| Euro OTC        | Dimethyl sulfoxide | EuroOTCPharma | 1              |
| Euro OTC        | Dimethyl sulfoxide | 3457          | 1              |
| Euro OTC        | Dimethyl sulfoxide | 1705025       | 3              |
| Euro OTC        | Dimethyl sulfoxide | 19060616-01   | 1              |
| Euro OTC        | Dimethyl sulfoxide | SYN170605     | 2              |
| Euro OTC        | Dimethyl sulfoxide | 1508013-01    | 1              |
| Euro OTC        | Dimethyl sulfoxide | SYN160201     | 1              |

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| <b>Supplier</b>            | <b>Substance</b>   | <b>Batch</b>    | <b>Spectra</b> |
|----------------------------|--------------------|-----------------|----------------|
| Euro OTC                   | Dimethyl sulfoxide | 1017Q-01336     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1809024         | 1              |
| Euro OTC                   | Dimethyl sulfoxide | SYN191125       | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1903021-21      | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 14111039-01     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 171000-01       | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 180500202       | 4              |
| Euro OTC                   | Dimethyl sulfoxide | 1505021-01      | 16             |
| EuroOTV / Noweda           | Dimethyl sulfoxide | 1604010-01      | 1              |
| europarm/gehe              | Dimethyl sulfoxide | 1610015-01      | 1              |
| EuRro/Anzag                | Dimethyl sulfoxide | 1710001-01      | 1              |
| Fagron                     | Dimethyl sulfoxide | 11K29-M03       | 1              |
| Fagron                     | Dimethyl sulfoxide | 11E03-M04       | 2              |
| Fagron                     | Dimethyl sulfoxide | 13071201        | 1              |
| Fagron                     | Dimethyl sulfoxide | 27061203        | 1              |
| Fagron                     | Dimethyl sulfoxide | 11G18-N15       | 1              |
| Fagron                     | Dimethyl sulfoxide | 1306010-02      | 1              |
| Fagron                     | Dimethyl sulfoxide | 1310008-02      | 1              |
| Fagron                     | Dimethyl sulfoxide | 1404031-02      | 1              |
| Fagron                     | Dimethyl sulfoxide | 14H28-M01       | 2              |
| Fagron                     | Dimethyl sulfoxide | 15A16-C01-16195 | 2              |
| Fagron                     | Dimethyl sulfoxide | 1705025-01      | 2              |
| Fagron                     | Dimethyl sulfoxide | Norpren         | 1              |
| Fagron                     | Dimethyl sulfoxide | 1711020-01      | 1              |
| Fagron                     | Dimethyl sulfoxide | 14H28-M03       | 1              |
| Fagron                     | Dimethyl sulfoxide | 161001502       | 1              |
| Fagron                     | Dimethyl sulfoxide | 14H28-M02       | 1              |
| Fiebig                     | Dimethyl sulfoxide | 1809024         | 1              |
| Fiebig                     | Dimethyl sulfoxide | 1906016-01      | 2              |
| Gatt-Koller                | Dimethyl sulfoxide | 1802552         | 4              |
| Gayford Chemical/Gehe      | Dimethyl sulfoxide | 1805002-01      | 1              |
| gaylord                    | Dimethyl sulfoxide | 1210059-01      | 1              |
| Gaylord                    | Dimethyl sulfoxide | 1709010-01      | 1              |
| Gaylord / Fiebig           | Dimethyl sulfoxide | 1505021-01      | 1              |
| Gaylord Chem / Gehe        | Dimethyl sulfoxide | 1903021-01      | 2              |
| Gaylord Chem.co            | Dimethyl sulfoxide | 1609006-01      | 1              |
| gaylord chem.USA/Phoenix   | Dimethyl sulfoxide | 1806021-01      | 1              |
| Gaylord Chemica Co.        | Dimethyl sulfoxide | 1906016-01      | 1              |
| GAYLORD CHEMICAL           | Dimethyl sulfoxide | 1903021-01      | 1              |
| GAYLORD CHEMICAL           | Dimethyl sulfoxide | 1906016-01      | 1              |
| Gaylord Chemical / Gehe    | Dimethyl sulfoxide | 1805002-02      | 1              |
| Gaylord Chemical / Gehe    | Dimethyl sulfoxide | 190321-02       | 1              |
| Gaylord Chemical / Gehe    | Dimethyl sulfoxide | 1906016-01      | 1              |
| Gaylord Chemical /107      | Dimethyl sulfoxide | 1809024-01      | 1              |
| Gaylord Chemical Corp./... | Dimethyl sulfoxide | 1508018-02      | 2              |
| Gaylord Chemical Corp./... | Dimethyl sulfoxide | 1508018-01      | 1              |
| Gaylord Chemical Corpor... | Dimethyl sulfoxide | 1808012-01      | 1              |
| Gaylord Chemical Corpor... | Dimethyl sulfoxide | 1610015-02      | 1              |
| gaylord chemical corpor... | Dimethyl sulfoxide | 1711020-01      | 2              |
| Gaylord Chemical Corpor... | Dimethyl sulfoxide | SYN180319       | 1              |
| Gaylord Chemical Corpor... | Dimethyl sulfoxide | 1805002-02      | 1              |
| Gaylord Chemical USA / ... | Dimethyl sulfoxide | 1906016-01      | 1              |
| Gaylord Chemical, Allia... | Dimethyl sulfoxide | 1906016-01      | 1              |
| Gaylord Chemical7 Anzag    | Dimethyl sulfoxide | 1906016-02      | 1              |
| Gaylord ChemicalCorp./ ... | Dimethyl sulfoxide | 1404031-02      | 1              |
| Euro OTC                   | Dimethyl sulfoxide | SYN170717       | 3              |
| Gaylord/Phoenix            | Dimethyl sulfoxide | SYN190325       | 1              |
| Gaylord/Phoenix            | Dimethyl sulfoxide | 1906016-01      | 1              |
| Gaylord/Sanacorp           | Dimethyl sulfoxide | 1306010-01      | 1              |
| Gaylord/Sanacorp 28.08.14  | Dimethyl sulfoxide | 1404031-01      | 1              |

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| <b>Supplier</b>   | <b>Substance</b>   | <b>Batch</b> | <b>Spectra</b> |
|-------------------|--------------------|--------------|----------------|
| Gehe              | Dimethyl sulfoxide | 1111059-01   | 1              |
| Gehe              | Dimethyl sulfoxide | 1111059-02   | 1              |
| Gehe              | Dimethyl sulfoxide | 1604010-01   | 1              |
| Gehe              | Dimethyl sulfoxide | 160600701    | 1              |
| Gehe              | Dimethyl sulfoxide | 1606007-01   | 1              |
| Gehe              | Dimethyl sulfoxide | 1610015-1    | 1              |
| Gehe              | Dimethyl sulfoxide | 1710000101   | 1              |
| Gehe              | Dimethyl sulfoxide | 1808012-01   | 1              |
| Gehe              | Dimethyl sulfoxide | 1805002-02   | 2              |
| Gehe              | Dimethyl sulfoxide | 180812-01    | 1              |
| Gehe              | Dimethyl sulfoxide | 1903021-02   | 2              |
| Gehe              | Dimethyl sulfoxide | 1906016-01   | 2              |
| GEHE              | Dimethyl sulfoxide | 1610015-01   | 1              |
| GEHE              | Dimethyl sulfoxide | 1805002-01   | 1              |
| GEHE              | Dimethyl sulfoxide | 1903021-02   | 1              |
| gehe 07.01.2014   | Dimethyl sulfoxide | 1306010-02   | 2              |
| Caelo             | Dimethyl sulfoxide | SYN140623    | 1              |
| Gehe/EuRo         | Dimethyl sulfoxide | 1609006-01   | 1              |
| Euro OTC          | Dimethyl sulfoxide | 121005901    | 1              |
| Hedinger          | Dimethyl sulfoxide | 1609006-01   | 1              |
| Hedinger          | Dimethyl sulfoxide | P2018/117    | 1              |
| Hedinger/Noweda   | Dimethyl sulfoxide | 1006007-01   | 1              |
| Hedinger/Sanacorp | Dimethyl sulfoxide | 1601048-01   | 2              |
| Kehr              | Dimethyl sulfoxide | 1711020-01   | 1              |
| Euro OTC          | Dimethyl sulfoxide | SYN140623    | 1              |
| Kögl              | Dimethyl sulfoxide | 259008164916 | 1              |
| Kögl              | Dimethyl sulfoxide | 259008164116 | 1              |
| Kögl              | Dimethyl sulfoxide | 259008160217 | 1              |
| Kögl              | Dimethyl sulfoxide | 158305171917 | 1              |
| Kögl              | Dimethyl sulfoxide | 1700333      | 2              |
| L10               | Dimethyl sulfoxide | 1709010-01   | 1              |
| L12               | Dimethyl sulfoxide | 1610015-01   | 1              |
| L12               | Dimethyl sulfoxide | 1808012-01   | 1              |
| L30               | Dimethyl sulfoxide | 1711020-01   | 2              |
| Merck             | Dimethyl sulfoxide | K47112150544 | 1              |
| Noweda            | Dimethyl sulfoxide | 1111059-01   | 1              |
| Noweda            | Dimethyl sulfoxide | 1111059-02   | 1              |
| Noweda            | Dimethyl sulfoxide | 1404031-02   | 1              |
| Noweda            | Dimethyl sulfoxide | 140403101    | 1              |
| Noweda            | Dimethyl sulfoxide | 1609006-01   | 1              |
| Noweda            | Dimethyl sulfoxide | 1610015-01   | 2              |
| Noweda            | Dimethyl sulfoxide | 1610015-02   | 1              |
| Noweda            | Dimethyl sulfoxide | SYN1608022   | 1              |
| Noweda            | Dimethyl sulfoxide | 1705025-01   | 1              |
| Noweda            | Dimethyl sulfoxide | 170502501    | 1              |
| Noweda            | Dimethyl sulfoxide | 1709010-01   | 2              |
| Noweda            | Dimethyl sulfoxide | 170001-01    | 1              |
| Noweda            | Dimethyl sulfoxide | 1808012-01   | 1              |
| Noweda            | Dimethyl sulfoxide | 18197616     | 2              |
| Noweda            | Dimethyl sulfoxide | 1903021-02   | 2              |
| Noweda            | Dimethyl sulfoxide | 1906016-01   | 2              |
| Noweda            | Dimethyl sulfoxide | 192208003    | 1              |
| Noweda            | Dimethyl sulfoxide | 7016-01      | 1              |
| Noweda            | Dimethyl sulfoxide | 2007016-01   | 1              |
| noweda/anzag      | Dimethyl sulfoxide | 1809024-01   | 1              |
| Euro OTC          | Dimethyl sulfoxide | 1411039_01   | 1              |
| Euro OTC          | Dimethyl sulfoxide | 190601601    | 2              |
| Fagron            | Dimethyl sulfoxide | 1610015-02   | 1              |
| Euro OTC          | Dimethyl sulfoxide | 19030221-02  | 1              |
| Euro OTC          | Dimethyl sulfoxide | 2071301      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>   | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|--------------------|---------------|----------------|
| Euro OTC                   | Dimethyl sulfoxide | 5111303       | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 161005-01     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1(1806021-01) | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 131000801     | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1813A-01336   | 1              |
| Pala                       | Dimethyl sulfoxide | 1903021-01    | 1              |
| phoenix                    | Dimethyl sulfoxide | 1610015-01    | 1              |
| Phoenix                    | Dimethyl sulfoxide | 1601048-01    | 1              |
| Phoenix                    | Dimethyl sulfoxide | 1606007-01    | 1              |
| Phoenix                    | Dimethyl sulfoxide | 1711020-01    | 1              |
| Phoenix                    | Dimethyl sulfoxide | 3206          | 1              |
| Phoenix                    | Dimethyl sulfoxide | 1805002-01    | 1              |
| Phoenix                    | Dimethyl sulfoxide | 18197612      | 1              |
| Phoenix                    | Dimethyl sulfoxide | 3415          | 1              |
| Phoenix                    | Dimethyl sulfoxide | 1903021-01    | 2              |
| Phoenix                    | Dimethyl sulfoxide | 192208003     | 2              |
| phoenix 06.03.14           | Dimethyl sulfoxide | 1306010-02    | 1              |
| PHOENIX 06.03.2014         | Dimethyl sulfoxide | 1306010-01    | 1              |
| phoenix 06.05.14           | Dimethyl sulfoxide | 1310008-01    | 1              |
| Phoenix 10.06.14           | Dimethyl sulfoxide | 131008-01     | 1              |
| Phoenix 19.05.2017 4,85EUR | Dimethyl sulfoxide | 1610015-01    | 1              |
| Phoenix WE08.04.17 -4,8... | Dimethyl sulfoxide | 1610015-01    | 2              |
| Caelo                      | Dimethyl sulfoxide | 131000801     | 1              |
| Phoenix/EuRho              | Dimethyl sulfoxide | 1705020-01    | 1              |
| phönix                     | Dimethyl sulfoxide | 1606007-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1210059-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1310008-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1511028-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1606007-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1610015-02    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1705025-01    | 2              |
| Phönix                     | Dimethyl sulfoxide | 171102001     | 1              |
| Phönix                     | Dimethyl sulfoxide | 1709010-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 3164          | 1              |
| Phönix                     | Dimethyl sulfoxide | 1711020-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | 1806021-01    | 1              |
| Phönix                     | Dimethyl sulfoxide | SYN180709     | 1              |
| Phönix                     | Dimethyl sulfoxide | 2007016-01    | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1306010-02    | 21             |
| Phönix 04.09.2019          | Dimethyl sulfoxide | 1903021-02    | 1              |
| Phönix Gotha               | Dimethyl sulfoxide | 1111059-02    | 1              |
| Phönix Gotha               | Dimethyl sulfoxide | 1404031-02    | 1              |
| Phönix Gotha               | Dimethyl sulfoxide | 1505021-01    | 1              |
| Phönix/apo ident           | Dimethyl sulfoxide | 1808012-01    | 1              |
| Phönix/EuRho               | Dimethyl sulfoxide | 1207008-01    | 1              |
| Phönix/Euro                | Dimethyl sulfoxide | 1610015-02    | 2              |
| Phönix/Euro                | Dimethyl sulfoxide | 1610015-01    | 1              |
| Phönix/Infectopharm        | Dimethyl sulfoxide | 1808012-01    | 1              |
| Euro OTC                   | Dimethyl sulfoxide | 1411039-01    | 21             |
| Sanacorp                   | Dimethyl sulfoxide | 1207008-01    | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 1306010-02    | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 1508018-01    | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 160600701     | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 161001502     | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 171000101     | 2              |
| Sanacorp                   | Dimethyl sulfoxide | 1711020-01    | 3              |
| Sanacorp                   | Dimethyl sulfoxide | 1808012-01    | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 1809024       | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 1903021-01    | 1              |
| Sanacorp                   | Dimethyl sulfoxide | 1906016-02    | 2              |

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| Supplier                   | Substance          | Batch                | Spectra |
|----------------------------|--------------------|----------------------|---------|
| Sanacorp W.E: 23.01.18 ... | Dimethyl sulfoxide | 1710001-01           | 1       |
| Sanacorp/ PZN08597061      | Dimethyl sulfoxide | 1306010-01-339413100 | 1       |
| Sanacorp/Euro              | Dimethyl sulfoxide | 1903021-01           | 1       |
| Sanacorp/Euro              | Dimethyl sulfoxide | 1906016-01           | 2       |
| Sanacorp/Euro              | Dimethyl sulfoxide | 1906016-03           | 1       |
| Synopharm                  | Dimethyl sulfoxide | 1705025-01           | 1       |
|                            | Dimethyl sulfoxide | 1903021-02           | 1       |
|                            | Dimethyl sulfoxide | 1411039-02           | 1       |
| Euro OTC                   | Dimethyl sulfoxide | 1601048              | 1       |
| Euro OTC                   | Dimethyl sulfoxide |                      | 4       |
| Fagron                     | Dimethyl sulfoxide | 15A16-C01-16194      | 2       |
| Fagron                     | Dimethyl sulfoxide |                      | 1       |
|                            | Dimethyl sulfoxide | 1306010-02           | 1       |
| vitalundfitmit100/ Sana... | Dimethyl sulfoxide |                      | 1       |

- 239 330 spectra from 1121 *Apo-Ident* customers from a total of 46 772 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Dimethyl sulfoxide* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Dimethyl sulfoxide* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 480           | 0              | 63 459        |
| <b>Type B</b> | 0              | 980           | 0              | 90 511        |
| <b>Type C</b> | 0              | 2028          | 5              | 239 330       |

The substance/substance group *Dimethyl sulfoxide* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.7500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.3878 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.7541 % (> 99.6065 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.



### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dimethyl sulfoxide* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance | Distance in<br>main model | Distance in<br>second-stage model |
|-----------|---------------------------|-----------------------------------|
| Acetone   | 91.34                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dimethyl sulfoxide* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31498     | 31498                  | 0.00                            | 128.82                             |
| 31732     | 31848                  | 1.41                            | 132.45                             |
| 31734     | 31734                  | 0.00                            | 132.47                             |
| 31803     | 31803                  | 0.00                            | 133.29                             |
| 31813     | 31813                  | 0.00                            | 133.00                             |
| 31848     | 31848                  | 0.00                            | 132.44                             |
| 32280     | 32280                  | 0.00                            | 136.51                             |
| 34221     | 34221                  | 0.00                            | 158.70                             |
| 35285     | 31848                  | 3.92                            | 127.18                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dimeticon 100 / 350 / 1000**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30660-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dimeticon 100 / 350 / 1000; Dimeticone 100; Dimeticone 1000; Dimeticone 350; Dimeticonum 100; Dimeticonum 1000; Dimeticonum 350

### Special notes

When selecting the *Dimeticon 100 / 350 / 1000* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group  | Type A | Type B | Type C |
|----------------------------|--------|--------|--------|
| Dimeticon 100 / 350 / 1000 | 11     | 6      | 100    |

## Second-stage model

For differentiation of the substance/substance group *Dimeticon 100 / 350 / 1000* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dimeticon 100 / 350 / 1000*:

| Supplier | Substance       | Batch            | Sample ID | Spectra | Certificate        |
|----------|-----------------|------------------|-----------|---------|--------------------|
| Caelo    | Dimeticone 100  | 12140101         | 30660     | 40      | 1403158            |
| Caelo    | Dimeticone 100  | 13049608         | 31333     | 40      | 20130301           |
| Caelo    | Dimeticone 100  | 172164           | 33918     | 40      | 20170809*          |
| Caelo    | Dimeticone 1000 | 161307           | 32169     | 60      | 20160427*          |
| Caelo    | Dimeticone 1000 | 15349907         | 32587     | 40      | 20151106           |
| Fagron   | Dimeticone 1000 | 14C20-B04-306781 | 32485     | 40      | 20140331           |
| Caelo    | Dimeticone 350  | 13236306         | 31334     | 40      | AR-15-FG-009277-01 |
| Euro OTC | Dimeticone 350  | 1702002          | 33234     | 40      | 20170302*          |
| Euro OTC | Dimeticone 350  | 1909012          | 34747     | 40      | 20191129*          |
| Fagron   | Dimeticone 350  | 14C20-B05-292285 | 31659     | 60      | 20140331           |
| Fagron   | Dimeticone 350  | 14D30-B07-330851 | 33278     | 40      | 20140513           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 480 spectra of 11 reference samples from the substance/substance group *Dimeticon 100 / 350 / 1000*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 11 different batches.
- 63 459 spectra from a total of 1296 batches from further 221 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 240 spectra of 6 reference samples from the substance/substance group *Dimeticon 100 / 350 / 1000*.
- Among them are spectra of independent samples from 6 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance       | Batch            | Sample ID | Spectra |
|----------|-----------------|------------------|-----------|---------|
| Caelo    | Dimeticone 100  | 15199409         | 32304     | 40      |
| Caelo    | Dimeticone 100  | 15404609         | 33628     | 40      |
| Caelo    | Dimeticone 1000 | 16348504         | 33654     | 40      |
| Caelo    | Dimeticone 1000 | 171981           | 33919     | 40      |
| Caelo    | Dimeticone 350  | 160754           | 32208     | 40      |
| Fagron   | Dimeticone 350  | 19L30-T04-080455 | 35265     | 40      |

- 91 251 spectra from a total of 2010 batches from further 343 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 324 spectra from 148 *Apo-Ident* customers from 105 batches from the substance/substance group *Dimeticon 100 / 350 / 1000*.
- Among them are spectra of independent samples from 99 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance       | Batch      | Spectra |
|----------------------|-----------------|------------|---------|
| Caelo                | Dimeticone 100  | 12310801   | 1       |
| Caelo                | Dimeticone 100  | 13049603   | 1       |
| Caelo                | Dimeticone 100  | 15199401   | 1       |
| Caelo                | Dimeticone 100  | 13362904   | 1       |
| Caelo                | Dimeticone 100  | 11215905   | 1       |
| Caelo                | Dimeticone 100  | 17366809   | 1       |
| Noweda               | Dimeticone 100  | 12316701   | 1       |
| Caelo                | Dimeticone 100  | 15059706   | 1       |
| Caelo                | Dimeticone 1000 | 16348503   | 2       |
| Caesar & Loretz GmbH | Dimeticone 1000 | 17367202   | 4       |
| AHD                  | Dimeticone 350  | 17090204   | 1       |
| AHD, 07.11.13        | Dimeticone 350  | 13049804   | 1       |
| Anzag 24.01.2013     | Dimeticone 350  | 12186301   | 1       |
| Beiersdorf Ag        | Dimeticone 350  | 1207015-02 | 1       |
| cae                  | Dimeticone 350  | 13236306   | 1       |
| Caelo                | Dimeticone 350  | 12193302   | 1       |
| Caelo                | Dimeticone 350  | 12193307   | 2       |
| Caelo                | Dimeticone 350  | 12193313   | 1       |
| Caelo                | Dimeticone 350  | 12193315   | 1       |
| Caelo                | Dimeticone 350  | 13049803   | 2       |
| Caelo                | Dimeticone 350  | 13049809   | 1       |
| Caelo                | Dimeticone 350  | 13236302   | 2       |
| Caelo                | Dimeticone 350  | 13049813   | 1       |
| Caelo                | Dimeticone 350  | 13236312   | 2       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caelo                      | Dimeticone 350   | 14074509         | 15             |
| Caelo                      | Dimeticone 350   | 14704509         | 1              |
| Caelo                      | Dimeticone 350   | 14074512         | 20             |
| Caelo                      | Dimeticone 350   | 14074511         | 1              |
| Caelo                      | Dimeticone 350   | 14336402         | 7              |
| Caelo                      | Dimeticone 350   | 15239901         | 1              |
| Caelo                      | Dimeticone 350   | 14336403         | 1              |
| Caelo                      | Dimeticone 350   | 14C20-B05-292285 | 1              |
| Caelo                      | Dimeticone 350   | 16075401         | 5              |
| Caelo                      | Dimeticone 350   | 1407004-01       | 1              |
| Caelo                      | Dimeticone 350   | 14D30-B07-300432 | 2              |
| Caelo                      | Dimeticone 350   | 16075405         | 2              |
| Caelo                      | Dimeticone 350   | 17090203         | 23             |
| Caelo                      | Dimeticone 350   | 17366902         | 2              |
| Caelo                      | Dimeticone 350   | 17366905         | 17             |
| Caelo                      | Dimeticone 350   | 18211105         | 6              |
| Caelo                      | Dimeticone 350   | 18211102         | 1              |
| Caelo                      | Dimeticone 350   | 18211109         | 5              |
| Caelo                      | Dimeticone 350   | 18211110         | 1              |
| Caelo                      | Dimeticone 350   | 2315274          | 1              |
| Caelo                      | Dimeticone 350   | 18211118         | 1              |
| Caelo                      | Dimeticone 350   | 18211116         | 1              |
| Caelo                      | Dimeticone 350   | 173669           | 1              |
| Caelo                      | Dimeticone 350   | 182111           | 1              |
| Caelo                      | Dimeticone 350   | 18211113         | 4              |
| Caelo                      | Dimeticone 350   | 10111314         | 1              |
| Caelo                      | Dimeticone 350   | 13049802         | 2              |
| Caelo                      | Dimeticone 350   | 13236308         | 2              |
| Caelo                      | Dimeticone 350   | 17090201         | 15             |
| Caelo                      | Dimeticone 350   | 18211106         | 1              |
| Caelo                      | Dimeticone 350   | 17090204         | 3              |
| Caelo                      | Dimeticone 350   | 16075410         | 1              |
| Caelo                      | Dimeticone 350   | 17004506         | 1              |
| Caelo                      | Dimeticone 350   | 14074518         | 2              |
| Caelo                      | Dimeticone 350   | 13236307         | 2              |
| Caelo                      | Dimeticone 350   | 9371810          | 1              |
| Caelo                      | Dimeticone 350   | 11042104         | 1              |
| Caelo                      | Dimeticone 350   | 12186301         | 1              |
| Caelo                      | Dimeticone 350   | 191953001        | 5              |
| Caelo                      | Dimeticone 350   | 12193308         | 1              |
| Caelo                      | Dimeticone 350   | 19A09-B02-357845 | 1              |
| Caelo                      | Dimeticone 350   | 12193303         | 3              |
| Caelo                      | Dimeticone 350   | 13049804         | 4              |
| Caelo                      | Dimeticone 350   | 17004502         | 1              |
| Caelo                      | Dimeticone 350   | 16348504         | 1              |
| Caelo                      | Dimeticone 350   | 173669905        | 1              |
| Caolo/Ahd                  | Dimeticone 350   | 18211106         | 1              |
| Caesar & Loretz GmbH       | Dimeticone 350   | 18211105         | 2              |
| Caesar & Loretz GmbH       | Dimeticone 350   | 18211113         | 1              |
| Caesar & Loretz GmbH       | Dimeticone 350   | 18211116         | 2              |
| Caesar & Loretz GmbH       | Dimeticone 350   | 18211117         | 2              |
| Caesar & Loretz GmbH/Fi... | Dimeticone 350   | 191953001        | 1              |
| Caesar & Loretz GmbH/Je... | Dimeticone 350   | 18211117         | 2              |
| Caesar & Loretz Hilden     | Dimeticone 350   | 191953001        | 2              |
| Caesar & Loretz Hilden/... | Dimeticone 350   | 18211117         | 2              |
| Caesar & Loretz Hilden/... | Dimeticone 350   | 18211105         | 2              |
| Chiesi / Noweda / 27.09... | Dimeticone 350   | 18211117         | 1              |
| Euro OTC                   | Dimeticone 350   | 1207015-01       | 1              |
| Euro OTC                   | Dimeticone 350   | 1207015-02       | 1              |
| Euro OTC                   | Dimeticone 350   | 14C20-B05-292285 | 1              |

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| Supplier                 | Substance      | Batch            | Spectra |
|--------------------------|----------------|------------------|---------|
| Euro OTC                 | Dimeticone 350 | 1702002-01       | 6       |
| EuRo/Phönix              | Dimeticone 350 | 1207015-01       | 1       |
| Fagron                   | Dimeticone 350 | 9B10             | 1       |
| Fagron                   | Dimeticone 350 | 3111Q-02251      | 1       |
| Fagron                   | Dimeticone 350 | 14C20-B05        | 1       |
| Fagron                   | Dimeticone 350 | 16075401         | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07        | 1       |
| Fagron                   | Dimeticone 350 | 144D30-B07       | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07-334577 | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07-343668 | 3       |
| Fagron                   | Dimeticone 350 | Caelo/Noweda     | 1       |
| Fagron                   | Dimeticone 350 | 19A09-B02        | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07-333434 | 2       |
| Fagron                   | Dimeticone 350 | 14D30-B07-300432 | 2       |
| Fagron                   | Dimeticone 350 | 14030-807        | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07-335878 | 2       |
| Fagron                   | Dimeticone 350 | 17020002-01      | 1       |
| Fagron                   | Dimeticone 350 | 19A09B02-357845  | 1       |
| Fagron                   | Dimeticone 350 | 7676459          | 1       |
| Fagron                   | Dimeticone 350 | 14D30-B07-328248 | 1       |
| Fargon                   | Dimeticone 350 | 14C20-B05_292282 | 1       |
| Gatt-Koller              | Dimeticone 350 | 190003           | 2       |
| gehe                     | Dimeticone 350 | 14D30-B07-346200 | 1       |
| Gehe                     | Dimeticone 350 | 1407004-01       | 1       |
| Gehe                     | Dimeticone 350 | 14d30b07-330851  | 1       |
| Gehe                     | Dimeticone 350 | 14D30-B07        | 2       |
| Caelo                    | Dimeticone 350 | 301115           | 1       |
| Jenne                    | Dimeticone 350 | 14074509         | 1       |
| Kögl                     | Dimeticone 350 | 124604161816     | 1       |
| Kögl                     | Dimeticone 350 | 124604160517     | 1       |
| Kögl                     | Dimeticone 350 | KNC0320J16       | 1       |
| Kögl                     | Dimeticone 350 | 1700492          | 1       |
| Kögl                     | Dimeticone 350 | knc0320j16       | 1       |
| Kögl                     | Dimeticone 350 | 1801089          | 2       |
| Lamotte/3                | Dimeticone 350 | 1407511          | 1       |
| Nachtestung-Verlängerung | Dimeticone 350 | 3/16             | 1       |
| Noweda                   | Dimeticone 350 | 17090203         | 1       |
| Noweda                   | Dimeticone 350 | 17366905         | 2       |
| Noweda                   | Dimeticone 350 | 18211105         | 1       |
| Euro OTC                 | Dimeticone 350 | 1407004-01       | 1       |
| Caelo                    | Dimeticone 350 | 16075407         | 6       |
| Caelo                    | Dimeticone 350 | 18211117         | 15      |
| Ph.Eur.8.0               | Dimeticone 350 | 14C20B05292285   | 1       |
| Phoenix                  | Dimeticone 350 | 14D30-B07-335878 | 1       |
| Fagron                   | Dimeticone 350 | 14D30B07346200   | 1       |
| Caelo                    | Dimeticone 100 | 12140101         | 1       |
| Caelo                    | Dimeticone 350 | 13236306         | 12      |
| Caelo                    | Dimeticone 350 | 15349907         | 1       |
| Fagron                   | Dimeticone 350 | 14C20-B05-292285 | 6       |
| Sanacorp                 | Dimeticone 350 |                  | 1       |
| Caelo                    | Dimeticone 350 |                  | 1       |

- 241 039 spectra from 1121 *Apo-Ident* customers from a total of 46 904 batches from a further 340 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).



## Validation results

The validation runs checked whether the substance/substance group *Dimeticon 100 / 350 / 1000* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Dimeticon 100 / 350 / 1000* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 480           | 0              | 63 459        |
| Type B | 0              | 240           | 0              | 91 251        |
| Type C | 0              | 324           | 0              | 241 039       |

The substance/substance group *Dimeticon 100 / 350 / 1000* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.7500 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 100.0000 % (> 98.1481 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dimeticon 100 / 350 / 1000* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance | Distance in main model | Distance in second-stage model |
|-----------|------------------------|--------------------------------|
| Cineole   | 284.39                 | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dimeticon 100 / 350 / 1000* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30660     | 30660               | 0.00                         | 333.01                          |
| 31333     | 33918               | 1.95                         | 341.41                          |
| 31334     | 31334               | 0.00                         | 343.52                          |
| 31659     | 33918               | 2.37                         | 343.29                          |
| 32169     | 32169               | 0.00                         | 349.57                          |
| 32485     | 33918               | 4.46                         | 329.34                          |
| 32587     | 33234               | 2.11                         | 328.20                          |
| 33234     | 33234               | 0.00                         | 332.13                          |
| 33278     | 33234               | 2.07                         | 327.93                          |
| 33918     | 33918               | 0.00                         | 330.57                          |
| 34747     | 34747               | 0.00                         | 344.68                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Dwarf pine oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30204-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Dwarf pine oil; Oleum pini pumilionis

### Special notes

When selecting the *Dwarf pine oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Dwarf pine oil            | 9      | 7      | 96     |

## Second-stage model

For differentiation of the substance/substance group *Dwarf pine oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Dwarf pine oil*:

| Supplier | Substance      | Batch            | Sample ID | Spectra | Certificate |
|----------|----------------|------------------|-----------|---------|-------------|
| Caelo    | Dwarf pine oil | 11375614         | 31189     | 40      | 20120102    |
| Caelo    | Dwarf pine oil | 16114705         | 33266     | 40      | 20160420    |
| Caelo    | Dwarf pine oil | 16114706         | 33282     | 40      | 20160420    |
| Caelo    | Dwarf pine oil | 172158           | 33679     | 40      | 20170807*   |
| Caelo    | Dwarf pine oil | 20002366         | 35022     | 40      | 20200728*   |
| Euro OTC | Dwarf pine oil | 1210024-02       | 31529     | 60      | 20140806    |
| Euro OTC | Dwarf pine oil | 1511014          | 31818     | 60      | 20151214*   |
| Fagron   | Dwarf pine oil | 12C29-N17        | 31184     | 40      | 1403167     |
| Fagron   | Dwarf pine oil | 15A05-B06-322743 | 33276     | 40      | 20150126    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 400 spectra of 9 reference samples from the substance/substance group *Dwarf pine oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 539 spectra from a total of 1298 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 280 spectra of 7 reference samples from the substance/substance group *Dwarf pine oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 7 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch   | Sample ID | Spectra |
|----------|----------------|---------|-----------|---------|
| Caelo    | Dwarf pine oil | 192716  | 34717     | 40      |
| Euro OTC | Dwarf pine oil | 1606003 | 32470     | 40      |
| Euro OTC | Dwarf pine oil | 1703031 | 33235     | 40      |
| Euro OTC | Dwarf pine oil | 1801001 | 33931     | 40      |
| Euro OTC | Dwarf pine oil | 1807002 | 34194     | 40      |
| Euro OTC | Dwarf pine oil | 1905020 | 34491     | 40      |
| Euro OTC | Dwarf pine oil | 2004017 | 35065     | 40      |

- 91 211 spectra from a total of 2009 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 304 spectra from 151 *Apo-Ident* customers from 101 batches from the substance/substance group *Dwarf pine oil*.
- Among them are spectra of independent samples from 95 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance      | Batch      | Spectra |
|---------------------|----------------|------------|---------|
| AHD                 | Dwarf pine oil | 17364206   | 1       |
| Caelo               | Dwarf pine oil | 192716001  | 3       |
| Caelo               | Dwarf pine oil | 18309501   | 7       |
| Alliance            | Dwarf pine oil | 11375601   | 1       |
| Alliance Healthcare | Dwarf pine oil | 1215802    | 1       |
| Apo-Ident/Phoenix   | Dwarf pine oil | 17364201   | 1       |
| Caelo               | Dwarf pine oil | 12239904   | 3       |
| Caelo               | Dwarf pine oil | 1137575601 | 1       |
| Caelo               | Dwarf pine oil | 23021301   | 1       |
| Caelo               | Dwarf pine oil | 11375608   | 1       |
| Caelo               | Dwarf pine oil | 11375613   | 3       |
| Caelo               | Dwarf pine oil | 13084309   | 1       |
| Caelo               | Dwarf pine oil | 21051403   | 1       |
| Caelo               | Dwarf pine oil | 14083301   | 7       |
| Caelo               | Dwarf pine oil | 14083311   | 1       |
| Caelo               | Dwarf pine oil | 14083315   | 1       |
| Caelo               | Dwarf pine oil | 15239202   | 2       |
| Caelo               | Dwarf pine oil | 15375502   | 3       |
| Caelo               | Dwarf pine oil | 15375505   | 4       |
| Caelo               | Dwarf pine oil | 621H23     | 1       |
| Caelo               | Dwarf pine oil | 24061712   | 1       |
| Caelo               | Dwarf pine oil | 17215802   | 8       |
| Caelo               | Dwarf pine oil | 17219801   | 1       |
| Caelo               | Dwarf pine oil | 17215803   | 1       |
| Caelo               | Dwarf pine oil | 17364201   | 5       |
| Caelo               | Dwarf pine oil | 17364202   | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caelo                      | Dwarf pine oil   | 17364206         | 8              |
| Caelo                      | Dwarf pine oil   | 5011903          | 1              |
| Caelo                      | Dwarf pine oil   | 183096505        | 1              |
| Caelo                      | Dwarf pine oil   | 18309506         | 1              |
| Caelo                      | Dwarf pine oil   | 17012014         | 2              |
| Caelo                      | Dwarf pine oil   | 153239202        | 1              |
| Caelo                      | Dwarf pine oil   | 16114701         | 8              |
| Caelo                      | Dwarf pine oil   | 1792977          | 2              |
| Caelo                      | Dwarf pine oil   | 11375601         | 9              |
| Caelo                      | Dwarf pine oil   | 37(18309501)     | 1              |
| Caelo                      | Dwarf pine oil   | 12239903         | 2              |
| Caelo                      | Dwarf pine oil   | 17215801         | 16             |
| Caelo                      | Dwarf pine oil   | 17364203         | 1              |
| Caelo                      | Dwarf pine oil   | 15375501         | 10             |
| Caelo                      | Dwarf pine oil   | 18309505         | 5              |
| Caelo                      | Dwarf pine oil   | 15239201         | 4              |
| Caelo                      | Dwarf pine oil   | 15239203         | 1              |
| Caelo                      | Dwarf pine oil   | 1606003-01       | 1              |
| Caelo                      | Dwarf pine oil   | 1703031-01       | 1              |
| Caelo                      | Dwarf pine oil   | 18309502         | 5              |
| Caelo                      | Dwarf pine oil   | 16114702         | 3              |
| Caelo                      | Dwarf pine oil   | 12239902         | 2              |
| Caelo                      | Dwarf pine oil   | 14083310         | 1              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 17364206         | 1              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 18309502         | 4              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 17364202         | 2              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 18309501         | 5              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 18309505         | 1              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 18309507         | 1              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 18309506         | 2              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 192716004        | 3              |
| Caesar & Loretz GmbH       | Dwarf pine oil   | 192716001        | 2              |
| Caesar & Loretz GmbH/ P... | Dwarf pine oil   | 192716004        | 1              |
| Caesar & Loretz GmbH/Gehe  | Dwarf pine oil   | 192716001        | 1              |
| Caesar & Loretz GmbH/Je... | Dwarf pine oil   | 18309505         | 2              |
| Caesar & Loretz GmbH/No... | Dwarf pine oil   | 1801001-01       | 1              |
| Caesar & Loretz GmbH/No... | Dwarf pine oil   | 1905020-01       | 1              |
| Caesar & Loretz GmbH/Sa... | Dwarf pine oil   | 18309501         | 1              |
| Caesar & Loretz GmbH/Sa... | Dwarf pine oil   | 192716001        | 1              |
| Caesar & Loretz GmbH/Sa... | Dwarf pine oil   | 192716004        | 1              |
| Cealo                      | Dwarf pine oil   | 18309502         | 1              |
| Cealo/ Anzag               | Dwarf pine oil   | 16114706         | 1              |
| Euro OTC                   | Dwarf pine oil   | 1703031-01       | 1              |
| Euro OTC                   | Dwarf pine oil   | 1511014-01       | 4              |
| Euro OTC                   | Dwarf pine oil   | 1411021-01       | 5              |
| Euro OTC                   | Dwarf pine oil   | 98764            | 1              |
| Euro OTC                   | Dwarf pine oil   | 1606003-01       | 1              |
| Euro OTC                   | Dwarf pine oil   | 1801001-01       | 1              |
| Fagron                     | Dwarf pine oil   | 11G18-N10        | 2              |
| Fagron                     | Dwarf pine oil   | 27111207         | 1              |
| Fagron                     | Dwarf pine oil   | 12G12-N11        | 2              |
| Fagron                     | Dwarf pine oil   | 12G12N11         | 1              |
| Fagron                     | Dwarf pine oil   | 13C04-N02        | 7              |
| Fagron                     | Dwarf pine oil   | 13E06-N04        | 5              |
| Fagron                     | Dwarf pine oil   | 736339           | 3              |
| Fagron                     | Dwarf pine oil   | 12-K06-N06       | 1              |
| Fagron                     | Dwarf pine oil   | 12K06-N06        | 1              |
| Fagron                     | Dwarf pine oil   | 15051509         | 1              |
| Fagron                     | Dwarf pine oil   | 1606003-01       | 1              |
| Fagron                     | Dwarf pine oil   | 15A05-B06-305065 | 1              |

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| Supplier                | Substance      | Batch              | Spectra |
|-------------------------|----------------|--------------------|---------|
| Fagron                  | Dwarf pine oil | 13H28-N04-0008/370 | 1       |
| Fagron                  | Dwarf pine oil | 15A05B06           | 1       |
| Fagron                  | Dwarf pine oil | 15A05-B06-305064   | 1       |
| Fagron                  | Dwarf pine oil | 13H28-N04          | 3       |
| Fagron                  | Dwarf pine oil | 14D14-B01          | 5       |
| Fagron                  | Dwarf pine oil | 15A05-B06          | 5       |
| Fargo                   | Dwarf pine oil | 13C04-N02          | 1       |
| Fiebig                  | Dwarf pine oil | 18309502           | 3       |
| Franz GmbH/Phönix       | Dwarf pine oil | 12C29-N17          | 2       |
| Frey & Lau GmbH/Phoenix | Dwarf pine oil | 13C04-N020133/265  | 1       |
| Gatt-Koller             | Dwarf pine oil | 1701129            | 1       |
| Hedinger/Phönix         | Dwarf pine oil | 1801001-01         | 1       |
| Ichthyol-Gesellschaft   | Dwarf pine oil | 1610280P/15375501  | 1       |
| Kögl                    | Dwarf pine oil | 37202163916        | 1       |
| Kögl                    | Dwarf pine oil | 484101172017       | 1       |
| Kögl                    | Dwarf pine oil | 484101170517       | 1       |
| Nachprüfung 19.9.17.    | Dwarf pine oil | 15A05-B06-322744   | 1       |
| Caelo                   | Dwarf pine oil | 14083303           | 1       |
| Noweda/EuRoh            | Dwarf pine oil | 160600301          | 1       |
| Phoenix                 | Dwarf pine oil | 17364206           | 1       |
| Phoenix                 | Dwarf pine oil | 18309501           | 1       |
| Phönix                  | Dwarf pine oil | 11/19-N12          | 1       |
| Phönix                  | Dwarf pine oil | 17215802           | 3       |
| Phönix 08.11.2019       | Dwarf pine oil | 18309502           | 1       |
| Fagron                  | Dwarf pine oil | 13C04-N02          | 1       |
| primavera               | Dwarf pine oil | 149B26             | 1       |
| PVL                     | Dwarf pine oil | 1360313            | 1       |
| Caelo                   | Dwarf pine oil | 14083302           | 3       |
| Taoasis                 | Dwarf pine oil | 30985-106654       | 1       |
| Taoasis                 | Dwarf pine oil | 30985-111105       | 2       |
| Taoasis                 | Dwarf pine oil | 30985-110461       | 1       |
| Taoasis                 | Dwarf pine oil | 33347-112503       | 1       |
| Taoasis                 | Dwarf pine oil | 586/116867         | 1       |
| Taoasis                 | Dwarf pine oil | 586-116867         | 1       |
| Taoasis                 | Dwarf pine oil | 25599-117839       | 1       |
| Taoasis                 | Dwarf pine oil | 25599-118829       | 1       |
| Taoasis                 | Dwarf pine oil | 8783-125163        | 1       |
| Taoasis                 | Dwarf pine oil | 1148-148           | 1       |
| Taoasis                 | Dwarf pine oil | 2622-7698          | 1       |
| Taoasis GmbH            | Dwarf pine oil | 30985-110461       | 1       |
| VDL; 7.50EUR; 28.9.2015 | Dwarf pine oil | 15239201           | 1       |
| Caelo                   | Dwarf pine oil | 11375614           | 3       |
| Caelo                   | Dwarf pine oil | 16114705           | 15      |
| Caelo                   | Dwarf pine oil | 16114706           | 6       |
| Euro OTC                | Dwarf pine oil | 1210024-02         | 1       |
| Fagron                  | Dwarf pine oil | 12C29-N17          | 1       |
| Fritz Schiele           | Dwarf pine oil |                    | 1       |

- 241 059 spectra from 1121 *Apo-Ident* customers from a total of 46 906 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Dwarf pine oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all

relevant spectra of the various substances were compared with *Dwarf pine oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 400           | 0              | 63 539        |
| <b>Type B</b> | 0              | 280           | 0              | 91 211        |
| <b>Type C</b> | 0              | 302           | 2              | 241 059       |

The substance/substance group *Dwarf pine oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.8571 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.3421 % (> 98.3553 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Dwarf pine oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance           | Distance in main model | Distance in second-stage model |
|---------------------|------------------------|--------------------------------|
| Pine silvestris oil | 23.16                  | —                              |
| Bergamot oil        | 25.14                  | —                              |
| Juniper oil         | 25.72                  | —                              |
| Angelica root oil   | 26.15                  | —                              |
| Bitter orange oil   | 26.72                  | —                              |
| Spearmint oil       | 32.00                  | —                              |
| Caraway oil         | 32.22                  | —                              |
| Grapefruit oil      | 32.24                  | —                              |
| Citric oil          | 38.76                  | —                              |
| Eucalyptus oil      | 46.72                  | —                              |
| Cedar wood oil      | 52.07                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Dwarf pine oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested

reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31184     | 31184               | 0.00                         | 30.55                           |
| 31189     | 31184               | 4.58                         | 31.70                           |
| 31529     | 31818               | 1.90                         | 25.95                           |
| 31818     | 31818               | 0.00                         | 26.34                           |
| 33266     | 31818               | 5.40                         | 28.74                           |
| 33276     | 31184               | 7.37                         | 30.66                           |
| 33282     | 33679               | 5.82                         | 30.37                           |
| 33679     | 33679               | 0.00                         | 31.75                           |
| 35022     | 35022               | 0.00                         | 31.31                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Ethanol 90%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30379-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Ethanol 90%; Ethanolum 90% rein / vergällt

### Special notes

When selecting the *Ethanol 90%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Ethanol 90%               | 6      | 8      | 438    |

## Second-stage model

For differentiation of the substance/substance group *Ethanol 90%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Ethanol 90%*:

| Supplier | Substance   | Batch     | Sample ID | Spectra | Certificate |
|----------|-------------|-----------|-----------|---------|-------------|
| apomix   | Ethanol 90% | 25A040913 | 31056     | 40      | 1404654     |
| apomix   | Ethanol 90% | 03A290419 | 34512     | 40      | 20190429    |
| Caelo    | Ethanol 90% | 14052802  | 31392     | 40      | 20140225    |
| Caelo    | Ethanol 90% | 163144    | 33102     | 40      | 20161209*   |
| Caelo    | Ethanol 90% | 183064    | 34322     | 40      | 20181218*   |
| Caelo    | Ethanol 90% | 191965    | 34737     | 40      | 20190815*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 240 spectra of 6 reference samples from the substance/substance group *Ethanol 90%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 699 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 320 spectra of 8 reference samples from the substance/substance group *Ethanol 90%*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 8 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier | Substance   | Batch  | Sample ID | Spectra |
|----------|-------------|--------|-----------|---------|
| Caelo    | Ethanol 90% | 161944 | 32324     | 40      |
| Caelo    | Ethanol 90% | 163142 | 33103     | 40      |
| Caelo    | Ethanol 90% | 163143 | 33104     | 40      |
| Caelo    | Ethanol 90% | 171741 | 33714     | 40      |
| Caelo    | Ethanol 90% | 171739 | 33715     | 40      |
| Caelo    | Ethanol 90% | 190983 | 34628     | 40      |
| Caelo    | Ethanol 90% | 191966 | 34735     | 40      |
| Caelo    | Ethanol 90% | 191964 | 34736     | 40      |

- 91 171 spectra from a total of 2008 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1191 spectra from 425 *Apo-Ident* customers from 450 batches from the substance/substance group *Ethanol 90%*.
- Among them are spectra of independent samples from 438 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance   | Batch       | Spectra |
|---------------------|-------------|-------------|---------|
| — (Retest)          | Ethanol 90% | H180620A    | 1       |
| Caelo               | Ethanol 90% | 19196401    | 16      |
| Adler               | Ethanol 90% | 4618Q-03042 | 1       |
| Adler               | Ethanol 90% | 5018E-03042 | 1       |
| AHD                 | Ethanol 90% | 16314401    | 1       |
| AHD/apomix          | Ethanol 90% | 2A110319    | 1       |
| Caelo               | Ethanol 90% | 19098201    | 5       |
| Caelo               | Ethanol 90% | 15442702    | 9       |
| Alliance Healthcare | Ethanol 90% | 20A030717   | 1       |
| Alliance Healthcare | Ethanol 90% | 18089801    | 1       |
| Alliance Healthcare | Ethanol 90% | 19043701    | 2       |
| Alliance Healthcare | Ethanol 90% | 19196601    | 1       |
| Alte Apo Defektur   | Ethanol 90% | 3318M-03019 | 1       |
| Alte Apo Defektur   | Ethanol 90% | 119M-02303  | 1       |
| Alte Apo Defektur   | Ethanol 90% | 1120M-02303 | 1       |
| Alte Apotheke       | Ethanol 90% | 4716E-03042 | 1       |
| Anzag 06.10.12      | Ethanol 90% | 25A290812   | 1       |
| Apo Ident/ Noweda   | Ethanol 90% | 18200201    | 1       |
| ApoAmKlini          | Ethanol 90% | 918Q-02303  | 1       |
| apomix              | Ethanol 90% | 15A090512   | 1       |
| apomix              | Ethanol 90% | 8A170215    | 1       |
| apomix              | Ethanol 90% | 7A170215    | 1       |
| apomix              | Ethanol 90% | 18A080615   | 1       |
| apomix              | Ethanol 90% | 45A261015   | 1       |
| apomix              | Ethanol 90% | 17A200616   | 1       |
| apomix              | Ethanol 90% | 7A200317    | 1       |
| apomix              | Ethanol 90% | 39A281116   | 1       |
| apomix              | Ethanol 90% | 26A160817   | 1       |
| apomix              | Ethanol 90% | 17A290517   | 1       |
| apomix              | Ethanol 90% | 30A041017   | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| apomix                     | Ethanol 90%      | 35A061117    | 1              |
| apomix                     | Ethanol 90%      | 6A310718     | 1              |
| apomix                     | Ethanol 90%      | 6a310718     | 1              |
| apomix                     | Ethanol 90%      | 1a140119     | 1              |
| apomix                     | Ethanol 90%      | 3a290419     | 1              |
| apomix                     | Ethanol 90%      | 2A110319     | 1              |
| apomix                     | Ethanol 90%      | 3A290419     | 1              |
| apomix                     | Ethanol 90%      | 6A240420     | 1              |
| Apomix                     | Ethanol 90%      | 46A071215    | 1              |
| Apomix                     | Ethanol 90%      | 21A110416    | 1              |
| Apomix                     | Ethanol 90%      | 39A281116    | 1              |
| Apomix                     | Ethanol 90%      | 37A071116    | 1              |
| Apomix                     | Ethanol 90%      | 8A200317     | 1              |
| Apomix                     | Ethanol 90%      | 11A150517    | 1              |
| Apomix                     | Ethanol 90%      | 19A120617    | 1              |
| Apomix                     | Ethanol 90%      | 12A150517    | 1              |
| Apomix                     | Ethanol 90%      | 34A231017    | 1              |
| Apomix                     | Ethanol 90%      | 2A070518     | 1              |
| Apomix                     | Ethanol 90%      | 4A280618     | 1              |
| Apomix                     | Ethanol 90%      | 9A240417     | 1              |
| Apomix                     | Ethanol 90%      | 3A290419     | 1              |
| Apomix                     | Ethanol 90%      | 7A121119     | 1              |
| Apomix                     | Ethanol 90%      | 32A141211    | 1              |
| Apomix                     | Ethanol 90%      | 35A211112    | 1              |
| Apomix                     | Ethanol 90%      | 37A101212    | 1              |
| Apomix                     | Ethanol 90%      | 12A150513    | 1              |
| Apomix                     | Ethanol 90%      | 21A310713    | 1              |
| Apomix                     | Ethanol 90%      | 2A130114     | 1              |
| Apomix                     | Ethanol 90%      | 14A120514    | 1              |
| Apomix                     | Ethanol 90%      | 37A021214    | 1              |
| apomix PKH GmbH Halle      | Ethanol 90%      | 30A310815    | 1              |
| Apomix / Alliance Healt... | Ethanol 90%      | 13A170516    | 1              |
| Apomix / Alliance Healt... | Ethanol 90%      | 5A200217     | 1              |
| Apomix / Gehe              | Ethanol 90%      | 5A300320     | 1              |
| Apomix / Hainbuchen - A... | Ethanol 90%      | 2A090320     | 6              |
| Apomix / Noweda            | Ethanol 90%      | 8A061118     | 1              |
| Apomix / Noweda            | Ethanol 90%      | 4A300320     | 1              |
| Apomix / Phoenix           | Ethanol 90%      | 47A071215    | 1              |
| Apomix / Phoenix           | Ethanol 90%      | 5A150216     | 1              |
| Apomix / Phoenix           | Ethanol 90%      | 2040030717   | 1              |
| Apomix / Phoenix           | Ethanol 90%      | 3A060618     | 1              |
| Apomix / Phönix            | Ethanol 90%      | 5A130214     | 1              |
| Apomix PKH                 | Ethanol 90%      | 7A121119     | 1              |
| apomix,Gehe 08.07.2019     | Ethanol 90%      | 8A061118     | 1              |
| Apomix/ Alliance           | Ethanol 90%      | 4A280618     | 1              |
| Apomix/ Noweda             | Ethanol 90%      | 6A310718     | 1              |
| Apomix/Fiebig              | Ethanol 90%      | 3A290419     | 1              |
| Apomix/Kehr                | Ethanol 90%      | 8A200317     | 1              |
| Apomix/Noweda              | Ethanol 90%      | 25A160817    | 1              |
| Apomix/Phoenix             | Ethanol 90%      | 2A070518     | 1              |
| Apomix/Phoenix/Noweda      | Ethanol 90%      | 5A16018      | 1              |
| apomix/phönix              | Ethanol 90%      | 173060003    | 1              |
| Apomix/Phönix              | Ethanol 90%      | 40A201117    | 1              |
| Apomix/Phönix              | Ethanol 90%      | 16A210610    | 1              |
| Apomix/PKH Halle/Phönix    | Ethanol 90%      | 5A160718     | 1              |
| Apomix/PKH Halle/Sanacorp  | Ethanol 90%      | 38A201117    | 1              |
| Apomix/PKH Halle/Sanacorp  | Ethanol 90%      | 8A061118     | 1              |
| apomix/Sanacorp            | Ethanol 90%      | 38A201117    | 1              |
| Apotärze                   | Ethanol 90%      | 4513M-02303  | 1              |
| Apotärze                   | Ethanol 90%      | 4414E-03042  | 1              |

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| <b>Supplier</b>    | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------|------------------|--------------|----------------|
| Apotärze/Zentrum   | Ethanol 90%      | 10092013-D   | 1              |
| Apotheke           | Ethanol 90%      | 3116Q-03042  | 1              |
| Audor Pharma       | Ethanol 90%      | 1614E-03042  | 1              |
| Behlen/Phönix      | Ethanol 90%      | 1410T1300816 | 1              |
| Beiersdorf AG      | Ethanol 90%      | 18306202     | 1              |
| Beiersdorf/Phoenix | Ethanol 90%      | 16314303     | 1              |
| bison              | Ethanol 90%      | 616H2        | 1              |
| Brinn- Holtz       | Ethanol 90%      | 1258-06/17   | 1              |
| Brinn-Holtz        | Ethanol 90%      | 190615       | 2              |
| Caelo              | Ethanol 90%      | 15010502     | 1              |
| Caelo              | Ethanol 90%      | 15014002     | 9              |
| Caelo              | Ethanol 90%      | 15010601     | 1              |
| Caelo              | Ethanol 90%      | 15150701     | 7              |
| Caelo              | Ethanol 90%      | 15328201     | 8              |
| Caelo              | Ethanol 90%      | 15219501     | 3              |
| Caelo              | Ethanol 90%      | 15328301     | 15             |
| Caelo              | Ethanol 90%      | 15328202     | 2              |
| Caelo              | Ethanol 90%      | 15442701     | 2              |
| Caelo              | Ethanol 90%      | 15442602     | 3              |
| Caelo              | Ethanol 90%      | 15442603     | 2              |
| Caelo              | Ethanol 90%      | 14122202     | 1              |
| Caelo              | Ethanol 90%      | 15442801     | 5              |
| Caelo              | Ethanol 90%      | 9A270416     | 1              |
| Caelo              | Ethanol 90%      | 15442703     | 3              |
| Caelo              | Ethanol 90%      | 16107002     | 1              |
| Caelo              | Ethanol 90%      | 16106802     | 5              |
| Caelo              | Ethanol 90%      | 16107003     | 4              |
| Caelo              | Ethanol 90%      | 16194501     | 6              |
| Caelo              | Ethanol 90%      | 16106801     | 6              |
| Caelo              | Ethanol 90%      | 16194401     | 1              |
| Caelo              | Ethanol 90%      | 16194402     | 2              |
| Caelo              | Ethanol 90%      | 16106803     | 4              |
| Caelo              | Ethanol 90%      | 16194701     | 6              |
| Caelo              | Ethanol 90%      | 16314201     | 4              |
| Caelo              | Ethanol 90%      | 16314401     | 3              |
| Caelo              | Ethanol 90%      | 16314302     | 9              |
| Caelo              | Ethanol 90%      | 42A151216    | 1              |
| Caelo              | Ethanol 90%      | 16314301     | 7              |
| Caelo              | Ethanol 90%      | 17047804     | 2              |
| Caelo              | Ethanol 90%      | 17048004     | 3              |
| Caelo              | Ethanol 90%      | 17173902     | 1              |
| Caelo              | Ethanol 90%      | 17173903     | 5              |
| Caelo              | Ethanol 90%      | 17173901     | 1              |
| Caelo              | Ethanol 90%      | 17174101     | 6              |
| Caelo              | Ethanol 90%      | 17206401     | 5              |
| Caelo              | Ethanol 90%      | 17174102     | 9              |
| Caelo              | Ethanol 90%      | 17306001     | 5              |
| Caelo              | Ethanol 90%      | 17174103     | 4              |
| Caelo              | Ethanol 90%      | 17306301     | 14             |
| Caelo              | Ethanol 90%      | 17306003     | 7              |
| Caelo              | Ethanol 90%      | 23051805     | 1              |
| Caelo              | Ethanol 90%      | 18089902     | 21             |
| Caelo              | Ethanol 90%      | 18200101     | 6              |
| Caelo              | Ethanol 90%      | 18200201     | 11             |
| Caelo              | Ethanol 90%      | 18200203     | 14             |
| Caelo              | Ethanol 90%      | 18306302     | 2              |
| Caelo              | Ethanol 90%      | 19043802     | 5              |
| Caelo              | Ethanol 90%      | 19098202     | 22             |
| Caelo              | Ethanol 90%      | 19098301     | 5              |
| Caelo              | Ethanol 90%      | 19196501     | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Ethanol 90%      | 1916402      | 1              |
| Caelo           | Ethanol 90%      | 1919640      | 1              |
| Caelo           | Ethanol 90%      | 1919641      | 1              |
| Caelo           | Ethanol 90%      | 19196601     | 2              |
| Caelo           | Ethanol 90%      | 20000567001  | 2              |
| Caelo           | Ethanol 90%      | 11329304     | 1              |
| Caelo           | Ethanol 90%      | 12068202     | 1              |
| Caelo           | Ethanol 90%      | 12068301     | 1              |
| Caelo           | Ethanol 90%      | 12275501     | 2              |
| Caelo           | Ethanol 90%      | 12355601     | 4              |
| Caelo           | Ethanol 90%      | 12275403     | 1              |
| Caelo           | Ethanol 90%      | 13019601     | 1              |
| Caelo           | Ethanol 90%      | 13019701     | 2              |
| Caelo           | Ethanol 90%      | 13019602     | 2              |
| Caelo           | Ethanol 90%      | 2413Q-03042  | 1              |
| Caelo           | Ethanol 90%      | 13085901     | 4              |
| Caelo           | Ethanol 90%      | 13085801     | 1              |
| Caelo           | Ethanol 90%      | 13086001     | 4              |
| Caelo           | Ethanol 90%      | 13160501     | 2              |
| Caelo           | Ethanol 90%      | 13086002     | 1              |
| Caelo           | Ethanol 90%      | 13290202     | 2              |
| Caelo           | Ethanol 90%      | 13160703     | 2              |
| Caelo           | Ethanol 90%      | 13160701     | 3              |
| Caelo           | Ethanol 90%      | 13399605     | 4              |
| Caelo           | Ethanol 90%      | 13399801     | 1              |
| Caelo           | Ethanol 90%      | 814E-02303   | 1              |
| Caelo           | Ethanol 90%      | 5A130214     | 1              |
| Caelo           | Ethanol 90%      | 14027502     | 1              |
| Caelo           | Ethanol 90%      | 14027302     | 1              |
| Caelo           | Ethanol 90%      | 14027301     | 1              |
| Caelo           | Ethanol 90%      | 14027402     | 1              |
| Caelo           | Ethanol 90%      | 14027305     | 1              |
| Caelo           | Ethanol 90%      | 14122201     | 5              |
| Caelo           | Ethanol 90%      | 5209A-02303  | 1              |
| Caelo           | Ethanol 90%      | 14122302     | 4              |
| Caelo           | Ethanol 90%      | 14208901     | 3              |
| Caelo           | Ethanol 90%      | 14208702     | 2              |
| Caelo           | Ethanol 90%      | 21105102     | 1              |
| Caelo           | Ethanol 90%      | 14208802     | 4              |
| Caelo           | Ethanol 90%      | 915Q-02303   | 1              |
| Caelo           | Ethanol 90%      | 1915L-02303  | 1              |
| Caelo           | Ethanol 90%      | 15010602     | 6              |
| Caelo           | Ethanol 90%      | 15014001     | 1              |
| Caelo           | Ethanol 90%      | 2515A-03042  | 1              |
| Caelo           | Ethanol 90%      | 15442601     | 4              |
| Caelo           | Ethanol 90%      | 1616902      | 1              |
| Caelo           | Ethanol 90%      | 14027303     | 2              |
| Caelo           | Ethanol 90%      | 18200202     | 12             |
| Caelo           | Ethanol 90%      | 14027501     | 2              |
| Caelo           | Ethanol 90%      | 14122101     | 2              |
| Caelo           | Ethanol 90%      | 17174002     | 4              |
| Caelo           | Ethanol 90%      | 19096202     | 1              |
| Caelo           | Ethanol 90%      | 13290401     | 2              |
| Caelo           | Ethanol 90%      | 12275402     | 1              |
| Caelo           | Ethanol 90%      | 16194702     | 8              |
| Caelo           | Ethanol 90%      | 16314303     | 2              |
| Caelo           | Ethanol 90%      | 15150704     | 4              |
| Caelo           | Ethanol 90%      | 20002785001  | 4              |
| Caelo           | Ethanol 90%      | 12355501     | 2              |
| Caelo           | Ethanol 90%      | 13160601     | 4              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Ethanol 90%      | 17048002     | 6              |
| Caelo           | Ethanol 90%      | 14052601     | 4              |
| Caelo           | Ethanol 90%      | 15010504     | 1              |
| Caelo           | Ethanol 90%      | 14208801     | 5              |
| Caelo           | Ethanol 90%      | 15073203     | 2              |
| Caelo           | Ethanol 90%      | 20002786002  | 5              |
| Caelo           | Ethanol 90%      | 18306401     | 9              |
| Caelo           | Ethanol 90%      | 19043701     | 3              |
| Caelo           | Ethanol 90%      | 16092001     | 1              |
| Caelo           | Ethanol 90%      | 1714102      | 2              |
| Caelo           | Ethanol 90%      | 806890       | 1              |
| Caelo           | Ethanol 90%      | 1806301      | 1              |
| Caelo           | Ethanol 90%      | 14060201     | 7              |
| Caelo           | Ethanol 90%      | 15442502     | 2              |
| Caelo           | Ethanol 90%      | 19043801     | 2              |
| Caelo           | Ethanol 90%      | 20000569002  | 1              |
| Caelo           | Ethanol 90%      | 16106902     | 1              |
| Caelo           | Ethanol 90%      | 16194601     | 5              |
| Caelo           | Ethanol 90%      | 16314202     | 2              |
| Caelo           | Ethanol 90%      | 17047902     | 4              |
| Caelo           | Ethanol 90%      | 17174001     | 1              |
| Caelo           | Ethanol 90%      | 17306202     | 7              |
| Caelo           | Ethanol 90%      | 20002786001  | 1              |
| Caelo           | Ethanol 90%      | 10250602     | 1              |
| Caelo           | Ethanol 90%      | 713E-02303   | 1              |
| Caelo           | Ethanol 90%      | 18089801     | 5              |
| Caelo           | Ethanol 90%      | Defektur     | 1              |
| Caelo           | Ethanol 90%      | 15442704     | 2              |
| Caelo           | Ethanol 90%      | 16106804     | 1              |
| Caelo           | Ethanol 90%      | 16314403     | 1              |
| Caelo           | Ethanol 90%      | 17306205     | 7              |
| Caelo           | Ethanol 90%      | 18306203     | 5              |
| Caelo           | Ethanol 90%      | 12275301     | 1              |
| Caelo           | Ethanol 90%      | 14060301     | 3              |
| Caelo           | Ethanol 90%      | 14122401     | 4              |
| Caelo           | Ethanol 90%      | 14060302     | 1              |
| Caelo           | Ethanol 90%      | 11329402     | 1              |
| Caelo           | Ethanol 90%      | 13290203     | 1              |
| Caelo           | Ethanol 90%      | 15073201     | 3              |
| Caelo           | Ethanol 90%      | 18306301     | 7              |
| Caelo           | Ethanol 90%      | 13399606     | 2              |
| Caelo           | Ethanol 90%      | 18306402     | 19             |
| Caelo           | Ethanol 90%      | 13290402     | 3              |
| Caelo           | Ethanol 90%      | 12A250315    | 1              |
| Caelo           | Ethanol 90%      | 15328401     | 3              |
| Caelo           | Ethanol 90%      | 17306002     | 5              |
| Caelo           | Ethanol 90%      | 17306203     | 2              |
| Caelo           | Ethanol 90%      | 20000563002  | 5              |
| Caelo           | Ethanol 90%      | 20002787002  | 1              |
| Caelo           | Ethanol 90%      | 10329402     | 1              |
| Caelo           | Ethanol 90%      | 12355401     | 3              |
| Caelo           | Ethanol 90%      | 14027401     | 4              |
| Caelo           | Ethanol 90%      | 15080301     | 5              |
| Caelo           | Ethanol 90%      | 200002786002 | 1              |
| Caelo           | Ethanol 90%      | 17306101     | 8              |
| Caelo           | Ethanol 90%      | 13019703     | 1              |
| Caelo           | Ethanol 90%      | 15219302     | 3              |
| Caelo           | Ethanol 90%      | 18089901     | 8              |
| Caelo           | Ethanol 90%      | 190982022    | 1              |
| Caelo           | Ethanol 90%      | 19098401     | 15             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caelo                      | Ethanol 90%      | 20000564001  | 7              |
| Caelo                      | Ethanol 90%      | 20004036001  | 1              |
| Caelo                      | Ethanol 90%      | 14052701     | 2              |
| Caelo                      | Ethanol 90%      | 14122303     | 1              |
| Caelo                      | Ethanol 90%      | 15010501     | 3              |
| Caelo                      | Ethanol 90%      | 15010503     | 1              |
| Caelo                      | Ethanol 90%      | 15150705     | 2              |
| Caelo                      | Ethanol 90%      | 16194403     | 7              |
| Caelo                      | Ethanol 90%      | 17047802     | 4              |
| Caelo                      | Ethanol 90%      | 17048001     | 8              |
| Caelo                      | Ethanol 90%      | 17306302     | 11             |
| Caelo                      | Ethanol 90%      | 17306004     | 2              |
| Caelo                      | Ethanol 90%      | 18306202     | 7              |
| Caelo                      | Ethanol 90%      | 19196402     | 4              |
| Caelo                      | Ethanol 90%      | 20000564002  | 5              |
| Caelo                      | Ethanol 90%      | 13290201     | 4              |
| Caelo                      | Ethanol 90%      | 814E-03042   | 1              |
| Caelo                      | Ethanol 90%      | 80933148     | 1              |
| Caelo                      | Ethanol 90%      | 5214E-02303  | 1              |
| Caelo                      | Ethanol 90%      | 18306201     | 9              |
| Caelo                      | Ethanol 90%      | 20000563001  | 11             |
| Caelo                      | Ethanol 90%      | 13290301     | 3              |
| Caelo                      | Ethanol 90%      | 13399604     | 1              |
| Caelo                      | Ethanol 90%      | 15080201     | 1              |
| Caelo                      | Ethanol 90%      | 1736101      | 1              |
| Caelo                      | Ethanol 90%      | 17048003     | 1              |
| Caelo                      | Ethanol 90%      | 18090001     | 17             |
| Caelo                      | Ethanol 90%      | 1908202      | 1              |
| Caelo                      | Ethanol 90%      | 5119E02303   | 1              |
| Caelo                      | Ethanol 90%      | 13399803     | 2              |
| Caelo                      | Ethanol 90%      | 13399701     | 2              |
| Caelo                      | Ethanol 90%      | 4717Q-02303  | 1              |
| Caelo                      | Ethanol 90%      | 13399601     | 1              |
| Caesar & Loretz            | Ethanol 90%      | 16194501     | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 18306301     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 18306202     | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 18306401     | 3              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 18090001     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19043701     | 3              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 18089901     | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19098201     | 4              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19043802     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19098401     | 9              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19043801     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19196402     | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19098301     | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19196501     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 19196601     | 2              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20000563001  | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20000563003  | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20000569001  | 3              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20000567001  | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20002787002  | 1              |
| Caesar & Loretz GmbH       | Ethanol 90%      | 20000564001  | 1              |
| Caesar & Loretz GmbH'      | Ethanol 90%      | 17306203     | 1              |
| Caesar & Loretz GmbH / ... | Ethanol 90%      | 14208801     | 1              |
| Caesar & Loretz GmbH / ... | Ethanol 90%      | 15014002     | 1              |
| Caesar & Loretz GmbH / ... | Ethanol 90%      | 18200201     | 1              |
| Caesar & Loretz GmbH / ... | Ethanol 90%      | 19196401     | 1              |
| Caesar & Loretz GmbH, 4... | Ethanol 90%      | 12068301     | 1              |

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| Supplier                   | Substance   | Batch         | Spectra |
|----------------------------|-------------|---------------|---------|
| Caesar & Loretz GmbH, 4... | Ethanol 90% | 12275402      | 1       |
| Caesar & Loretz GmbH, 4... | Ethanol 90% | 13290202      | 1       |
| Caesar & Loretz GmbH/Ph... | Ethanol 90% | 20000563001   | 1       |
| Caesar & Loretz GmbH'/P... | Ethanol 90% | 18306201      | 1       |
| Caesar & Loretz GmbH/Sa... | Ethanol 90% | AP210205-04   | 1       |
| Caesar & Loretz GmbH/Sa... | Ethanol 90% | 20002787002   | 1       |
| Caesar & Loretz Hilden     | Ethanol 90% | 18200203      | 1       |
| Caesar & Loretz Hilden     | Ethanol 90% | 19098202      | 1       |
| Cealo                      | Ethanol 90% | 18306301      | 1       |
| Ceasar & Loretz GmbH / ... | Ethanol 90% | 18200203      | 1       |
| Defektur                   | Ethanol 90% | 2115A-03042   | 1       |
| Defektur                   | Ethanol 90% | 3015M-03042   | 1       |
| Defektur                   | Ethanol 90% | 5015I-03042   | 1       |
| Defektur                   | Ethanol 90% | 1816A-03042   | 1       |
| Defektur                   | Ethanol 90% | 60616/50Hk    | 1       |
| Defektur                   | Ethanol 90% | 3216N-03042   | 1       |
| Defektur                   | Ethanol 90% | 4916E-03042   | 1       |
| Defektur                   | Ethanol 90% | H1917I03042   | 1       |
| Defektur                   | Ethanol 90% | 3517A-03042   | 1       |
| Defektur                   | Ethanol 90% | 1LP20190710   | 1       |
| Defektur                   | Ethanol 90% | 1715I-02303   | 1       |
| Defektur                   | Ethanol 90% | 26112012D01   | 1       |
| Defektur                   | Ethanol 90% | 4714E-03042   | 1       |
| DEFEKTUR Schwanen-Apoth... | Ethanol 90% | 170620-1      | 1       |
| Delta                      | Ethanol 90% | 17048003      | 1       |
| Doppeleiche Apotheke       | Ethanol 90% | 190411003     | 1       |
| Doppeleiche Apotheke       | Ethanol 90% | 190415002     | 1       |
| Doppeleiche Apotheke       | Ethanol 90% | 190729007     | 1       |
| Duburg- Apotheke           | Ethanol 90% | 1121A-02303   | 1       |
| Ebert & Jacobi             | Ethanol 90% | 17047902      | 1       |
| eigen                      | Ethanol 90% | 3119I-03042   | 1       |
| Eigen                      | Ethanol 90% | A041301       | 1       |
| Eigen                      | Ethanol 90% | 817Q-03042    | 1       |
| Eigen                      | Ethanol 90% | 4617E         | 1       |
| Eigen Apotheke             | Ethanol 90% | 3417E-03042   | 1       |
| Eigen/Apotärze             | Ethanol 90% | 4818Q-02303   | 1       |
| Eigen/Neue Apotheke        | Ethanol 90% | 4315I-02303   | 2       |
| eigene                     | Ethanol 90% | 518U-02303    | 1       |
| eigene                     | Ethanol 90% | 4918A-02303   | 1       |
| eigene                     | Ethanol 90% | 5218Q-02302   | 1       |
| eigene                     | Ethanol 90% | 1419A-02303   | 1       |
| eigene                     | Ethanol 90% | 4219M-02303   | 1       |
| eigene                     | Ethanol 90% | 4319A-02303   | 1       |
| eigene                     | Ethanol 90% | 120Q-02303    | 1       |
| eigene Herstellung         | Ethanol 90% | SP9025        | 1       |
| Eigene Herstellung         | Ethanol 90% | 4317A-02303   | 1       |
| Eigene Herstellung         | Ethanol 90% | SP9090        | 1       |
| Eigene Herstellung         | Ethanol 90% | SPV9024       | 1       |
| Eigenherstellung           | Ethanol 90% | 115Q-07057    | 1       |
| Eigenherstellung           | Ethanol 90% | 1515I-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 4211215       | 1       |
| Eigenherstellung           | Ethanol 90% | 416A-02303    | 1       |
| Eigenherstellung           | Ethanol 90% | 1716Q-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 3416E-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 217I-02303    | 1       |
| Eigenherstellung           | Ethanol 90% | 3917E-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 4718Q-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 1119E-02303   | 1       |
| Eigenherstellung           | Ethanol 90% | 14032019-0190 | 1       |
| Eigenherstellung           | Ethanol 90% | 1919Q-02303   | 1       |

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| Supplier                   | Substance   | Batch           | Spectra |
|----------------------------|-------------|-----------------|---------|
| Eigenherstellung           | Ethanol 90% | 4819E-02303     | 1       |
| Eigenherstellung           | Ethanol 90% | 1620I-02303     | 1       |
| Eigenherstellung           | Ethanol 90% | 4320M-02303     | 1       |
| Eigenherstellung           | Ethanol 90% | 821E-02303      | 1       |
| Eigenherstellung           | Ethanol 90% | 4161112         | 1       |
| Eigenherstellung           | Ethanol 90% | 1312I-07057     | 1       |
| Eigenherstellung           | Ethanol 90% | 1613A-07057     | 1       |
| Eigenherstellung           | Ethanol 90% | 4313Q-07057     | 1       |
| Eigenherstellung           | Ethanol 90% | 4733            | 1       |
| Eigenherstellung           | Ethanol 90% | 4713Q-07057     | 1       |
| Eigenherstellung           | Ethanol 90% | 514E-07057      | 1       |
| Eigenherstellung           | Ethanol 90% | 2614I-02303     | 1       |
| Eigenherstellung           | Ethanol 90% | 3416E-07057     | 1       |
| Eigenherstellung           | Ethanol 90% | 4414A-07057     | 1       |
| Eigenherstellung Hubert... | Ethanol 90% | 2014072222DF    | 1       |
| Engel/Engel                | Ethanol 90% | 4415A-07014     | 1       |
| Euro OTC                   | Ethanol 90% | 17174002        | 1       |
| Fagron                     | Ethanol 90% | 15442602        | 1       |
| Fagron                     | Ethanol 90% | 17306003        | 2       |
| Fagron                     | Ethanol 90% | 17306302        | 1       |
| Fagron                     | Ethanol 90% | 270614P1        | 1       |
| Fagron                     | Ethanol 90% | 14027303        | 1       |
| Fagron                     | Ethanol 90% | 16314201        | 3       |
| Fiebig                     | Ethanol 90% | 40A201117       | 1       |
| Caelo                      | Ethanol 90% | 812201517047901 | 1       |
| Galderma / Noweda          | Ethanol 90% | 16107001        | 1       |
| Gehe                       | Ethanol 90% | 15328301        | 1       |
| Gehe                       | Ethanol 90% | 16106901        | 1       |
| Gehe                       | Ethanol 90% | 15442801        | 1       |
| Gehe                       | Ethanol 90% | 17048002        | 1       |
| Gehe                       | Ethanol 90% | 17174102        | 1       |
| Gehe                       | Ethanol 90% | 3118I-02303     | 1       |
| Gehe                       | Ethanol 90% | 18089801        | 1       |
| Gehe                       | Ethanol 90% | 3A060618        | 1       |
| Gehe                       | Ethanol 90% | 18306201        | 1       |
| Gehe                       | Ethanol 90% | 19098201        | 1       |
| Gehe                       | Ethanol 90% | 14A180520       | 1       |
| Gehe                       | Ethanol 90% | 20000569001     | 1       |
| Gehe                       | Ethanol 90% | 12068201        | 1       |
| GEHE                       | Ethanol 90% | 28A110917       | 1       |
| GEHE                       | Ethanol 90% | 18200101        | 1       |
| GEHE                       | Ethanol 90% | 18090001        | 1       |
| Gehe / Apomix              | Ethanol 90% | 31a041017       | 1       |
| Gehe / Apomix              | Ethanol 90% | 5A160718        | 1       |
| GEHE 29.04.2014            | Ethanol 90% | 14027502        | 2       |
| Gehe amax                  | Ethanol 90% | 19196501        | 1       |
| Caelo                      | Ethanol 90% | 1260117         | 1       |
| Caelo                      | Ethanol 90% | 14052801        | 3       |
| Geilenkirchen              | Ethanol 90% | 15010501        | 1       |
| Germania Apo               | Ethanol 90% | 219060          | 1       |
| Goethe Apotheke            | Ethanol 90% | 519M-03042      | 1       |
| Gutenberg-Apotheke         | Ethanol 90% | Defektur        | 1       |
| Gutenberg-Apotheke         | Ethanol 90% | 140324001       | 1       |
| Gütte/Phönix               | Ethanol 90% | 20112013-M      | 1       |
| Hedinger                   | Ethanol 90% | 716020Be        | 1       |
| Henry Lamotte/Noweda       | Ethanol 90% | 10889901        | 1       |
| Herstellung                | Ethanol 90% | 110416P1        | 1       |
| Hirsch                     | Ethanol 90% | 5013Q-02303     | 2       |
| Hirsch                     | Ethanol 90% | 11233           | 1       |
| HirschApotheke             | Ethanol 90% | 10151-02303     | 1       |

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| Supplier                   | Substance   | Batch            | Spectra |
|----------------------------|-------------|------------------|---------|
| Hochhaus-Apotheke          | Ethanol 90% | 4514A-03042      | 1       |
| Hochhaus-Apotheke          | Ethanol 90% | 2616Q-03042      | 1       |
| Jenne                      | Ethanol 90% | 19098202         | 1       |
| Caelo                      | Ethanol 90% | 24000863         | 1       |
| Kastner                    | Ethanol 90% | 1314I-03042      | 1       |
| Kastner (eigen)            | Ethanol 90% | 1215I-02303      | 1       |
| Kastner (eigen)            | Ethanol 90% | 3114E-03042      | 1       |
| Kruppa                     | Ethanol 90% | 818H3            | 1       |
| KWST / KWST                | Ethanol 90% | 4118E-02303      | 1       |
| Libellen Apotheke          | Ethanol 90% | 1515Q-02303      | 1       |
| Löwen-Apotheke             | Ethanol 90% | 1218Q-03042      | 1       |
| Markt Apotheke             | Ethanol 90% | 4619M-02303      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-130216-1D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-160416-1D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-220716-1P      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-021116-3D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-030117-1Praxis | 1       |
| Martinus-Apotheke          | Ethanol 90% | A-160913-2D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-080114-1D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-040414-1D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-211014-1D      | 1       |
| Martinus-Apotheke          | Ethanol 90% | E-170215-1D      | 1       |
| Nachprüfung                | Ethanol 90% | 913Q-03042       | 1       |
| Noweda                     | Ethanol 90% | 15219302         | 1       |
| Noweda                     | Ethanol 90% | 15328301         | 1       |
| Noweda                     | Ethanol 90% | 15442602         | 1       |
| Noweda                     | Ethanol 90% | 15442603         | 1       |
| Noweda                     | Ethanol 90% | 16314302         | 1       |
| Noweda                     | Ethanol 90% | 18306402         | 1       |
| Noweda                     | Ethanol 90% | 13290203         | 1       |
| Noweda                     | Ethanol 90% | 10A170314        | 1       |
| Noweda / apomix            | Ethanol 90% | 1A090320         | 1       |
| Noweda / apomix            | Ethanol 90% | 11A300420        | 1       |
| Caelo                      | Ethanol 90% | 15073202         | 2       |
| Noweda/PKH Halle           | Ethanol 90% | 5A160718         | 1       |
| Phoenix                    | Ethanol 90% | 17047802         | 1       |
| Phoenix                    | Ethanol 90% | 3077             | 1       |
| Phoenix                    | Ethanol 90% | 1925681          | 2       |
| Phoenix                    | Ethanol 90% | 13019703         | 1       |
| Phoenix                    | Ethanol 90% | 13399802         | 1       |
| Phoenix 09.10.19 15,51EUR  | Ethanol 90% | 19098202         | 1       |
| Phoenix/Apomix             | Ethanol 90% | 5A300320         | 1       |
| Caelo                      | Ethanol 90% | 17047803         | 4       |
| Phonix                     | Ethanol 90% | 14052601         | 1       |
| Phönix                     | Ethanol 90% | 15442703         | 1       |
| Phönix                     | Ethanol 90% | 1694702          | 1       |
| Phönix                     | Ethanol 90% | 17306002         | 1       |
| Phönix                     | Ethanol 90% | 7A170918         | 1       |
| Phönix                     | Ethanol 90% | 19098401         | 1       |
| Phönix                     | Ethanol 90% | 13399604         | 1       |
| Phönix/Beiersdorf          | Ethanol 90% | 18089901         | 1       |
| Phönix/Cealo               | Ethanol 90% | 18090001         | 1       |
| pkh                        | Ethanol 90% | 2a110319         | 1       |
| PKH                        | Ethanol 90% | 23A180615        | 1       |
| PKH GmbH/ Alliance Heal... | Ethanol 90% | 11A150517        | 2       |
| PKH Halle                  | Ethanol 90% | 9A270416         | 1       |
| PKH Halle                  | Ethanol 90% | 1A040418         | 1       |
| PKH Halle/Noweda           | Ethanol 90% | 4A290114         | 2       |
| PKH Halle/Sanacorp         | Ethanol 90% | 1A040418         | 1       |
| Post-Apotheke              | Ethanol 90% | 1414A-02303      | 1       |

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| Supplier                   | Substance   | Batch              | Spectra |
|----------------------------|-------------|--------------------|---------|
| Post-Apotheke 15.01.2014   | Ethanol 90% | 15012014           | 1       |
| Rappen-Apotheke            | Ethanol 90% | 190513-2           | 1       |
| Rappen-Apotheke            | Ethanol 90% | 200430-2           | 1       |
| Rappen-Apotheke            | Ethanol 90% | 200623-1           | 1       |
| Römer-Apotheke             | Ethanol 90% | 150428003          | 1       |
| Römer-Apotheke             | Ethanol 90% | 4213E-03042        | 1       |
| Römer-Apotheke             | Ethanol 90% | 1914E-03042        | 1       |
| Römer-Apotheke             | Ethanol 90% | 36141-03042        | 1       |
| Rondell Apotheke           | Ethanol 90% | 4615E-07209        | 1       |
| Rondell Apotheke           | Ethanol 90% | 4615E-02303        | 1       |
| Rondell Apotheke           | Ethanol 90% | 4615E-03042        | 1       |
| Rondell Apotheke           | Ethanol 90% | 4814E-02303        | 1       |
| Rondell-Apotheke           | Ethanol 90% | 3913Q-03042        | 1       |
| Rosenapotheke              | Ethanol 90% | 2417E-07094        | 1       |
| Sanacorp                   | Ethanol 90% | 16194501           | 1       |
| Sanacorp                   | Ethanol 90% | 16194601           | 1       |
| Sanacorp                   | Ethanol 90% | 1618E-02303        | 1       |
| Sanacorp                   | Ethanol 90% | 17306003           | 1       |
| Sanacorp                   | Ethanol 90% | 19098301           | 1       |
| Caelo                      | Ethanol 90% | 20000569001        | 2       |
| Sanacorp 24.11.14 EK 63... | Ethanol 90% | 14122101           | 1       |
| Caelo                      | Ethanol 90% | AKD6               | 1       |
| selbst hergestellt         | Ethanol 90% | 1MH160427          | 1       |
| selbst hergestellt         | Ethanol 90% | 1LG20180616        | 1       |
| Selbst hergestellt         | Ethanol 90% | 180320             | 1       |
| Solling-Apo                | Ethanol 90% | 181213001          | 1       |
| Caelo                      | Ethanol 90% | 13399802           | 1       |
| Stern                      | Ethanol 90% | 150622004          | 1       |
| Taoasis                    | Ethanol 90% | VE4038-127890      | 1       |
| Taoasis                    | Ethanol 90% | VE40438-127890     | 1       |
| Toeste Apotheke            | Ethanol 90% | 4819A-03042        | 1       |
| Tsiripidou                 | Ethanol 90% | 180324             | 1       |
| VbF B/Phönix               | Ethanol 90% | 5585102            | 1       |
| VDL 09.05.14               | Ethanol 90% | 13399801           | 1       |
| Caelo                      | Ethanol 90% | 17047901           | 8       |
| verdünnt von 96% von Ap... | Ethanol 90% | 190208002          | 1       |
| Wolf Apotheke/Defektur     | Ethanol 90% | 80615/50Kr         | 1       |
| Wolf-Apotheke / Defektur   | Ethanol 90% | 70428/50Hk         | 1       |
| Wolf-Apotheke-Defektur     | Ethanol 90% | 80711/50Hk         | 1       |
| Zentrum-Apotheke           | Ethanol 90% | 514I-03042         | 1       |
| Alte Apo Defektur          | Ethanol 90% |                    | 1       |
| Apomix/Noweda              | Ethanol 90% |                    | 1       |
| Apotheke                   | Ethanol 90% |                    | 1       |
| Berkel AHK                 | Ethanol 90% |                    | 1       |
| Caelo                      | Ethanol 90% | 14052802           | 2       |
| Caelo                      | Ethanol 90% |                    | 3       |
|                            | Ethanol 90% | Hergestelltt070514 | 1       |
| phönix                     | Ethanol 90% |                    | 1       |
| Tsiripidou (Fortuna Apo... | Ethanol 90% |                    | 1       |
| Wolf Apotheke              | Ethanol 90% |                    | 3       |

- 240172 spectra from 1121 *Apo-Ident* customers from a total of 46567 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Ethanol 90%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Ethanol 90%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 240           | 0              | 63 699        |
| Type B | 0              | 320           | 0              | 91 091        |
| Type C | 0              | 1190          | 1              | 240 077       |

The substance/substance group *Ethanol 90%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| Type B | 100.0000 % (> 99.9657 %) | 100.0000 % (> 98.1250 %) |
| Type C | 100.0000 % (> 99.6840 %) | 99.9160 % (> 99.6641 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Ethanol 90%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in main model | Distance in second-stage model |
|------------------------------|------------------------|--------------------------------|
| Dexpanthenol                 | 48.08                  | —                              |
| Dexpanthenol concentrate 50% | 98.08                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Ethanol 90%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31056     | 31056               | 0.00                         | 109.77                          |
| 31392     | 34737               | 5.26                         | 97.59                           |
| 33102     | 33102               | 0.00                         | 89.34                           |
| 34322     | 34322               | 0.00                         | 80.31                           |
| 34512     | 31056               | 1.88                         | 109.39                          |
| 34737     | 34737               | 0.00                         | 91.68                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Ethanol 96%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31488-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Ethanol 96%; Ethanolum 96%

### Special notes

When selecting the *Ethanol 96%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Ethanol 96%               | 4      | 2      | 708    |



## Second-stage model

For differentiation of the substance/substance group *Ethanol 96%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Ethanol 96%*:

| Supplier         | Substance   | Batch        | Sample ID | Spectra | Certificate |
|------------------|-------------|--------------|-----------|---------|-------------|
| Caelo            | Ethanol 96% | 182621       | 34330     | 40      | 20181119*   |
| Caelo            | Ethanol 96% | 190302       | 34457     | 40      | 20190206*   |
| Laborchemie A... | Ethanol 96% | 24001427     | 33852     | 40      | 20170801    |
| Merck            | Ethanol 96% | K45197671406 | 31488     | 60      | 1503676     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Ethanol 96%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Ethanol 96%*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier           | Substance   | Batch    | Sample ID | Spectra |
|--------------------|-------------|----------|-----------|---------|
| Caelo              | Ethanol 96% | 20003544 | 35251     | 40      |
| Laborchemie Apolda | Ethanol 96% | 25000305 | 34123     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1710 spectra from 532 *Apo-Ident* customers from 721 batches from the substance/substance group *Ethanol 96%*.
- Among them are spectra of independent samples from 690 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                    | Substance   | Batch                | Spectra |
|-----------------------------|-------------|----------------------|---------|
| — (Retest)                  | Ethanol 96% | 374/17               | 1       |
| .....                       | Ethanol 96% | 22001720             | 1       |
| /Phönix                     | Ethanol 96% | 140604               | 1       |
| A.H.D.                      | Ethanol 96% | 20000305             | 1       |
| Abtshof Magdeburg GmbH      | Ethanol 96% | L08020               | 1       |
| Agralko                     | Ethanol 96% | 2015010901           | 1       |
| Agralko                     | Ethanol 96% | 1062015              | 1       |
| AgrAlko                     | Ethanol 96% | A2014000328          | 2       |
| AgrAlko                     | Ethanol 96% | 410-1405             | 1       |
| AHC/Laborchemie Apolda      | Ethanol 96% | 24000161             | 1       |
| AHD 03.12.14 EK 85,21       | Ethanol 96% | 21002075             | 1       |
| AHK GmbH                    | Ethanol 96% | 18/02/09             | 1       |
| AHK GmbH                    | Ethanol 96% | 18/08/14             | 1       |
| Alfred Quadflieg, Gelse...  | Ethanol 96% | K16/08/03            | 1       |
| Alkoholvertrieb Süd Dr. ... | Ethanol 96% | 39552016/28012016    | 1       |
| Alkohol Vertrieb Süd        | Ethanol 96% | 121952017/21082017   | 1       |
| Alkoholvertrieb/Süd         | Ethanol 96% | 136842018/0102018    | 1       |
| Alkoholvertrieb/Süd         | Ethanol 96% | 60492019/18032019    | 2       |
| Alkoholvertrieb             | Ethanol 96% | 65942020/20042020    | 1       |
| Alkoholvertrieb             | Ethanol 96% | 105272020            | 1       |
| Alkoholvertrieb Bernd M...  | Ethanol 96% | 3074201709012017     | 1       |
| Alkoholvertrieb Dr. Ber...  | Ethanol 96% | 15132014/02122013    | 1       |
| Alkoholvertrieb Dr. Ber...  | Ethanol 96% | 41010414052992014    | 1       |
| Alkoholvertrieb süd         | Ethanol 96% | 53472018/0032018     | 1       |
| Alkoholvertrieb süd         | Ethanol 96% | 71192018/23042018    | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 410-1101502/16032015 | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 5643/VALU38679/23    | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 9012016/05112015     | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 80452016/01062016    | 2       |
| Alkoholvertrieb Süd         | Ethanol 96% | 6282017/24102016     | 2       |
| Alkoholvertrieb Süd         | Ethanol 96% | 116702016/05092016   | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 18122017/25112016    | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 100122017/07072017   | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 121952017/21082017   | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 138512107/28092017   | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 1313081029/26082013  | 1       |

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| Supplier                    | Substance   | Batch                | Spectra |
|-----------------------------|-------------|----------------------|---------|
| Alkoholvertrieb Süd         | Ethanol 96% | 53472018/0032018     | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 81692019/13052019    | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 95772020             | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 17962021             | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 3297636/11062014     | 1       |
| Alkoholvertrieb Süd         | Ethanol 96% | 410-104-1405/2909201 | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 138512017/28092017   | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 136842018/01102018   | 2       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 10412020/04112019    | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 122022020            | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 17962021             | 3       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 32132021             | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 2/0713               | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | keine                | 1       |
| Alkoholvertrieb Süd GmbH    | Ethanol 96% | 1313081029/26082013  | 1       |
| Alkoholvertrieb Süd GmbH... | Ethanol 96% | 6282017/24102016     | 2       |
| Alkoholvertrieb Süd GmbH... | Ethanol 96% | 30742017/09012017    | 1       |
| Alkoholvertrieb Süd GmbH... | Ethanol 96% | 124412018/28082018   | 1       |
| Alkoholvertrieb Süd GmbH... | Ethanol 96% | 1313081029/26082013  | 1       |
| Alkoholvertrieb Süd/ Dr...  | Ethanol 96% | 30742017/09012017    | 1       |
| Alkoholvertrieb Süd/ Dr...  | Ethanol 96% | 136842018/01102018   | 1       |
| Alkoholvertrieb Süd/DPD     | Ethanol 96% | 41010315061020072015 | 1       |
| Alkoholvertrieb Süd/Gehe    | Ethanol 96% | 1410T130111514122015 | 1       |
| Alkoholvertrieb Süd/Gehe    | Ethanol 96% | 3297636/11062014     | 1       |
| Alkoholvertrieb Sued        | Ethanol 96% | 87872017/29052017    | 1       |
| All. Healthc. / Laborph...  | Ethanol 96% | 22000616             | 1       |
| All.Heal./laborchemie A...  | Ethanol 96% | 21001053             | 1       |
| All.Heal./laborchemie A...  | Ethanol 96% | 21001561             | 1       |
| Allchem /Allchem            | Ethanol 96% | Sorte410/UN1170      | 2       |
| Allchem/Phönix              | Ethanol 96% | 15266298             | 1       |
| AllchemGmbH                 | Ethanol 96% | UN1170               | 2       |
| Caelo                       | Ethanol 96% | 26000285             | 1       |
| alliance Health. 23.10.14   | Ethanol 96% | 21001379             | 1       |
| Alliance/LaborChemie        | Ethanol 96% | 25001980             | 1       |
| AllianceHealthcare          | Ethanol 96% | 22001291             | 1       |
| AllianceHealthcare          | Ethanol 96% | 23000997             | 1       |
| AMANN CHEMIE GmbH           | Ethanol 96% | UN1117               | 4       |
| AMANN CHEMIE GmbH           | Ethanol 96% | n732001736           | 2       |
| AMANN CHEMIE GmbH           | Ethanol 96% | N732001736           | 2       |
| Amann Chemie GmbH; Brei...  | Ethanol 96% | 1410T1231219         | 1       |
| Amman Chemie                | Ethanol 96% | N732001736           | 1       |
| anzag                       | Ethanol 96% | 25439                | 1       |
| Anzag                       | Ethanol 96% | 25000305             | 1       |
| Anzag                       | Ethanol 96% | 25001144             | 1       |
| Anzag                       | Ethanol 96% | 19000121             | 1       |
| Anzag / Labor chemie        | Ethanol 96% | 25000305             | 1       |
| Anzag/ Laborchemie Apol...  | Ethanol 96% | 26002023             | 1       |
| Anzag/Apolda                | Ethanol 96% | 24001494             | 1       |
| Anzag/Hedinger              | Ethanol 96% | 23000749             | 1       |
| Anzag/Heyl                  | Ethanol 96% | 25000305             | 1       |
| Anzag/Heyl                  | Ethanol 96% | 24002259             | 1       |
| Anzag/Heyl                  | Ethanol 96% | 26000283             | 2       |
| Apolda                      | Ethanol 96% | 23001368             | 1       |
| Apolda                      | Ethanol 96% | 25000361             | 1       |
| Apolda                      | Ethanol 96% | 25001954             | 1       |
| Apolda                      | Ethanol 96% | 25001139             | 1       |
| Apolda                      | Ethanol 96% | 26000283             | 2       |
| Apolda                      | Ethanol 96% | 26001277             | 2       |
| Apolda                      | Ethanol 96% | 26001211             | 1       |
| Apolda                      | Ethanol 96% | 21002268             | 1       |

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| Supplier                     | Substance   | Batch    | Spectra |
|------------------------------|-------------|----------|---------|
| Apolda                       | Ethanol 96% | 22001718 | 1       |
| Apolda                       | Ethanol 96% | 22002230 | 1       |
| Apolda / Alliance Healt. ... | Ethanol 96% | 24000927 | 1       |
| Apolda / Anzag               | Ethanol 96% | 22001717 | 1       |
| Apolda / Gehe                | Ethanol 96% | 23001357 | 1       |
| Apolda / Gehe                | Ethanol 96% | 20000065 | 1       |
| Apolda / Gehe                | Ethanol 96% | 20000974 | 1       |
| Apolda / Noweda              | Ethanol 96% | 25001138 | 1       |
| Apolda / Noweda              | Ethanol 96% | 25001955 | 1       |
| Apolda / Noweda              | Ethanol 96% | 26000283 | 1       |
| Apolda / Sanacorp            | Ethanol 96% | 22001985 | 1       |
| Apolda / Sanacorp            | Ethanol 96% | 20002191 | 1       |
| Apolda / Noweda              | Ethanol 96% | 24002163 | 1       |
| Apolda GmbH                  | Ethanol 96% | 24001427 | 1       |
| Apolda GmbH                  | Ethanol 96% | 22000086 | 1       |
| Apolda GmbH                  | Ethanol 96% | 22001948 | 1       |
| Apolda GmbH                  | Ethanol 96% | 24002163 | 1       |
| Apolda GmbH                  | Ethanol 96% | 20000305 | 1       |
| Apolda GmbH                  | Ethanol 96% | 19001936 | 1       |
| Apolda GmbH                  | Ethanol 96% | 21001379 | 2       |
| Apolda GmbH                  | Ethanol 96% | 21001382 | 1       |
| Apolda GmbH                  | Ethanol 96% | 100050   | 1       |
| Apolda GmbH                  | Ethanol 96% | 22001717 | 1       |
| Apolda GMBH/Anzag            | Ethanol 96% | 21001382 | 1       |
| Apolda GmbH/Gehe             | Ethanol 96% | 22000616 | 1       |
| Apolda gmbH/N                | Ethanol 96% | 21002064 | 1       |
| Apolda gmbH/N                | Ethanol 96% | 22000999 | 1       |
| Apolda GmbH/N/PZN:10137...   | Ethanol 96% | 20000975 | 1       |
| Apolda GMBH/Noweda           | Ethanol 96% | 22000616 | 1       |
| Apolda GMBH/Noweda           | Ethanol 96% | 24000863 | 1       |
| Apolda GMBH/Noweda           | Ethanol 96% | 25001144 | 1       |
| Apolda Laborchemie           | Ethanol 96% | 19002599 | 1       |
| Apolda Laborchemie           | Ethanol 96% | 20001887 | 1       |
| Apolda, direkt best.         | Ethanol 96% | 21001560 | 1       |
| Apolda, Gehe                 | Ethanol 96% | 20001887 | 1       |
| Apolda, Gehe                 | Ethanol 96% | 20002192 | 1       |
| Apolda, Noweda               | Ethanol 96% | 20001212 | 1       |
| Apolda, Phönix               | Ethanol 96% | 20000307 | 1       |
| Apolda/ Alliance             | Ethanol 96% | 25000305 | 1       |
| Apolda/ Alliance Health...   | Ethanol 96% | 23000175 | 1       |
| Apolda/ Gehe                 | Ethanol 96% | 24001427 | 1       |
| Apolda/ Sanacorp             | Ethanol 96% | 21001560 | 1       |
| Apolda/ Sanacorp             | Ethanol 96% | 21001380 | 1       |
| Apolda/ Sanacorp             | Ethanol 96% | 21002239 | 1       |
| Apolda/ Sanacorp             | Ethanol 96% | 22000090 | 1       |
| Apolda/ Sanacorp             | Ethanol 96% | 21000154 | 2       |
| Apolda/Ebert                 | Ethanol 96% | 24000920 | 1       |
| Apolda/Gehe                  | Ethanol 96% | 24000186 | 1       |
| Apolda/Gehe                  | Ethanol 96% | 24001427 | 1       |
| Apolda/Gehe                  | Ethanol 96% | 24002163 | 1       |
| Apolda/Gehe                  | Ethanol 96% | 25001980 | 1       |
| Apolda/Gehe                  | Ethanol 96% | 20002193 | 1       |
| Apolda/GEHE                  | Ethanol 96% | 26002023 | 2       |
| Apolda/Heyl/Noweda           | Ethanol 96% | 22001985 | 3       |
| Apolda/Heyl/Noweda           | Ethanol 96% | 23000749 | 1       |
| Apolda/Heyl/Noweda           | Ethanol 96% | 23001368 | 1       |
| Apolda/Heyl/Noweda           | Ethanol 96% | 24000187 | 1       |
| Apolda/Noweda                | Ethanol 96% | 24000163 | 1       |
| Apolda/Noweda                | Ethanol 96% | 23001368 | 1       |
| Apolda/Noweda                | Ethanol 96% | 24001427 | 1       |

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| Supplier              | Substance   | Batch         | Spectra |
|-----------------------|-------------|---------------|---------|
| Apolda/Noweda         | Ethanol 96% | 25001955      | 1       |
| Apolda/Phoenix        | Ethanol 96% | 22000616      | 1       |
| Apolda/Phoenix        | Ethanol 96% | 25001980      | 3       |
| Apolda/Phoenix        | Ethanol 96% | 21000197      | 1       |
| Apolda/Phönix         | Ethanol 96% | 21002269      | 1       |
| Apolda/Phönix         | Ethanol 96% | 22000096      | 1       |
| Apolda/Phönix         | Ethanol 96% | 22000616      | 1       |
| Apolda/Phönix         | Ethanol 96% | 22001291      | 1       |
| Apolda/Phönix         | Ethanol 96% | 3613M-02304   | 1       |
| Apolda/Sana           | Ethanol 96% | 24001427      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 22000090      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 22000392      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 24002163      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 25000305      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 25001144      | 4       |
| Apolda/Sanacorp       | Ethanol 96% | 250001980     | 2       |
| Apolda/Sanacorp       | Ethanol 96% | 26000285      | 1       |
| Apolda/Sanacorp       | Ethanol 96% | 26001268      | 2       |
| Apolda/Spangro        | Ethanol 96% | 22002231      | 1       |
| Apolda/Spangro        | Ethanol 96% | 24001494      | 1       |
| Apolda/VDL            | Ethanol 96% | 20001830      | 1       |
| Applichem             | Ethanol 96% | 220113PML01   | 1       |
| Applichem/Diagonal    | Ethanol 96% | 70214PJK05    | 1       |
| Behlen/direkt         | Ethanol 96% | 1410T1090119  | 1       |
| Behlen/direkt         | Ethanol 96% | 1410T1170320  | 1       |
| Behlen/Phönix         | Ethanol 96% | 1410T1300816  | 1       |
| bergchemie            | Ethanol 96% | 14-12-10      | 1       |
| bergchemie            | Ethanol 96% | 14-06-04      | 1       |
| bergchemie            | Ethanol 96% | UN1170        | 1       |
| Bergchemie            | Ethanol 96% | 14-10-16      | 1       |
| Bergchemie            | Ethanol 96% | 15-5-07       | 1       |
| Bergchemie            | Ethanol 96% | 15-05-07      | 1       |
| Bergchemie            | Ethanol 96% | 15/06/10      | 1       |
| Bergchemie            | Ethanol 96% | 15-10-09      | 1       |
| Bergchemie            | Ethanol 96% | 16/01/06      | 2       |
| Bergchemie            | Ethanol 96% | 16/02/02      | 1       |
| Bergchemie            | Ethanol 96% | aaaaaa        | 1       |
| Bergchemie            | Ethanol 96% | 16/08/03      | 1       |
| Bergchemie            | Ethanol 96% | 9-03-07       | 1       |
| Bergchemie            | Ethanol 96% | 13/03/06      | 1       |
| Bergchemie            | Ethanol 96% | 13/11/27      | 1       |
| Bergchemie            | Ethanol 96% | 14-06-04      | 1       |
| Bergchemie            | Ethanol 96% | 5/0810        | 1       |
| Bergchemie            | Ethanol 96% | 14-08-12      | 2       |
| Bergchemie/Bergchemie | Ethanol 96% | 17-05-19      | 2       |
| Berkel                | Ethanol 96% | 1410T31310715 | 1       |
| Berkel                | Ethanol 96% | 1410T31051115 | 1       |
| Berkel                | Ethanol 96% | 1410T31141015 | 1       |
| Berkel                | Ethanol 96% | 220217/824    | 1       |
| Berkel                | Ethanol 96% | 17/04/05      | 1       |
| Berkel                | Ethanol 96% | 140T31030517  | 1       |
| Berkel                | Ethanol 96% | 1410T31191113 | 1       |
| Berkel                | Ethanol 96% | 1410T31260814 | 1       |
| BERKEL                | Ethanol 96% | 1410U         | 1       |
| Berkel AHK            | Ethanol 96% | 220217/824    | 1       |
| Berkel AHG            | Ethanol 96% | 80318/931     | 1       |
| Berkel Ahk            | Ethanol 96% | 1410T31040320 | 1       |
| Berkel Ahk            | Ethanol 96% | 1410T31200420 | 1       |
| Berkel AHK            | Ethanol 96% | 14/11/13      | 1       |
| Berkel AHK            | Ethanol 96% | 14/01/30      | 1       |

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| Supplier                   | Substance   | Batch          | Spectra |
|----------------------------|-------------|----------------|---------|
| Berkel AHK                 | Ethanol 96% | 151125         | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31280116  | 1       |
| Berkel AHK                 | Ethanol 96% | VE37799        | 1       |
| Berkel AHK                 | Ethanol 96% | 120516/746     | 1       |
| Berkel AHK                 | Ethanol 96% | 60919/1La      | 1       |
| Berkel AHK                 | Ethanol 96% | 111016/786     | 2       |
| Berkel AHK                 | Ethanol 96% | 17/01/11       | 1       |
| Berkel AHK                 | Ethanol 96% | 310317/835     | 1       |
| Berkel AHK                 | Ethanol 96% | 310317/834     | 1       |
| Berkel AHK                 | Ethanol 96% | 40517/843      | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31121017  | 1       |
| Berkel AHK                 | Ethanol 96% | 101017/884     | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31151217  | 1       |
| Berkel AHK                 | Ethanol 96% | 17/09/07-1     | 1       |
| Berkel AHK                 | Ethanol 96% | 171208         | 1       |
| Berkel AHK                 | Ethanol 96% | 80318/931      | 1       |
| Berkel AHK                 | Ethanol 96% | 180327         | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31230418  | 1       |
| Berkel AHK                 | Ethanol 96% | 190618/958     | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31191118  | 1       |
| Berkel AHK                 | Ethanol 96% | 61218/008      | 1       |
| Berkel AHK                 | Ethanol 96% | VE46375        | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31041219  | 1       |
| Berkel AHK                 | Ethanol 96% | 110220/123     | 1       |
| Berkel AHK                 | Ethanol 96% | 30320/130      | 2       |
| Berkel AHK                 | Ethanol 96% | 1410T31170320  | 2       |
| Berkel AHK                 | Ethanol 96% | 1410T31010420  | 2       |
| Berkel AHK                 | Ethanol 96% | 30420/143      | 2       |
| Berkel AHK                 | Ethanol 96% | VE49686        | 1       |
| Berkel AHK                 | Ethanol 96% | 20/03/27       | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31120520  | 1       |
| Berkel AHK                 | Ethanol 96% | 30620/175      | 1       |
| Berkel AHK                 | Ethanol 96% | VE50571        | 1       |
| Berkel AHK                 | Ethanol 96% | 2906211085     | 1       |
| Berkel AHK                 | Ethanol 96% | VE28587        | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31141212  | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31080113  | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T311060513 | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31040613  | 1       |
| Berkel AHK                 | Ethanol 96% | 3613Q2304      | 1       |
| Berkel AHK                 | Ethanol 96% | 13/09/05       | 1       |
| Berkel AHK                 | Ethanol 96% | 13/11/08       | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31191113  | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31181213  | 1       |
| Berkel AHK                 | Ethanol 96% | 200214/567     | 1       |
| Berkel AHK                 | Ethanol 96% | 260411/145     | 2       |
| Berkel AHK                 | Ethanol 96% | 210714/598     | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31050914  | 1       |
| Berkel AHK                 | Ethanol 96% | 1410T31271014  | 1       |
| Berkel AHK                 | Ethanol 96% | 1137111/08     | 1       |
| Berkel AHK                 | Ethanol 96% | 91214/632      | 1       |
| Berkel AHK                 | Ethanol 96% | 14/09/17       | 1       |
| Berkel AHK                 | Ethanol 96% | 15/07/23       | 2       |
| BERKEL AHK                 | Ethanol 96% | 50319/035      | 1       |
| BERKEL AHK                 | Ethanol 96% | 110220/123     | 1       |
| BERKEL AHK                 | Ethanol 96% | 30320/130      | 1       |
| BERKEL AHK                 | Ethanol 96% | 90321/265      | 1       |
| BERKEL AHK                 | Ethanol 96% | 170712/334     | 4       |
| Berkel AHK / Werner Hof... | Ethanol 96% | 16/08/04       | 2       |
| Berkel AHK /TEREOS         | Ethanol 96% | 190515/669     | 1       |

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| Supplier                   | Substance   | Batch          | Spectra |
|----------------------------|-------------|----------------|---------|
| Berkel AHK Alkoholhandel   | Ethanol 96% | VE32323        | 1       |
| Berkel AHK Alkoholhandel   | Ethanol 96% | VE32507        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE37799        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE39460        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE40783        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | 40517/843      | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE41728        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE42914        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE44224        | 1       |
| Berkel AHK Alkoholhande... | Ethanol 96% | VE45584        | 1       |
| Berkel AHK Berlin          | Ethanol 96% | 80318/931      | 1       |
| Berkel AHK/ MTG            | Ethanol 96% | 1410T31080819  | 1       |
| Berkel AHK/ Tereos, Ori... | Ethanol 96% | 16/02/02       | 1       |
| Berkel AHK/Berkel AHK      | Ethanol 96% | VE52339        | 1       |
| Berkel AHK/MTG Sped.       | Ethanol 96% | 1410T31040319  | 1       |
| Berkel AHK/MTG Sped.       | Ethanol 96% | 1410T31170619  | 1       |
| Berkel AHK/MTG Sped.       | Ethanol 96% | 1410T31080819  | 1       |
| Spangropharm               | Ethanol 96% | 1410T31041016  | 1       |
| Berkel AKK                 | Ethanol 96% | 190220         | 1       |
| Berkel/Alliance Healthc... | Ethanol 96% | 231018/994     | 1       |
| Berkel/Anzag               | Ethanol 96% | 101017/884     | 1       |
| Berkel/Anzag               | Ethanol 96% | 241117/897     | 1       |
| Berkel/Ebert               | Ethanol 96% | 1410T31271115  | 1       |
| BerkelAHK                  | Ethanol 96% | 1410T31271115  | 1       |
| BerkelAHK                  | Ethanol 96% | 16/11/23       | 1       |
| BerkelAHK                  | Ethanol 96% | 1410T31060717  | 1       |
| Berkel-AHK                 | Ethanol 96% | 30320/130      | 1       |
| BfB                        | Ethanol 96% | 1/2/3/4        | 1       |
| BfB                        | Ethanol 96% | 10065927       | 1       |
| BFB                        | Ethanol 96% | keinevorhanden | 1       |
| Bioenergi Icking GmbH      | Ethanol 96% | N781601635     | 12      |
| Bioenergi Icking GmbH      | Ethanol 96% | N781704668     | 4       |
| Bioenergi Icking GmbH      | Ethanol 96% | N781602528     | 3       |
| Bioenergi Icking GmbH      | Ethanol 96% | N781062528     | 1       |
| Bioenergie Icking          | Ethanol 96% | 201102170016   | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | N781602528     | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | N781601635     | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | N781807555     | 2       |
| Bioenergie Icking GmbH     | Ethanol 96% | N781809027     | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | Bioenergie     | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | N781911663     | 1       |
| Bioenergie Icking GmbH     | Ethanol 96% | N782012869     | 1       |
| bionergie icking           | Ethanol 96% | 781807555      | 1       |
| Bionorica                  | Ethanol 96% | 22001720       | 1       |
| Birkenhof Brennerei Nis... | Ethanol 96% | L200401        | 1       |
| BMV Branntwein             | Ethanol 96% | Ch19           | 1       |
| Brand GmbH Alkoholvertr... | Ethanol 96% | 24052013/60    | 1       |
| Branntweinmonopol          | Ethanol 96% | 613Et0H96      | 1       |
| Brantweinmonopolstelle     | Ethanol 96% | 40517/843      | 1       |
| Brantweinmonopolstelle     | Ethanol 96% | 110717/861     | 1       |
| Brantweinmonopolstelle     | Ethanol 96% | 150518/949     | 1       |
| Brantweinmonopolstelle     | Ethanol 96% | 261018/996     | 1       |
| Brantweinmonopolstelle     | Ethanol 96% | 50319/035      | 1       |
| Brauerei                   | Ethanol 96% | 200525A        | 1       |
| Brennerei                  | Ethanol 96% | 201408-1       | 1       |
| Brennerei Henrich          | Ethanol 96% | Re20200120     | 1       |
| Brennerei Kessler          | Ethanol 96% | L4518          | 1       |
| Brennerei Kessler          | Ethanol 96% | 8020-3         | 1       |
| Brennerei Kessler          | Ethanol 96% | L-0120-L1020   | 1       |
| Brennerei Kessler Bad P... | Ethanol 96% | L1120          | 1       |

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| Supplier                   | Substance   | Batch          | Spectra |
|----------------------------|-------------|----------------|---------|
| Brückemann                 | Ethanol 96% | V032006620     | 1       |
| Brückweg Apotheke          | Ethanol 96% | 1410T31241018  | 1       |
| Brüggeman Alkohol          | Ethanol 96% | 7815040634     | 1       |
| Brüggemann                 | Ethanol 96% | 7816041610     | 1       |
| Brüggemann                 | Ethanol 96% | 7815040634     | 1       |
| Brüggemann                 | Ethanol 96% | 7814110456     | 1       |
| Brüggemann                 | Ethanol 96% | 7815030598     | 1       |
| Brüggemann                 | Ethanol 96% | 7815080789     | 3       |
| Brüggemann                 | Ethanol 96% | 7815110957     | 1       |
| Brüggemann                 | Ethanol 96% | N781601257     | 1       |
| Brüggemann                 | Ethanol 96% | V781704599(4)  | 1       |
| Brüggemann                 | Ethanol 96% | V781704599(1)  | 1       |
| Brüggemann                 | Ethanol 96% | V781704599(2)  | 1       |
| Brüggemann                 | Ethanol 96% | V781704599(3)  | 1       |
| Brüggemann                 | Ethanol 96% | N781704589     | 1       |
| Brüggemann                 | Ethanol 96% | n781704927     | 1       |
| Brüggemann                 | Ethanol 96% | N781705545     | 1       |
| Brüggemann                 | Ethanol 96% | N841700608     | 1       |
| Brüggemann                 | Ethanol 96% | N781809235     | 1       |
| Brüggemann                 | Ethanol 96% | N781909367     | 1       |
| Brüggemann                 | Ethanol 96% | V032006616     | 1       |
| Brüggemann                 | Ethanol 96% | V781911659     | 1       |
| Brüggemann                 | Ethanol 96% | 312104624      | 3       |
| Brüggemann                 | Ethanol 96% | 201101270401   | 1       |
| Brüggemann                 | Ethanol 96% | V032006620     | 1       |
| Brüggemann                 | Ethanol 96% | 7813050119     | 1       |
| Brüggemann                 | Ethanol 96% | 7813110228     | 1       |
| Brüggemann                 | Ethanol 96% | 1514020991     | 1       |
| Brüggemann                 | Ethanol 96% | 7814060362     | 1       |
| Brüggemann                 | Ethanol 96% | 1514041040     | 1       |
| Brüggemann Alkohol         | Ethanol 96% | 7815060735     | 2       |
| Brüggemann Alkohol         | Ethanol 96% | N781601503     | 1       |
| Brüggemann Alkohol         | Ethanol 96% | 7814070382     | 1       |
| Brüggemann Alkohol         | Ethanol 96% | 7814120470     | 1       |
| Brüggemann Alkohol Heil... | Ethanol 96% | V032006620     | 1       |
| Brüggemann Alkohol Wite... | Ethanol 96% | N841700370     | 6       |
| Brüggemann Alkohol/Heil... | Ethanol 96% | 7816123659     | 3       |
| Brüggemann Alkohol Heil... | Ethanol 96% | N8170469278170 | 1       |
| Brüggemann Alkohol Witt... | Ethanol 96% | 7818118981     | 1       |
| Brüggemann Alkohol Witt... | Ethanol 96% | 7819121988     | 1       |
| Brüggemann Alkohol Witt... | Ethanol 96% | 7820022415     | 2       |
| Brüggemann Alkohol Witt... | Ethanol 96% | 7820033297     | 1       |
| Brüggemann Distilling C... | Ethanol 96% | N782013731     | 1       |
| Brüggemann Wittenberg      | Ethanol 96% | 7815010512     | 5       |
| Brüggemann Wittenberg      | Ethanol 96% | 7815030598     | 1       |
| Brüggemann Wittenberg      | Ethanol 96% | N781809140     | 1       |
| Brüggemann/ Delicom        | Ethanol 96% | N781601155     | 1       |
| Brüggemann/Heilbronn 23... | Ethanol 96% | L-20101        | 1       |
| BrüggemannAlkohol Witte... | Ethanol 96% | N782012493     | 1       |
| BrüggemannAlkohol Witte... | Ethanol 96% | N781703809     | 5       |
| BrüggemannAlkohol Witte... | Ethanol 96% | N781704731     | 4       |
| Brüggemann/Alkohol         | Ethanol 96% | 7814020283     | 1       |
| Brüggemann/Alkohol         | Ethanol 96% | 7814060362     | 1       |
| brüggemann                 | Ethanol 96% | 60100575563    | 1       |
| Bundes...                  | Ethanol 96% | 8042014        | 1       |
| Bundesm.Brandwein          | Ethanol 96% | 140710         | 1       |
| Bundesmonopolstelle für... | Ethanol 96% | xxxx           | 1       |
| Bundesmonopolverw.         | Ethanol 96% | 20130903       | 1       |
| Bundesmonopolverwaltung... | Ethanol 96% | 2032012GI      | 1       |
| Caelo                      | Ethanol 96% | 220000086      | 1       |

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| Supplier | Substance   | Batch             | Spectra |
|----------|-------------|-------------------|---------|
| Caelo    | Ethanol 96% | 20150908          | 1       |
| Caelo    | Ethanol 96% | K46109471         | 1       |
| Caelo    | Ethanol 96% | 2394894           | 2       |
| Caelo    | Ethanol 96% | 20001583          | 1       |
| Caelo    | Ethanol 96% | 23000749          | 2       |
| Caelo    | Ethanol 96% | 23001357          | 1       |
| Caelo    | Ethanol 96% | 23001368          | 3       |
| Caelo    | Ethanol 96% | 23001968          | 1       |
| Caelo    | Ethanol 96% | 24000034          | 1       |
| Caelo    | Ethanol 96% | 1410T31290518     | 1       |
| Caelo    | Ethanol 96% | 18191701          | 14      |
| Caelo    | Ethanol 96% | 19129501          | 14      |
| Caelo    | Ethanol 96% | 190000643001      | 1       |
| Caelo    | Ethanol 96% | 5678              | 1       |
| Caelo    | Ethanol 96% | 12345             | 1       |
| Caelo    | Ethanol 96% | 7813010053        | 2       |
| Caelo    | Ethanol 96% | 915A-03041        | 1       |
| Caelo    | Ethanol 96% | 1/12              | 1       |
| Caelo    | Ethanol 96% | CH24002163        | 1       |
| Caelo    | Ethanol 96% | CHB19000643001    | 1       |
| Caelo    | Ethanol 96% | 1929501           | 1       |
| Caelo    | Ethanol 96% | 26001211          | 1       |
| Caelo    | Ethanol 96% | 19000643001       | 15      |
| Caelo    | Ethanol 96% | 20003544001       | 6       |
| Caelo    | Ethanol 96% | 19030201          | 16      |
| Caelo    | Ethanol 96% | 20001887          | 1       |
| Caelo    | Ethanol 96% | 90309001/PR       | 1       |
| Caelo    | Ethanol 96% | 18191702          | 16      |
| Caelo    | Ethanol 96% | 410300518106      | 1       |
| Caelo    | Ethanol 96% | 20001378001       | 9       |
| Caelo    | Ethanol 96% | 23000480          | 1       |
| Caelo    | Ethanol 96% | 19002599          | 1       |
| Caelo    | Ethanol 96% | 22001985          | 2       |
| Caelo    | Ethanol 96% | 24000856          | 1       |
| Caelo    | Ethanol 96% | 25001144          | 1       |
| Caelo    | Ethanol 96% | 25001980          | 1       |
| Caelo    | Ethanol 96% | 22000096          | 1       |
| Caelo    | Ethanol 96% | 21002269          | 1       |
| Caelo    | Ethanol 96% | 25001138          | 1       |
| Caelo    | Ethanol 96% | 21002075          | 1       |
| Caelo    | Ethanol 96% | 22001948          | 1       |
| Caelo    | Ethanol 96% | 120117/505/032    | 3       |
| Caelo    | Ethanol 96% | 24002163          | 1       |
| Caelo    | Ethanol 96% | 23000998          | 1       |
| Caelo    | Ethanol 96% | 126987            | 1       |
| Caelo    | Ethanol 96% | 25000361          | 1       |
| Caelo    | Ethanol 96% | 170718/505/048    | 2       |
| Caelo    | Ethanol 96% | 20002439001       | 1       |
| Caelo    | Ethanol 96% | 18181402          | 16      |
| Caelo    | Ethanol 96% | 21002294001       | 1       |
| Caelo    | Ethanol 96% | 22000641          | 1       |
| Caelo    | Ethanol 96% | 22000999          | 1       |
| Caelo    | Ethanol 96% | 24000863          | 2       |
| Caelo    | Ethanol 96% | 24001427          | 1       |
| Caelo    | Ethanol 96% | 20982018/05122017 | 1       |
| Caelo    | Ethanol 96% | 120319/74282/021  | 1       |
| Caelo    | Ethanol 96% | 19129502          | 15      |
| Caelo    | Ethanol 96% | 21001964          | 1       |
| Caelo    | Ethanol 96% | 21002244          | 1       |
| Caelo    | Ethanol 96% | 25000305          | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|------------------|--------------------|----------------|
| Caelo                      | Ethanol 96%      | 24002259           | 1              |
| Caelo                      | Ethanol 96%      | 18181401           | 22             |
| Caelo                      | Ethanol 96%      | 104612018/09072018 | 1              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 18191702           | 4              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 19030201           | 4              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 19030202           | 1              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 19129501           | 11             |
| Caesar & Loretz GmbH       | Ethanol 96%      | 19129502           | 8              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 20001378001        | 7              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 19000643001        | 2              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 20002439001        | 1              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 20003544001        | 2              |
| Caesar & Loretz GmbH       | Ethanol 96%      | 21001403001        | 1              |
| Caesar & Loretz GmbH / ... | Ethanol 96%      | 18191702           | 1              |
| Caesar & Loretz GmbH/ N... | Ethanol 96%      | 19000643001        | 1              |
| Caesar & Loretz GmbH/Fi... | Ethanol 96%      | 18191701           | 1              |
| Caesar & Loretz GmbH/Gehe  | Ethanol 96%      | 20001378001        | 1              |
| Caesar & Loretz GmbH/Kehr  | Ethanol 96%      | 19030201           | 1              |
| Caesar & Loretz GmbH/Kr... | Ethanol 96%      | 19129502           | 1              |
| Caesar & Loretz GmbH/No... | Ethanol 96%      | 21001403003        | 1              |
| Caesar & Loretz GmbH/Sana  | Ethanol 96%      | 19030201           | 1              |
| Caesar & Loretz GmbH/Sa... | Ethanol 96%      | 19129502           | 5              |
| Caesar/Phoenix             | Ethanol 96%      | 19129502           | 1              |
| Crop Energies Bioethano... | Ethanol 96%      | 72V0015            | 1              |
| Dankwart                   | Ethanol 96%      | J0140242           | 1              |
| DHL                        | Ethanol 96%      | 11062013           | 1              |
| Direkt                     | Ethanol 96%      | 20190404           | 1              |
| Dr. Miller, Alkoholvert... | Ethanol 96%      | 81692019/13052019  | 1              |
| eal                        | Ethanol 96%      | 20150108           | 1              |
| Eal Euro-Alkohol           | Ethanol 96%      | 20140100           | 1              |
| Eckerts Wacholder Brenn... | Ethanol 96%      | 1718A03041         | 1              |
| Eckerts WacholderBrenne... | Ethanol 96%      | 455GT2             | 1              |
| Emil Scheibel Schwarzwa... | Ethanol 96%      | 450MT2             | 1              |
| Engel                      | Ethanol 96%      | 1410T31170619      | 1              |
| Engel                      | Ethanol 96%      | 1410T31290518      | 1              |
| Ethanol                    | Ethanol 96%      | 18181401           | 1              |
| Euro OTC                   | Ethanol 96%      | 27042017           | 1              |
| Euro Alkohol GmbH          | Ethanol 96%      | 20150108           | 1              |
| Euro Alkohol GmbH          | Ethanol 96%      | 20170160           | 1              |
| Euro Alkohol GmbH          | Ethanol 96%      | 16532020           | 1              |
| Euro Alkohol Schmittmann   | Ethanol 96%      | 11031708           | 1              |
| Euro OTC                   | Ethanol 96%      | 18191702           | 1              |
| Euro OTC                   | Ethanol 96%      | 18001042           | 1              |
| Euro OTC                   | Ethanol 96%      | 20001378001        | 1              |
| Euro OTC                   | Ethanol 96%      | 24000186           | 1              |
| euro-alkohol/schmittmann   | Ethanol 96%      | 20170160           | 1              |
| Fa Karl Josef Kost, Kob... | Ethanol 96%      | 5ma1410150520132   | 1              |
| Fa. Karl Kost Koblenz      | Ethanol 96%      | 410040216085       | 2              |
| Fa. Karl Kost Koblenz      | Ethanol 96%      | 410041115082       | 1              |
| Fa.Karl-Josef Kost/Kobl... | Ethanol 96%      | 410120320128       | 1              |
| Fagron                     | Ethanol 96%      | 19001836           | 1              |
| Fagron                     | Ethanol 96%      | 10971471840        | 1              |
| Fagron                     | Ethanol 96%      | 23002116           | 1              |
| Fagron                     | Ethanol 96%      | 22001718           | 2              |
| Fagron                     | Ethanol 96%      | 1410T31200516      | 1              |
| Fagron                     | Ethanol 96%      | 26000285           | 1              |
| Fagron                     | Ethanol 96%      | 22001291           | 1              |
| Fiebig                     | Ethanol 96%      | 20003544001        | 2              |
| Fiebig                     | Ethanol 96%      | 12020161/1         | 1              |
| Finteler Apotheke          | Ethanol 96%      | 170407             | 1              |

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| Supplier                   | Substance   | Batch                  | Spectra |
|----------------------------|-------------|------------------------|---------|
| Firma Behlen               | Ethanol 96% | 1410T1061217           | 1       |
| Firma Kost/Krieger         | Ethanol 96% | 410311014072           | 1       |
| Friedrich Schwarze         | Ethanol 96% | CH839/L9390097         | 1       |
| Frohnachtaler Edelbrände   | Ethanol 96% | KeineCharge            | 1       |
| Gehe                       | Ethanol 96% | 22001291               | 1       |
| Gehe                       | Ethanol 96% | 23000175               | 1       |
| Gehe                       | Ethanol 96% | 23001968               | 1       |
| Gehe                       | Ethanol 96% | 25000305               | 1       |
| Gehe                       | Ethanol 96% | 25001144               | 1       |
| Gehe                       | Ethanol 96% | 25001980               | 2       |
| Gehe                       | Ethanol 96% | 23000997               | 1       |
| Gehe                       | Ethanol 96% | 20002439001            | 1       |
| Gehe                       | Ethanol 96% | DE00001237810          | 1       |
| Gehe                       | Ethanol 96% | LieferungMai2013       | 1       |
| GEHE                       | Ethanol 96% | 25000353               | 1       |
| GEHE                       | Ethanol 96% | 18181401               | 1       |
| GEHE                       | Ethanol 96% | 26000283               | 1       |
| GEHE                       | Ethanol 96% | 26001268               | 1       |
| Gehe am 18.02.2014         | Ethanol 96% | 20002191               | 1       |
| Gehe Laborchemie Apolda... | Ethanol 96% | 19000689               | 1       |
| Gehe/ Laborchemie Apolda   | Ethanol 96% | 26001268               | 1       |
| GEHE/ Spinnrad             | Ethanol 96% | 12532019/03122018      | 1       |
| Gehe/ApoldaGmbH            | Ethanol 96% | 24002163               | 1       |
| Caelo                      | Ethanol 96% | 22000392               | 1       |
| Caelo                      | Ethanol 96% | 23000998/1050816       | 1       |
| Caelo                      | Ethanol 96% | 19030202               | 5       |
| Gehe/Dr. Wollff            | Ethanol 96% | 21002237               | 2       |
| Gehe/Laborchemie Apolda    | Ethanol 96% | 23001368               | 1       |
| Gehe/Laborchemie Apolda    | Ethanol 96% | 20000973               | 1       |
| Gehe-Apolda                | Ethanol 96% | 2000/1895              | 1       |
| Gehe-Apolda                | Ethanol 96% | 20001885               | 1       |
| Geistreich                 | Ethanol 96% | 6042020                | 1       |
| Greif Apotheke             | Ethanol 96% | 3119A-0230             | 1       |
| Greif Apotheke             | Ethanol 96% | 4719E-0230             | 1       |
| Gutenberg-Apotheke         | Ethanol 96% | 904214                 | 1       |
| Hamburg Destilling Comp... | Ethanol 96% | KH0500                 | 1       |
| HDC                        | Ethanol 96% | 200421                 | 2       |
| hedinger                   | Ethanol 96% | 25001980               | 1       |
| Hedinger                   | Ethanol 96% | 22001720               | 1       |
| Hedinger                   | Ethanol 96% | 30013                  | 1       |
| Hedinger                   | Ethanol 96% | 701214B                | 4       |
| Hedinger / Anzag           | Ethanol 96% | 24000161               | 1       |
| Heidinger/ Noweda          | Ethanol 96% | 2215M                  | 1       |
| Henry Lamotte Oil / Gehe   | Ethanol 96% | 25001144               | 2       |
| Hessische Spezialitäten... | Ethanol 96% | 410_108_1501           | 1       |
| Hessische Spezialitäten... | Ethanol 96% | Sorte410Neutralalkohol | 1       |
| hetterich                  | Ethanol 96% | 3574702                | 1       |
| heyl                       | Ethanol 96% | 22001291               | 1       |
| heyl                       | Ethanol 96% | 24002163               | 1       |
| heyl                       | Ethanol 96% | 25000305               | 1       |
| heyl                       | Ethanol 96% | 25001144               | 1       |
| heyl                       | Ethanol 96% | 25001980               | 2       |
| Heyl                       | Ethanol 96% | 22000394               | 1       |
| Heyl                       | Ethanol 96% | 22000392               | 1       |
| Heyl                       | Ethanol 96% | 22001948               | 1       |
| Heyl                       | Ethanol 96% | 23000188               | 1       |
| Heyl                       | Ethanol 96% | 23000189               | 1       |
| Heyl                       | Ethanol 96% | 22001292               | 1       |
| Heyl                       | Ethanol 96% | 23001368               | 2       |
| Heyl                       | Ethanol 96% | 23000750               | 1       |

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| Supplier                   | Substance   | Batch      | Spectra |
|----------------------------|-------------|------------|---------|
| Heyl                       | Ethanol 96% | 24000856   | 2       |
| Heyl                       | Ethanol 96% | 24000163   | 1       |
| Heyl                       | Ethanol 96% | 24008630   | 1       |
| Heyl                       | Ethanol 96% | 25000305   | 2       |
| Heyl                       | Ethanol 96% | 25001144   | 1       |
| Heyl                       | Ethanol 96% | 25001980   | 1       |
| Heyl                       | Ethanol 96% | 26002066   | 1       |
| Heyl                       | Ethanol 96% | 27000539   | 1       |
| HEYL                       | Ethanol 96% | 23000749   | 1       |
| Heyl / AHD                 | Ethanol 96% | 20001830   | 1       |
| Heyl / Gehe                | Ethanol 96% | 27000531   | 1       |
| Heyl / Noweda              | Ethanol 96% | 23001368   | 1       |
| Heyl / Noweda              | Ethanol 96% | 26001268   | 1       |
| Heyl / Noweda              | Ethanol 96% | 26000285   | 1       |
| Heyl / Noweda              | Ethanol 96% | 27001078   | 1       |
| Heyl / Sanacorp            | Ethanol 96% | 21001379   | 1       |
| Heyl / Sanacorp            | Ethanol 96% | 21001373   | 1       |
| Heyl Laborchemie Apolda... | Ethanol 96% | 23002116   | 1       |
| Heyl(Laborchemie Apolda... | Ethanol 96% | 21002064   | 1       |
| Heyl/ Noweda               | Ethanol 96% | 24001427   | 1       |
| heyl/ Noweda               | Ethanol 96% | 23001968   | 2       |
| heyl/ Noweda               | Ethanol 96% | 24002259   | 1       |
| heyl/ Noweda               | Ethanol 96% | 25001955   | 1       |
| Heyl/ Phoenix              | Ethanol 96% | 24002163   | 4       |
| Heyl/ Phoenix              | Ethanol 96% | 23001368   | 1       |
| Heyl/ Sanacorp             | Ethanol 96% | 24001427   | 1       |
| Heyl/Alliance              | Ethanol 96% | 25001980   | 1       |
| Heyl/Anzag                 | Ethanol 96% | 22001291   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 22001717   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 22001948   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 24000863   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 25001138   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 25001144   | 1       |
| Heyl/Gehe                  | Ethanol 96% | 26000283   | 1       |
| Heyl/Noweda                | Ethanol 96% | 22000326   | 1       |
| Heyl/Noweda                | Ethanol 96% | 23000749   | 1       |
| Heyl/Noweda                | Ethanol 96% | 23002116   | 3       |
| Heyl/Noweda                | Ethanol 96% | 24000034   | 1       |
| Heyl/Noweda                | Ethanol 96% | 24001427   | 1       |
| Heyl/Noweda                | Ethanol 96% | 25001980   | 2       |
| Heyl/Noweda                | Ethanol 96% | 26002023   | 1       |
| Heyl/Phoenix               | Ethanol 96% | 21002268   | 1       |
| Heyl/Phoenix               | Ethanol 96% | 24002163   | 2       |
| Heyl/Phönix                | Ethanol 96% | 23000749   | 1       |
| Heyl/Phönix                | Ethanol 96% | 23001368   | 1       |
| Heyl/Sanacorp              | Ethanol 96% | 240001427  | 1       |
| Heyl/Sanacorp              | Ethanol 96% | 24001496   | 1       |
| Heyl/Sanacorp              | Ethanol 96% | 24002163   | 2       |
| Heyl/Sanacorp              | Ethanol 96% | 25000305   | 5       |
| Heyl/Sanacorp              | Ethanol 96% | 25001144   | 1       |
| Heyl/Sanacorp              | Ethanol 96% | 25001980   | 1       |
| Heyl/Sanacorp HI           | Ethanol 96% | 27000743   | 2       |
| Höfer chemie               | Ethanol 96% | 237398/0   | 1       |
| Höfer Chemie               | Ethanol 96% | 23739870   | 1       |
| Hoffmann                   | Ethanol 96% | 20160007   | 1       |
| Hoffmann                   | Ethanol 96% | 123456     | 1       |
| Hoffmann                   | Ethanol 96% | 28081201   | 1       |
| Hoffmann                   | Ethanol 96% | E-200412-1 | 2       |
| Hoffmann                   | Ethanol 96% | 16061405   | 1       |
| Hoffmann/ Martinus-Apot... | Ethanol 96% | E-060815-1 | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|----------------------------|------------------|----------------|----------------|
| Hoffmann/ Martinus-Apot... | Ethanol 96%      | E-231213-1     | 2              |
| Hoffmann/Schmittmann       | Ethanol 96%      | 20150108       | 1              |
| Hofmann                    | Ethanol 96%      | 20150278       | 1              |
| Hofmann,Branntweinmonopol  | Ethanol 96%      | 20140162       | 1              |
| Hofmann,Branntweinmonopol  | Ethanol 96%      | 20170160       | 1              |
| Hofmann/Schmittmann        | Ethanol 96%      | 20160007       | 1              |
| Hofmann/Schmittmann Korn   | Ethanol 96%      | 19/10/10       | 1              |
| Hofmann/Schmittmann Korn   | Ethanol 96%      | VE49528        | 1              |
| Honberg-Apo                | Ethanol 96%      | L27420         | 1              |
| Hubertus Apotheke          | Ethanol 96%      | 23001968       | 1              |
| Jovi Intern.UG /Buchmül... | Ethanol 96%      | VE49950        | 1              |
| K.J. Kost/Krieger          | Ethanol 96%      | 410220114066   | 1              |
| Kammer/Kirsch              | Ethanol 96%      | V131702621     | 1              |
| Kammer-Kirsch              | Ethanol 96%      | 120216         | 1              |
| Karl Josef Kost            | Ethanol 96%      | 410191018111   | 1              |
| Karl Josef Kost Alkohole   | Ethanol 96%      | 410150520132   | 1              |
| Karl JosefKost             | Ethanol 96%      | 410181217102   | 1              |
| Karl-Josef KG              | Ethanol 96%      | 410110117094   | 1              |
| Karl-Josef Kost            | Ethanol 96%      | 410040216085   | 1              |
| Karl-Josef Kost            | Ethanol 96%      | 410270917100   | 1              |
| Karl-Josef Kost            | Ethanol 96%      | 410181217102   | 1              |
| Karl-Josef Kost            | Ethanol 96%      | 410050319115   | 1              |
| Karl-Josef Kost            | Ethanol 96%      | 410310120126   | 1              |
| Karl-Josef Kost Alkohol... | Ethanol 96%      | 41004115082    | 1              |
| Karl-Josef Kost Alkohol... | Ethanol 96%      | 410190516087   | 1              |
| Karl-Josef Kost Alkohol... | Ethanol 96%      | 410070119113   | 1              |
| Karl-Josef Kost/Krieger    | Ethanol 96%      | 410181217102   | 1              |
| Karl-Josef Kost/Krieger    | Ethanol 96%      | 410310120126   | 4              |
| Karl-Josef-Kost            | Ethanol 96%      | 410070119113   | 1              |
| Karl-Josef-Kost            | Ethanol 96%      | 410230519117   | 1              |
| Kassner & Sasse            | Ethanol 96%      | 16/02/02       | 1              |
| Kassner & Sasse            | Ethanol 96%      | 12/11/23       | 1              |
| Kehr                       | Ethanol 96%      | 24000186       | 1              |
| Klenk                      | Ethanol 96%      | 10059387-15102 | 1              |
| Kornbrennerei J.J.Kemper   | Ethanol 96%      | 4000           | 1              |
| Kornbrennerei J.J.Kemper   | Ethanol 96%      | 1208           | 1              |
| kost                       | Ethanol 96%      | 410031212052   | 1              |
| Kost                       | Ethanol 96%      | 410300316086   | 1              |
| Kost                       | Ethanol 96%      | 410221116092   | 1              |
| Kost                       | Ethanol 96%      | 410130217095   | 1              |
| Kost                       | Ethanol 96%      | 410261017101   | 1              |
| Kost                       | Ethanol 96%      | 410200918110   | 1              |
| Kost                       | Ethanol 96%      | 410191018111   | 1              |
| Kost                       | Ethanol 96%      | 410160719-119  | 1              |
| Kost                       | Ethanol 96%      | 410071019122   | 1              |
| Kost Alkohole              | Ethanol 96%      | 410130217095   | 3              |
| Kost Alkohole              | Ethanol 96%      | 410050718107   | 1              |
| Kost Alkohole              | Ethanol 96%      | 410160719119   | 1              |
| Kost Koblenz               | Ethanol 96%      | 410240417096   | 1              |
| Kost Koblenz/ Krieger      | Ethanol 96%      | 410300119114   | 1              |
| Kost Koblenz/ Krieger      | Ethanol 96%      | 410251119124   | 1              |
| Kost Koblenz/ Krieger      | Ethanol 96%      | 410150420131   | 4              |
| Kost/13.12.13              | Ethanol 96%      | 410051213065   | 3              |
| Kost/kost/sophien          | Ethanol 96%      | 410051213065   | 2              |
| Kost/kost/sophien          | Ethanol 96%      | 4065280513     | 1              |
| Kost/Krieger/04.07.13      | Ethanol 96%      | 410040713061   | 2              |
| Kost/Krieger/05.12.13      | Ethanol 96%      | 410111113064   | 2              |
| Kost/Krieger/12.08.13      | Ethanol 96%      | 410130313059   | 2              |
| Kost/Krieger/18.03.14      | Ethanol 96%      | 410220114066   | 1              |
| Kost/Krieger/18.10.13      | Ethanol 96%      | 410081013063   | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|------------------|-------------------|----------------|
| Kost/Krieger/26.06.13      | Ethanol 96%      | 410140513060      | 1              |
| Kost/sophien               | Ethanol 96%      | 410010414067      | 1              |
| Kottkamp                   | Ethanol 96%      | 71026022          | 1              |
| Kottkamp Alkoholver.       | Ethanol 96%      | 120117/505/032    | 1              |
| Kottkamp Alkoholvertr.     | Ethanol 96%      | 230414            | 1              |
| Kottkamp Alkoholvertrieb   | Ethanol 96%      | 90318/505/044     | 1              |
| Kottkamp Alkoholvertrieb   | Ethanol 96%      | 71118/505/051     | 3              |
| Kottkamp Alkoholvertrieb   | Ethanol 96%      | 180213            | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 1512155050519     | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 211114/505/008    | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 160714/505/004    | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 1200117/505/032   | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 120117/505/32     | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 220817/505/038    | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 201017/505/040    | 3              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 21117/505/041     | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 221117/505/042    | 1              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 70218/505/043     | 2              |
| Kottkamp Alkoholvertrie... | Ethanol 96%      | 200918/505/050    | 2              |
| kottkamp,gehe              | Ethanol 96%      | 130513            | 1              |
| kottkamp/Anzag             | Ethanol 96%      | 61015/505/017     | 1              |
| Kottkamp/Anzag             | Ethanol 96%      | 130116/505/020    | 1              |
| Kottkamp/Direkt            | Ethanol 96%      | 4915A-03041       | 1              |
| Kottkamp/Gehe              | Ethanol 96%      | 121213            | 1              |
| Kottkamp/Phönix            | Ethanol 96%      | 151215/505/019    | 1              |
| Kraul & Wilkening u. St... | Ethanol 96%      | 270320/74282/037  | 1              |
| Kraul & Wilkening u. St... | Ethanol 96%      | 10420/122/001     | 2              |
| Kraul und Wilkening        | Ethanol 96%      | 281217/74282/008  | 1              |
| Kraul& Wilkening u. Ste... | Ethanol 96%      | 10420/122/001     | 1              |
| Kraul&Wilkening u.Stell... | Ethanol 96%      | 11/18             | 1              |
| Kraul&Wilkening u.Stell... | Ethanol 96%      | 3/19              | 1              |
| Kraul_Wi                   | Ethanol 96%      | 271119/74282/028  | 1              |
| Krieger / Kost / 27.08.13  | Ethanol 96%      | 410090813062      | 2              |
| Krugmann                   | Ethanol 96%      | 8124              | 1              |
| Krugmann                   | Ethanol 96%      | 1720              | 1              |
| Kullmanns Obstbrennerei    | Ethanol 96%      | 3146              | 1              |
| kwst                       | Ethanol 96%      | 10420/122/001     | 1              |
| KWST                       | Ethanol 96%      | 281217/74282/008  | 1              |
| KWST                       | Ethanol 96%      | 60219/74282/020   | 1              |
| KWST                       | Ethanol 96%      | 240519/74282/023  | 2              |
| KWST                       | Ethanol 96%      | 190618/74282/012  | 1              |
| KWST                       | Ethanol 96%      | 290819/74282/025  | 1              |
| KWST                       | Ethanol 96%      | 50220/74282/032   | 1              |
| KWST                       | Ethanol 96%      | 70220/015/001     | 1              |
| KWST                       | Ethanol 96%      | 190320/011/002    | 1              |
| KWST                       | Ethanol 96%      | 230320/011/003    | 1              |
| KWST                       | Ethanol 96%      | 10420/122/001     | 3              |
| KWST                       | Ethanol 96%      | 260320/011/004    | 1              |
| KWST                       | Ethanol 96%      | 64-17-5           | 1              |
| KWST Kraul & Wilkenin...   | Ethanol 96%      | 260320/011/004    | 1              |
| KWST / KWST                | Ethanol 96%      | 190618/74282/012  | 3              |
| KWST / KWST                | Ethanol 96%      | 1410197/74282/026 | 1              |
| KWST Kraul & Wilkening ... | Ethanol 96%      | 10420/122/001     | 1              |
| KWST/dpd                   | Ethanol 96%      | 231017/505/005    | 1              |
| KWST/KWST                  | Ethanol 96%      | 61119/74282/027   | 1              |
| Kwst/Walther CMP           | Ethanol 96%      | 290814            | 1              |
| Labochemie/ Phönix         | Ethanol 96%      | 24002163          | 1              |
| Labopharm/Sanacorp         | Ethanol 96%      | 25001144          | 1              |
| Laborch                    | Ethanol 96%      | 24001427          | 1              |
| Laborch. Apolda            | Ethanol 96%      | 18001881          | 1              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Laborch. Apolda/ Noweda     | Ethanol 96%      | 21002237     | 1              |
| Laborch. Apolda/ Noweda     | Ethanol 96%      | 22001291     | 1              |
| Laborch. Apolda/ Noweda     | Ethanol 96%      | 22001718     | 1              |
| Laborch. Apolda/ Noweda     | Ethanol 96%      | 23000997     | 1              |
| Laborch. Apolda/ Gehe       | Ethanol 96%      | 21002269     | 1              |
| Laborchemie                 | Ethanol 96%      | 21002244     | 1              |
| Laborchemie                 | Ethanol 96%      | 22001717     | 1              |
| Laborchemie                 | Ethanol 96%      | 24000856     | 1              |
| Laborchemie                 | Ethanol 96%      | 25000305     | 1              |
| Laborchemie                 | Ethanol 96%      | 27000531     | 1              |
| Laborchemie                 | Ethanol 96%      | 21000152     | 1              |
| Laborchemie / Alliance. . . | Ethanol 96%      | 26000283     | 1              |
| Laborchemie / Anzag         | Ethanol 96%      | 25001144     | 2              |
| Laborchemie / Noweda        | Ethanol 96%      | 26002023     | 2              |
| Laborchemie / Noweda        | Ethanol 96%      | 20001830     | 1              |
| Laborchemie / Sanacorp      | Ethanol 96%      | 22001717     | 1              |
| laborchemie abolda gmbh     | Ethanol 96%      | 19112005     | 1              |
| Laborchemie Apolda/Pho. . . | Ethanol 96%      | 26002066     | 1              |
| Laborchemie Apold GmbH      | Ethanol 96%      | 21002269     | 1              |
| Laborchemie Apold GmbH      | Ethanol 96%      | 22001948     | 1              |
| Laborchemie Apold GmbH      | Ethanol 96%      | 23001968     | 1              |
| laborchemie apolda          | Ethanol 96%      | 25001144     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 21002075     | 3              |
| Laborchemie Apolda          | Ethanol 96%      | 21002244     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 22000394     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 22000616     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 22000999     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 22001385     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 23000997     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 23000188     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 24000161     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 24000188     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 23002116     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 24000186     | 4              |
| Laborchemie Apolda          | Ethanol 96%      | 24002163     | 3              |
| Laborchemie Apolda          | Ethanol 96%      | 25000305     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 24002259     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 25001144     | 3              |
| Laborchemie Apolda          | Ethanol 96%      | 25000361     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 25001138     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 26000264     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 26000327     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 26000285     | 3              |
| Laborchemie Apolda          | Ethanol 96%      | 26001277     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 26001211     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 27000593     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 27000604     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 27000675     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 270000604    | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 19001519     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 20000071     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 20001199     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 20001886     | 2              |
| Laborchemie Apolda          | Ethanol 96%      | 20001885     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 20000065     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 20002191     | 1              |
| Laborchemie Apolda          | Ethanol 96%      | 17041401     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Laborchemie Apolda         | Ethanol 96%      | 21000152     | 2              |
| Laborchemie Apolda         | Ethanol 96%      | 21000197     | 1              |
| Laborchemie Apolda         | Ethanol 96%      | 21001054     | 1              |
| Laborchemie Apolda         | Ethanol 96%      | 22001720     | 1              |
| Laborchemie APOLDA         | Ethanol 96%      | 23000780     | 1              |
| Laborchemie APOLDA         | Ethanol 96%      | 23000998     | 1              |
| Laborchemie APOLDA         | Ethanol 96%      | 25000361     | 1              |
| Laborchemie APOLDA         | Ethanol 96%      | 21002269     | 1              |
| Laborchemie Apolda ,Gehe   | Ethanol 96%      | 21002075     | 1              |
| Laborchemie Apolda ,Gehe   | Ethanol 96%      | 22000641     | 1              |
| Laborchemie Apolda ,Gehe   | Ethanol 96%      | 24002263     | 1              |
| Laborchemie Apolda / S...  | Ethanol 96%      | 26001268     | 1              |
| Laborchemie Apolda / Gehe  | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda / Gehe  | Ethanol 96%      | 26000285     | 1              |
| Laborchemie Apolda / No... | Ethanol 96%      | 26001211     | 1              |
| Laborchemie Apolda / No... | Ethanol 96%      | 26002023     | 1              |
| Laborchemie apolda /Now... | Ethanol 96%      | CHB26001998  | 1              |
| laborchemie apolda gmbh    | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda gmbh    | Ethanol 96%      | 22002230     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 22000394     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 21002269     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 21002268     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 22001985     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23000188     | 3              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 22002231     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 21001736     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23000749     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 22000616     | 2              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23002116     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24000187     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23001357     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24001427     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24000856     | 2              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24000186     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24001494     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 25000305     | 4              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 24002163     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 25000361     | 2              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 25001139     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 25001144     | 2              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 23000189     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 26001277     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 27000531     | 2              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 27000539     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 27000593     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 19001937     | 1              |
| Laborchemie Apolda GmbH    | Ethanol 96%      | 21000154     | 1              |
| Laborchemie Apolda GMBH    | Ethanol 96%      | 220001       | 1              |
| Laborchemie Apolda GMBH    | Ethanol 96%      | 24000856     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 22001291     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 22000616     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 23000997     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 23002116     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 25000361     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 25001980     | 1              |
| Laborchemie APOLDA GmbH    | Ethanol 96%      | 21001561     | 1              |
| LABORCHEMIE APOLDA GmbH    | Ethanol 96%      | 24002259     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Laborchemie Apolda GmbH... | Ethanol 96%      | 21001561     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 25000305     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 29000309     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24001427     | 1              |
| LABORCHEMIE APOLDA GmbH... | Ethanol 96%      | 23001968     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 220030       | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23000749     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24001427     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 26000327     | 1              |
| Laborchemie Apolda GMBH... | Ethanol 96%      | 21002244     | 1              |
| LABORCHEMIE APOLDA GmbH... | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 260001277    | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 27000561     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24001494     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 25000361     | 2              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 25001955     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 26000283     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 22000616     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 27000675     | 1              |
| laborchemie apolda gmbh... | Ethanol 96%      | 25001144     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23001357     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24000187     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24000927     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 25001954     | 1              |
| LABORCHEMIE APOLDA GmbH... | Ethanol 96%      | 25000361     | 2              |
| LABORCHEMIE APOLDA GmbH... | Ethanol 96%      | 25001955     | 1              |
| LABORCHEMIE APOLDA GmbH... | Ethanol 96%      | 26000283     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24001427     | 1              |
| Laborchemie Apolda GMBH... | Ethanol 96%      | 22001985     | 1              |
| Laborchemie Apolda GMBH... | Ethanol 96%      | 25000305     | 1              |
| Laborchemie APOLDA gmbH... | Ethanol 96%      | 24000863     | 1              |
| Laborchemie APOLDA GmbH... | Ethanol 96%      | 25000305     | 1              |
| Laborchemie APOLDA GmbH... | Ethanol 96%      | 21002237     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23000749     | 3              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23002116     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 24001427     | 1              |
| Laborchemie Apolda GmbH... | Ethanol 96%      | 27000675     | 1              |
| Laborchemie Apolda Heyl    | Ethanol 96%      | 20001885     | 1              |
| Laborchemie Apolda Heyl    | Ethanol 96%      | 27000934     | 1              |
| Laborchemie Apolda Heyl... | Ethanol 96%      | 24000186     | 1              |
| Laborchemie Apolda Heyl... | Ethanol 96%      | 20001887     | 1              |
| Laborchemie Apolda über... | Ethanol 96%      | 21001964     | 1              |
| Laborchemie Apolda über... | Ethanol 96%      | 22002230     | 1              |
| Laborchemie Apolda über... | Ethanol 96%      | 23000997     | 1              |
| Laborchemie Apolda/ AHD    | Ethanol 96%      | 25000461     | 1              |
| Laborchemie Apolda/ All... | Ethanol 96%      | 24000187     | 1              |
| Laborchemie Apolda/ All... | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda/ All... | Ethanol 96%      | 24001427     | 1              |
| Laborchemie Apolda/ All... | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apolda/ Now... | Ethanol 96%      | 23000750     | 6              |
| Laborchemie Apolda/ Now... | Ethanol 96%      | 23001785     | 4              |
| Laborchemie Apolda/ Now... | Ethanol 96%      | 25000353     | 1              |
| Laborchemie Apolda/ Now... | Ethanol 96%      | 25001954     | 1              |
| Laborchemie Apolda/ Now... | Ethanol 96%      | 26000327     | 1              |
| Laborchemie APOLDA/ Now... | Ethanol 96%      | 20001574     | 1              |
| Laborchemie Apolda/ San... | Ethanol 96%      | 22002231     | 1              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Laborchemie Apolda/AHD      | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda/Alli...  | Ethanol 96%      | 22001291     | 1              |
| Laborchemie Apolda/Alli...  | Ethanol 96%      | 22000392     | 1              |
| Laborchemie Apolda/Anzag    | Ethanol 96%      | 25001980     | 1              |
| Caelo                       | Ethanol 96%      | 22001718     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 22000394     | 2              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 23001357     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 24002163     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 24002263     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 25001980     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 26001277     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 26001268     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 27000531     | 1              |
| Laborchemie Apolda/Gehe     | Ethanol 96%      | 27000934     | 1              |
| Laborchemie Apolda/Gehe...  | Ethanol 96%      | 25000305     | 1              |
| Laborchemie Apolda/Gehe...  | Ethanol 96%      | 26000283     | 1              |
| Laborchemie Apolda/Gehe...  | Ethanol 96%      | 27000531     | 1              |
| Laborchemie apolda/gehe...  | Ethanol 96%      | 27000743     | 1              |
| Laborchemie Apolda/Gehe...  | Ethanol 96%      | 26001268     | 1              |
| Laborchemie Apolda/Gehe...  | Ethanol 96%      | 27001078     | 1              |
| Laborchemie Apolda/Greif    | Ethanol 96%      | 27000934     | 1              |
| Laborchemie Apolda/Jenn...  | Ethanol 96%      | 20002191     | 1              |
| Laborchemie Apolda/Jenn...  | Ethanol 96%      | 12345        | 4              |
| Laborchemie Apolda/Krie...  | Ethanol 96%      | 25000305     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 22000086     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 23000997     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 24000102     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 24001427     | 2              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 25000305     | 2              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 24002163     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 25001139     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 26000285     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apolda/Noweda   | Ethanol 96%      | 20000974     | 1              |
| Laborchemie Apolda/Phoe...  | Ethanol 96%      | 21001736     | 1              |
| Laborchemie Apolda/Phoe...  | Ethanol 96%      | 22001948     | 2              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 22001291     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 22000392     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 21002268     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 24000186     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 25000305     | 1              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 18181401     | 2              |
| Laborchemie Apolda/Phönix   | Ethanol 96%      | 21000152     | 1              |
| LABORCHEMIE APOLDA/PHÖNIX   | Ethanol 96%      | 23001968     | 1              |
| Laborchemie Apolda/Sana     | Ethanol 96%      | 23000780     | 1              |
| Laborchemie Apolda/Sana...  | Ethanol 96%      | 22000999     | 1              |
| Laborchemie Apolda/Sana...  | Ethanol 96%      | 26000283     | 1              |
| Laborchemie Apolda/Span...  | Ethanol 96%      | 25000361     | 1              |
| Laborchemie ApoldaGmbH      | Ethanol 96%      | 25001144     | 2              |
| Laborchemie Apoldal, Sa...  | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Apoldo GmbH     | Ethanol 96%      | 22002231     | 1              |
| Laborchemie Apolida GmbH... | Ethanol 96%      | 23001368     | 1              |
| Laborchemie Apolida GmbH... | Ethanol 96%      | 24002163     | 1              |
| Laborchemie Heyl            | Ethanol 96%      | 25001955     | 1              |
| Laborchemie Heyl            | Ethanol 96%      | 26000264     | 1              |
| Laborchemie Heyl Apolda...  | Ethanol 96%      | 24000863     | 1              |
| Laborchemie Heyl Apolda...  | Ethanol 96%      | 26002023     | 1              |
| Laborchemie Heyl/Noweda     | Ethanol 96%      | 23001968     | 1              |
| Laborchemie/ Phönix         | Ethanol 96%      | 23000997     | 1              |

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| Supplier                   | Substance   | Batch                | Spectra |
|----------------------------|-------------|----------------------|---------|
| LABORCHEMIE/1              | Ethanol 96% | 25001955             | 1       |
| Laborchemie/Gehe           | Ethanol 96% | 22000603             | 3       |
| Laborchemie/Gehe           | Ethanol 96% | 23001368             | 1       |
| Laborchemie/Gehe           | Ethanol 96% | 24001427             | 1       |
| Laborchemie/Gehe           | Ethanol 96% | 24000920             | 2       |
| Laborchemie/Gehe           | Ethanol 96% | 25000305             | 2       |
| Laborchemie/Gehe           | Ethanol 96% | 26000283             | 1       |
| Laborchemie/Gehe           | Ethanol 96% | 26000285             | 2       |
| Laborchemie/Gehe           | Ethanol 96% | 20000305             | 3       |
| Laborchemie/Gehe           | Ethanol 96% | 20000071             | 1       |
| LABORCHEMIE/Gehe           | Ethanol 96% | 23000750             | 1       |
| LABORCHEMIE/Gehe           | Ethanol 96% | 24000856             | 1       |
| LABORCHEMIE/Gehe           | Ethanol 96% | 24000163             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 19001836             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 24000034             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 24000186             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 24000856             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 24000187             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 25001980             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 27000675             | 1       |
| Laborchemie/Noweda         | Ethanol 96% | 22000161             | 1       |
| LaborChemie/Noweda         | Ethanol 96% | 23000997             | 1       |
| Laborchemie/Sanacorp       | Ethanol 96% | 22000616             | 1       |
| Laborchemie/Sanacorp       | Ethanol 96% | 25000305             | 1       |
| Laborchemie/Sanacorp       | Ethanol 96% | 25001144             | 1       |
| Laborchemie/Sanacorp       | Ethanol 96% | 26000285             | 1       |
| LaborchemieApolda GmbH/... | Ethanol 96% | 20000306             | 1       |
| LaborchemieApolda GmbH/... | Ethanol 96% | 23001357             | 1       |
| LaborchemieApolda GmbH/... | Ethanol 96% | 25000361             | 1       |
| LaborchemieApolda GmbH/... | Ethanol 96% | 25001955             | 1       |
| LaborchemieApolda GmbH/... | Ethanol 96% | 19002422             | 1       |
| LaborchemieApolda/Phönix   | Ethanol 96% | 21000152             | 1       |
| LaborchemieApolda/Sanac... | Ethanol 96% | 21001053             | 1       |
| Lamotte/PX                 | Ethanol 96% | 200201121            | 1       |
| Larborchemie Apolda GMBH   | Ethanol 96% | 23002116             | 1       |
| Lautergold/Lauter-Berns... | Ethanol 96% | 35110                | 1       |
| Merck                      | Ethanol 96% | K45475971            | 1       |
| Merck                      | Ethanol 96% | 137K16157910         | 1       |
| Merck                      | Ethanol 96% | k47190371548         | 1       |
| Merck                      | Ethanol 96% | I1054067             | 2       |
| Merck                      | Ethanol 96% | K43729871232         | 3       |
| Merck                      | Ethanol 96% | K44538471324         | 1       |
| Merck                      | Ethanol 96% | 45056971             | 1       |
| Merck                      | Ethanol 96% | 10994871912          | 1       |
| Merck                      | Ethanol 96% | Index-No603-002-00-5 | 1       |
| Merck                      | Ethanol 96% | K47002671535         | 1       |
| Merck                      | Ethanol 96% | I0994871912          | 1       |
| Merck                      | Ethanol 96% | K48293171636         | 1       |
| Merck                      | Ethanol 96% | K45475971416         | 3       |
| Th. Geyer                  | Ethanol 96% | I1075571009          | 1       |
| Merck                      | Ethanol 96% | 1009711000           | 1       |
| Merck                      | Ethanol 96% | K46405471507         | 2       |
| Merck                      | Ethanol 96% | 11054071944          | 1       |
| Miller                     | Ethanol 96% | 1413040904/16042013  | 1       |
| Miller Alkoholvertrieb ... | Ethanol 96% | 20982018/05122017    | 1       |
| Miller Alkoholvertrieb ... | Ethanol 96% | 410-103-150508/26052 | 1       |
| Monopolstelle Jenne        | Ethanol 96% | J150114              | 1       |
| Movera GmbH                | Ethanol 96% | 9972161              | 1       |
| Movera GmbH                | Ethanol 96% | 9972601              | 1       |
| Mundo                      | Ethanol 96% | 1410T31150615        | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|------------------|-------------------|----------------|
| Mundo                      | Ethanol 96%      | 20142             | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31141015     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31160316     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31260716     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31281216     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31090617     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31241018     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31041219     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31010420     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31060513     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31120813     | 1              |
| Mundo OHG                  | Ethanol 96%      | 1410T31191113     | 1              |
| Mundo oHG/AH               | Ethanol 96%      | 1410T31040417     | 1              |
| Mundo oHG/AH               | Ethanol 96%      | 1410T31010719     | 1              |
| Mundo/AHD                  | Ethanol 96%      | 1410T31070815     | 1              |
| Mundo/AHD                  | Ethanol 96%      | 1410T31030516     | 1              |
| mandoOHG                   | Ethanol 96%      | 1410T31260218     | 1              |
| Nachgeprüft Karl-Josef     | Ethanol 96%      | 818N03041         | 1              |
| Nordbrand Nordhausen       | Ethanol 96%      | UN1170            | 2              |
| Nordbrand Nordhausen GmbH  | Ethanol 96%      | 200914-1          | 1              |
| Nordhausen                 | Ethanol 96%      | B32/26052020      | 2              |
| Nordhausen                 | Ethanol 96%      | B32/27072020      | 1              |
| Nordhäuser                 | Ethanol 96%      | 200404-1          | 1              |
| Noweda                     | Ethanol 96%      | 24000856          | 1              |
| Noweda                     | Ethanol 96%      | N781706124        | 3              |
| Noweda                     | Ethanol 96%      | 25000305          | 2              |
| Noweda                     | Ethanol 96%      | 19030201          | 1              |
| Noweda                     | Ethanol 96%      | 19129501          | 1              |
| Noweda                     | Ethanol 96%      | 26002023          | 1              |
| Noweda                     | Ethanol 96%      | 19000643001       | 1              |
| Noweda                     | Ethanol 96%      | 20002439001       | 1              |
| Noweda                     | Ethanol 96%      | 19001935          | 1              |
| Noweda                     | Ethanol 96%      | 1202124           | 2              |
| Noweda                     | Ethanol 96%      | 19002422          | 1              |
| Noweda                     | Ethanol 96%      | 19000663          | 1              |
| Noweda                     | Ethanol 96%      | 21000197          | 1              |
| Noweda / Aploda            | Ethanol 96%      | 21000197          | 1              |
| Noweda / Apolda            | Ethanol 96%      | 20000974          | 1              |
| Noweda 04.08.15            | Ethanol 96%      | 22000616          | 1              |
| Noweda/Heyl                | Ethanol 96%      | 25001144          | 1              |
| Noweda/Labochemie          | Ethanol 96%      | 20001566          | 1              |
| Noweda/Laborchem. Apolda   | Ethanol 96%      | 23001055          | 4              |
| Noweda/laborchemie Apolda  | Ethanol 96%      | 21002237          | 1              |
| Otto Fischar GmbH & Co KG  | Ethanol 96%      | 7150032           | 1              |
| Overlack                   | Ethanol 96%      | 1089417           | 1              |
| Phoenix                    | Ethanol 96%      | 21001561          | 1              |
| Phoenix                    | Ethanol 96%      | 3204              | 2              |
| Phoenix                    | Ethanol 96%      | 19030201          | 2              |
| Phoenix                    | Ethanol 96%      | 19129502          | 2              |
| Phoenix                    | Ethanol 96%      | 19000643001       | 1              |
| Phoenix                    | Ethanol 96%      | 200000973         | 1              |
| Phoenix Goettin            | Ethanol 96%      | 21002269          | 1              |
| Phoenix/ Laborchemie Ap... | Ethanol 96%      | 25000305          | 1              |
| Caelo                      | Ethanol 96%      | 200002439001      | 1              |
| Phoenix/Laborchemie APO... | Ethanol 96%      | 23000188          | 1              |
| Phönix                     | Ethanol 96%      | 18122017/25112016 | 1              |
| Phönix                     | Ethanol 96%      | 24002163          | 1              |
| Phönix                     | Ethanol 96%      | 18181402          | 1              |
| Phönix                     | Ethanol 96%      | 18191701          | 2              |
| Phönix                     | Ethanol 96%      | 18191702          | 2              |

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| Supplier                   | Substance   | Batch          | Spectra |
|----------------------------|-------------|----------------|---------|
| Phönix                     | Ethanol 96% | 26000285       | 1       |
| Phönix                     | Ethanol 96% | 20003544001    | 2       |
| Phönix / Heyl              | Ethanol 96% | 24000856       | 1       |
| Phönix 06.2.15             | Ethanol 96% | 21002075       | 1       |
| Phönix, Caesar&Loretz G... | Ethanol 96% | 19000643001    | 1       |
| Phönix/ Apolda             | Ethanol 96% | 24001427       | 1       |
| Phönix/berkel              | Ethanol 96% | 130208         | 1       |
| Phönix/Cealo               | Ethanol 96% | 18181401       | 1       |
| Fagron                     | Ethanol 96% | 22000096       | 1       |
| Phönix/Heyl                | Ethanol 96% | 24000863       | 1       |
| Post-Apotheke              | Ethanol 96% | 111a-02304     | 1       |
| PVL                        | Ethanol 96% | 1204131        | 1       |
| Rondell Apotheke           | Ethanol 96% | 410040216085   | 1       |
| Sana/Laborchemie           | Ethanol 96% | 260000283      | 1       |
| Sanacop                    | Ethanol 96% | 23000780       | 1       |
| sanacorp                   | Ethanol 96% | K40787471      | 1       |
| Sanacorp                   | Ethanol 96% | 21002268       | 1       |
| Sanacorp                   | Ethanol 96% | 24001427       | 1       |
| Sanacorp                   | Ethanol 96% | 25001138       | 1       |
| Sanacorp                   | Ethanol 96% | 25001980       | 1       |
| Sanacorp                   | Ethanol 96% | 21001560       | 2       |
| Sanacorp                   | Ethanol 96% | 20001830       | 1       |
| Sanacorp                   | Ethanol 96% | 20001574       | 1       |
| Sanacorp/ Laborchemie A... | Ethanol 96% | 24002163       | 1       |
| Caelo                      | Ethanol 96% | AKD7           | 1       |
| SAV LP                     | Ethanol 96% | 601826         | 1       |
| Schlitzer Destillerie      | Ethanol 96% | 1430T34090817  | 1       |
| Schmittmann                | Ethanol 96% | 20150108       | 1       |
| Schmittmann Gmbh           | Ethanol 96% | 20160426       | 1       |
| Schmittmann Gmbh           | Ethanol 96% | 20130105       | 1       |
| Schmittmann GmbH           | Ethanol 96% | 2041503        | 1       |
| Schmittmann GmbH           | Ethanol 96% | 20140100       | 1       |
| Schmittmann/Hoffmann       | Ethanol 96% | 20020112-1     | 1       |
| Senge& Butz GmbH WE: 0...  | Ethanol 96% | 41209          | 1       |
| Sonnen-Apotheke Wefensl... | Ethanol 96% | VE42671-1530   | 1       |
| Sonnenberg/Zentrum         | Ethanol 96% | 4711E-03041    | 1       |
| Sophien AM/ Karl-Josef ... | Ethanol 96% | 410040121138   | 5       |
| sophien arzneimittel       | Ethanol 96% | 410191018111   | 1       |
| Sophien Arzneimittel       | Ethanol 96% | 410120320128   | 1       |
| Sophien-AM / K.J.Kost      | Ethanol 96% | 410041115082   | 1       |
| Sophien-Arzneimittel Kost  | Ethanol 96% | 410090617097   | 1       |
| Spangro/Laborchemie Apo... | Ethanol 96% | 20001583       | 1       |
| spinnrad                   | Ethanol 96% | 815310072      | 1       |
| Spinnrad                   | Ethanol 96% | 1017310124     | 1       |
| Spinnrad                   | Ethanol 96% | 317310072      | 1       |
| Spinnrad                   | Ethanol 96% | 713310072      | 1       |
| Spinnrad/Gehe              | Ethanol 96% | 919310072      | 1       |
| Spinnrad/Noweda            | Ethanol 96% | 1017310073     | 1       |
| steuerfreier Alkohol       | Ethanol 96% | 19032020       | 1       |
| Taoasis                    | Ethanol 96% | VE36425-122428 | 1       |
| Taoasis                    | Ethanol 96% | 122428         | 1       |
| Taoasis                    | Ethanol 96% | VE40497-128163 | 2       |
| Taoasis                    | Ethanol 96% | VE42394-1530   | 1       |
| TAOASIS                    | Ethanol 96% | VE39261-125696 | 1       |
| Taoasis/K                  | Ethanol 96% | VE30892-112552 | 1       |
| Taoasis / G                | Ethanol 96% | VE31397-114015 | 1       |
| TC284_011018/Berkel        | Ethanol 96% | 1410T31091018  | 1       |
| Tereos 20131470D           | Ethanol 96% | 1410T31040613  | 1       |
| Tereos, Origny/ Berkel ... | Ethanol 96% | 19/12/11-1     | 1       |
| Tereos, Origny/ Berkel ... | Ethanol 96% | 20/03/27       | 1       |

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| Supplier                   | Substance   | Batch          | Spectra |
|----------------------------|-------------|----------------|---------|
| Tereos,Origny/ Kassner&... | Ethanol 96% | 17/02/08       | 1       |
| Tereos/ Berkel AHK Alko... | Ethanol 96% | 90119/018      | 1       |
| Tereos/Berkel AHK          | Ethanol 96% | 31115/705      | 1       |
| Tereos/Berkel AHK          | Ethanol 96% | 1410T31140217  | 1       |
| Tereos/Berkel AHK          | Ethanol 96% | 101017/884     | 1       |
| Tereos/Berkel AHK          | Ethanol 96% | 1410T31151117  | 1       |
| Tereos/BERKEL AHK          | Ethanol 96% | 1410T31060717  | 1       |
| Tereos/BERKEL AHK          | Ethanol 96% | 1410T31291117  | 1       |
| T-o-f / Walter CMP         | Ethanol 96% | 41119/505/062  | 1       |
| VDL                        | Ethanol 96% | K43005871151   | 1       |
| Caelo                      | Ethanol 96% | K43619871227   | 1       |
| VWR                        | Ethanol 96% | 16E034127      | 1       |
| VWR                        | Ethanol 96% | I0962467       | 2       |
| W. Hoffmann/Noweda         | Ethanol 96% | 20120106       | 1       |
| Walter CMP                 | Ethanol 96% | 1809-013       | 1       |
| Walter CMP                 | Ethanol 96% | 41119/505/062  | 1       |
| Walter CMP                 | Ethanol 96% | 40320/504/056  | 1       |
| Walter CMP                 | Ethanol 96% | 200320-505-066 | 1       |
| Walter CMP GmbH            | Ethanol 96% | 40320          | 1       |
| Walter CMP GmbH            | Ethanol 96% | 40320/504/056  | 3       |
| Walter-CMP                 | Ethanol 96% | 200320-505-066 | 2       |
| Walter-CMP + Co. KG        | Ethanol 96% | 200320/505/066 | 1       |
| Walter-CMP + Co. KG        | Ethanol 96% | 40320/504/056  | 1       |
| WalterCMP GmbH und CO.KG   | Ethanol 96% | 120419/505/047 | 2       |
| Walter-CMP GmbH&Co.KG ...  | Ethanol 96% | 200320/505/066 | 1       |
| Weinhaus Schenk            | Ethanol 96% | 18032020       | 1       |
| wepa                       | Ethanol 96% | 1820462779     | 1       |
| Werner Hoffmann            | Ethanol 96% | 7081503        | 1       |
| Werner Hoffmann            | Ethanol 96% | VE49528        | 1       |
| Werner Hoffmann            | Ethanol 96% | 20130033       | 1       |
| Werner Hofmann             | Ethanol 96% | 15071707       | 1       |
| Werner Hofmann             | Ethanol 96% | 20170160       | 2       |
| Werner Hofmann             | Ethanol 96% | 5031809        | 1       |
| Werner Hofmann             | Ethanol 96% | 29061804       | 1       |
| Werner Hofmann             | Ethanol 96% | 18/02/09       | 1       |
| Werner Hofmann             | Ethanol 96% | 5121821        | 1       |
| Werner Hofmann             | Ethanol 96% | 18/09/26-1     | 2       |
| Werner Hofmann             | Ethanol 96% | 17/09/07-1     | 1       |
| Werner Hofmann             | Ethanol 96% | 19/10/10       | 1       |
| Werner Hofmann             | Ethanol 96% | 8021304        | 1       |
| Werner Hofmann             | Ethanol 96% | 20120106       | 1       |
| Werner Hofmann             | Ethanol 96% | 30091302       | 1       |
| Werner Hofmann             | Ethanol 96% | 111111         | 1       |
| Werner Hofmann             | Ethanol 96% | 20150278       | 1       |
| Werner Hofmann / Schmit... | Ethanol 96% | 41019/02/20    | 1       |
| Werner Hofmann / Schmit... | Ethanol 96% | 19/10/10       | 1       |
| Werner Hofmann, Vertrie... | Ethanol 96% | Corona02024030 | 1       |
| Werner Hofmann/Werner H... | Ethanol 96% | 20150278       | 1       |
| Wilhelm-Apotheke           | Ethanol 96% | 80318/E        | 1       |
| Wittenberger Destillati... | Ethanol 96% | 300320WDG      | 1       |
| Agraralkohol AG München    | Ethanol 96% |                | 1       |
| Bergchemie                 | Ethanol 96% |                | 1       |
| Berkel                     | Ethanol 96% |                | 1       |
| BfB-Betrieb München        | Ethanol 96% |                | 1       |
| Bimmer                     | Ethanol 96% |                | 2       |
| BMV Branntwein             | Ethanol 96% |                | 5       |
| BrüggemannAlcohol GmbH/... | Ethanol 96% |                | 1       |
| Bundesmonopolverwaltung... | Ethanol 96% |                | 5       |
| Caelo                      | Ethanol 96% |                | 12      |
| Direktbestellung/Martin... | Ethanol 96% |                | 2       |

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| Supplier                   | Substance   | Batch    | Spectra |
|----------------------------|-------------|----------|---------|
| eal Euro-Alkohol           | Ethanol 96% |          | 1       |
| Emil Scheibel Schwarzwa... | Ethanol 96% |          | 2       |
| Fagron                     | Ethanol 96% |          | 1       |
| Fiebig                     | Ethanol 96% |          | 2       |
| Gehe Kassel                | Ethanol 96% |          | 1       |
| HB Alkoholvertrieb         | Ethanol 96% |          | 1       |
| Heyl / Sanacorp            | Ethanol 96% |          | 1       |
| Hofmann,Branntweinmonopol  | Ethanol 96% |          | 1       |
| Kammer Kirschner           | Ethanol 96% |          | 1       |
| Kraul und Wilkening        | Ethanol 96% |          | 1       |
| Kraul&Wilkening und Ste... | Ethanol 96% |          | 1       |
| Kraul-Wilkening-Stellin... | Ethanol 96% |          | 1       |
| Laborchemie                | Ethanol 96% |          | 1       |
| Laborchemie Apolda         | Ethanol 96% | 24001427 | 2       |
| Merck                      | Ethanol 96% |          | 1       |
| Mundo                      | Ethanol 96% |          | 1       |
| NACHPRÜFUNG ...            | Ethanol 96% |          | 1       |
| NACHPRÜFUNG Charge 2210... | Ethanol 96% |          | 1       |
| Nordbrand Nordhausen       | Ethanol 96% |          | 2       |
| Euro OTC                   | Ethanol 96% |          | 1       |
| prima Sprit                | Ethanol 96% |          | 1       |
| Rum Albrecht-Bad Bevensen  | Ethanol 96% |          | 1       |
| Sanacorp                   | Ethanol 96% |          | 1       |
| Sonnen-Apotheke Wefensl... | Ethanol 96% |          | 1       |
| Werner Hoffmann            | Ethanol 96% |          | 1       |
|                            | Ethanol 96% |          | 4       |
| xxx                        | Ethanol 96% |          | 1       |

- 239 653 spectra from 1121 *Apo-Ident* customers from a total of 46 303 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Ethanol 96%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Ethanol 96%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 180           | 0              | 63 759        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 1693          | 17             | 239 617       |

The substance/substance group *Ethanol 96%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6839 %) | 99.0058 % (> 98.8304 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Ethanol 96%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance          | Distance in<br>main model | Distance in<br>second-stage model |
|--------------------|---------------------------|-----------------------------------|
| Coal tar spirit SR | 20.50                     | —                                 |
| Dexpantenol        | 54.06                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Ethanol 96%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31488     | 31488                  | 0.00                            | 55.10                              |
| 33852     | 34457                  | 4.04                            | 52.82                              |
| 34330     | 34330                  | 0.00                            | 53.44                              |
| 34457     | 34457                  | 0.00                            | 52.88                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Ether**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31651-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Ether; Aether

### Special notes

When selecting the *Ether* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Ether                     | 4      | 2      | 141    |

### Second-stage model

For differentiation of the substance/substance group *Ether* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Ether*:

| Supplier     | Substance | Batch   | Sample ID | Spectra | Certificate |
|--------------|-----------|---------|-----------|---------|-------------|
| Hedinger     | Ether     | 052159  | 31854     | 60      | 9337        |
| Hedinger     | Ether     | 052161  | 33214     | 40      | 20160621    |
| Otto Fischar | Ether     | 5975088 | 31855     | 60      | 20150817    |
| Otto Fischar | Ether     | 5977054 | 33633     | 40      | 20170524    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 200 spectra of 4 reference samples from the substance/substance group *Ether*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 739 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Ether*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch  | Sample ID | Spectra |
|----------|-----------|--------|-----------|---------|
| Hedinger | Ether     | 052162 | 34122     | 40      |
| Hedinger | Ether     | 052166 | 35261     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were

recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 373 spectra from 180 *Apo-Ident* customers from 143 batches from the substance/substance group *Ether*.
- Among them are spectra of independent samples from 141 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance | Batch    | Spectra |
|----------------------------|-----------|----------|---------|
| Otto Fischer GmbH & Co...  | Ether     | 5978012  | 1       |
| Aallianc. Healthc. / Fi... | Ether     | 5798015  | 1       |
| AH/Fischar                 | Ether     | 5976061  | 1       |
| Allianc. Health. / Otto... | Ether     | 597606B  | 1       |
| Alliance Healthcare/Anzag  | Ether     | 597806A  | 1       |
| Alliance Healthcare/Anzag  | Ether     | 597806B  | 1       |
| Alliance Healthcare/Fis... | Ether     | 5973065  | 1       |
| Alliance Healthcare/Fis... | Ether     | 597401A  | 1       |
| Caelo                      | Ether     | 597606B  | 2       |
| Caelo                      | Ether     | 52163    | 2       |
| Caelo                      | Ether     | 5978017  | 1       |
| Caelo                      | Ether     | 5977057  | 1       |
| Caelo                      | Ether     | 28051304 | 1       |
| Caelo                      | Ether     | 5974058  | 1       |
| Caelo                      | Ether     | 5976064  | 1       |
| Caelo                      | Ether     | 52156    | 1       |
| Caelo                      | Ether     | 5977016  | 5       |
| Caelo                      | Ether     | 5976063  | 1       |
| Caelo                      | Ether     | 5974015  | 1       |
| Caelo                      | Ether     | 597306B  | 1       |
| Caelo                      | Ether     | 52161    | 1       |
| Caelo                      | Ether     | 5973014  | 1       |
| Chiesi                     | Ether     | 5978016  | 1       |
| E+J, 28.09.2016            | Ether     | 597601C  | 1       |
| Ebert & Jacobi             | Ether     | 5978067  | 1       |
| Fiebig                     | Ether     | 52163    | 1       |
| Fisch./Anzag               | Ether     | 5978018  | 1       |
| Fisch./Gehe                | Ether     | 5970016  | 1       |
| Fisch./Gehe                | Ether     | 597903C  | 1       |
| fischar                    | Ether     | 5976016  | 1       |
| fischar                    | Ether     | 5977056  | 1       |
| fischar                    | Ether     | 5978013  | 1       |
| fischar                    | Ether     | 5979036  | 1       |
| fischar                    | Ether     | 5972083  | 1       |
| fischar                    | Ether     | 597601C  | 1       |
| fischar                    | Ether     | 5975012  | 1       |
| Fischar                    | Ether     | 597601C  | 1       |
| Fischar                    | Ether     | 597606A  | 1       |
| Fischar                    | Ether     | 597606B  | 1       |
| Fischar                    | Ether     | 5977057  | 1       |
| Fischar                    | Ether     | 5977059  | 2       |
| Fischar                    | Ether     | 5978015  | 1       |
| Fischar                    | Ether     | 5978019  | 2       |
| Fischar                    | Ether     | 5978018  | 2       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Fischar                    | Ether            | 5978017      | 1              |
| Fischar                    | Ether            | 597806C      | 1              |
| Fischar                    | Ether            | 5977058      | 1              |
| Fischar                    | Ether            | 597036       | 1              |
| Fischar                    | Ether            | 90207/2      | 1              |
| Fischar                    | Ether            | 5979032      | 1              |
| Fischar                    | Ether            | 5978066      | 1              |
| Fischar                    | Ether            | 597903B      | 2              |
| Fischar                    | Ether            | 5971081      | 1              |
| Fischar                    | Ether            | 5972082      | 1              |
| Fischar                    | Ether            | 5973013      | 1              |
| Fischar                    | Ether            | 597208C      | 1              |
| Fischar                    | Ether            | 5972089      | 1              |
| Fischar                    | Ether            | 5973063      | 1              |
| Fischar                    | Ether            | 5973069      | 1              |
| Fischar                    | Ether            | 5973067      | 1              |
| Fischar                    | Ether            | 5974013      | 1              |
| Fischar                    | Ether            | 5973065      | 1              |
| Fischar                    | Ether            | 597401A      | 1              |
| Fischar                    | Ether            | 5974051      | 1              |
| Fischar                    | Ether            | 52157        | 1              |
| Fischar                    | Ether            | 597401C      | 1              |
| Fischar                    | Ether            | 5974059      | 2              |
| Fischar / Alliance Heal... | Ether            | 5976067      | 3              |
| Fischar / Alliance Heal... | Ether            | 5975011      | 1              |
| Fischar / Alliance Heal... | Ether            | 5978061      | 6              |
| Fischar / Alliance Heal... | Ether            | 597801C      | 6              |
| Fischar / Gehe             | Ether            | 5976063      | 1              |
| Fischar / Gehe             | Ether            | 5977018      | 1              |
| Fischar / Kehr             | Ether            | 597606B      | 2              |
| fischar / noweda           | Ether            | 5978017      | 1              |
| Fischar / Zentrum-Apotheke | Ether            | 5974013      | 1              |
| Fischar 001                | Ether            | 597204B      | 1              |
| Fischar Anzag              | Ether            | 85(5978015)  | 1              |
| Fischar Anzag              | Ether            | 86(5978066)  | 1              |
| Fischar Anzag              | Ether            | 89(5979031)  | 1              |
| Fischar Sanacorp           | Ether            | 5970019      | 1              |
| Fischar/ NOWEDA            | Ether            | 5978069      | 1              |
| Fischar/ Alliance Healt... | Ether            | 5977051      | 6              |
| fischar/ Anzag             | Ether            | 597903C      | 1              |
| Fischar/ Anzag             | Ether            | 87(5978066)  | 1              |
| Fischar/ Anzag             | Ether            | 88(5979036)  | 1              |
| Fischar/ Anzag             | Ether            | 5970071      | 1              |
| Fischar/ Anzag             | Ether            | 5970016      | 1              |
| Fischar/ Now               | Ether            | 5977054      | 1              |
| Fischar/ Now               | Ether            | 597301C      | 1              |
| Fischar/ Now               | Ether            | 597306C      | 1              |
| Fischar/ Noweda            | Ether            | 5977054      | 1              |
| Fischar/ Noweda            | Ether            | 5978066      | 1              |
| Fischar/AEP                | Ether            | 5979032      | 1              |
| Fischar/AHD                | Ether            | 83(5977053)  | 1              |
| Fischar/AHD                | Ether            | 84(5978012)  | 1              |
| Fischar/Alliance           | Ether            | 5978015      | 4              |
| Fischar/Alliance Health... | Ether            | 5978066      | 1              |
| Fischar/Anzag              | Ether            | 597903A      | 1              |
| Fischar/Anzag              | Ether            | 5973063      | 1              |
| Fischar/Fiebig             | Ether            | 5976062      | 2              |
| Fischar/Gehe               | Ether            | 5973018      | 1              |
| Fischar/Gehe               | Ether            | 597405A      | 1              |
| Fischar/GEHE               | Ether            | 5977051      | 1              |

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| <b>Supplier</b>          | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|------------------|--------------|----------------|
| Fischar/GEHE             | Ether            | 5978017      | 2              |
| Fischar/Jenne            | Ether            | 5978013      | 1              |
| Fischar/Jenne            | Ether            | 5978062      | 1              |
| Fischar/Jenne            | Ether            | 5978017      | 1              |
| Fischar/Jenne            | Ether            | AP210401-01  | 1              |
| Fischar/Kehr             | Ether            | 5977055      | 1              |
| Fischar/Kehr             | Ether            | 5978015      | 1              |
| Fischar/Kehr             | Ether            | 5979031      | 1              |
| Fischar/Kehr             | Ether            | 5979032      | 2              |
| Fischar/Kehr             | Ether            | 597903B      | 1              |
| Fischar/Krieger          | Ether            | 597903C      | 1              |
| Fischar/Noweda           | Ether            | 5976019      | 1              |
| Fischar/Noweda           | Ether            | 5978014      | 1              |
| Fischar/Noweda           | Ether            | 5978018      | 1              |
| Fischar/Noweda           | Ether            | 597806C      | 1              |
| Fischar/Noweda           | Ether            | 5978066      | 1              |
| Fischar/Noweda           | Ether            | 597903B      | 1              |
| Fischar/Noweda           | Ether            | 59790079     | 1              |
| Fischar/Noweda           | Ether            | 5973019      | 1              |
| FISCHAR/Noweda           | Ether            | 597903A      | 1              |
| fishar/Phoenix           | Ether            | 597903C      | 1              |
| Fischar/Phoenix          | Ether            | 5979032      | 1              |
| Fischar/Phoenix          | Ether            | 5970071      | 2              |
| Fischar/Phoenix          | Ether            | 5974014      | 1              |
| Fischar/Phoenix          | Ether            | 5974058      | 1              |
| Fischar/Phönix           | Ether            | 5978018      | 1              |
| Fischar/Phönix           | Ether            | 5973064      | 1              |
| Fischar/Sanacorp         | Ether            | 597606B      | 1              |
| Fischar/Sanacorp         | Ether            | 5977018      | 1              |
| Fischar/Sanacorp         | Ether            | 597606       | 1              |
| Fischar/Sanacorp         | Ether            | 5977054      | 1              |
| Fischar/Sanacorp         | Ether            | 5977056      | 3              |
| Fischar/Sanacorp         | Ether            | 5977055      | 1              |
| Fischar/Sanacorp         | Ether            | 5978014      | 2              |
| Fischar/Sanacorp         | Ether            | 5978016      | 1              |
| Fischar/Sanacorp         | Ether            | 5978017      | 1              |
| Fischar/Sanacorp         | Ether            | 597801C      | 1              |
| Fischar/Sanacorp         | Ether            | 5979035      | 6              |
| Fischar/Sanacorp         | Ether            | 5972042      | 1              |
| Fischar/Sanacorp         | Ether            | 5973066      | 1              |
| Fischar/XX               | Ether            | 597001B      | 1              |
| Fischbar                 | Ether            | 597701B      | 1              |
| Fischbar / Gehe          | Ether            | 597903C      | 1              |
| fischer                  | Ether            | 5977058      | 1              |
| fischer                  | Ether            | 597801C      | 1              |
| Fischer                  | Ether            | 597606B      | 1              |
| Fischer                  | Ether            | 5978017      | 1              |
| Fischer                  | Ether            | 5973066      | 1              |
| Fischer                  | Ether            | 597306A      | 1              |
| FISCHER GMBH / GEHE      | Ether            | 5974051      | 1              |
| Fischer Saarbrücken/GEHE | Ether            | 5972047      | 1              |
| Fischer/ Sanacorp        | Ether            | 5977056      | 1              |
| Fischer/AEP              | Ether            | 5976061      | 1              |
| Fischer/Gehe             | Ether            | 5977057      | 1              |
| fischer/Kehr             | Ether            | 5977058      | 1              |
| Fischer/Phönix           | Ether            | 597606b      | 1              |
| fISHA Noweda             | Ether            | 5977054      | 1              |
| fishar/ Sanacorp         | Ether            | 5977054      | 2              |
| Gehe                     | Ether            | 5972082      | 1              |
| Gehe /Hedinger           | Ether            | 52163        | 1              |

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| Supplier               | Substance | Batch    | Spectra |
|------------------------|-----------|----------|---------|
| GEHE 06.09.2019        | Ether     | 5979031  | 1       |
| Gehe/ Fischar          | Ether     | 5977057  | 1       |
| Gehe/Fischar           | Ether     | 597301   | 2       |
| gepepharm GmbH         | Ether     | 52155    | 1       |
| Hebinger               | Ether     | 52153    | 2       |
| Hedinger               | Ether     | 52161    | 2       |
| Hedinger               | Ether     | 13011812 | 1       |
| Hedinger               | Ether     | 21071803 | 1       |
| Hedinger               | Ether     | 52163    | 7       |
| Hedinger               | Ether     | 5121813  | 1       |
| Hedinger               | Ether     | 52164    | 2       |
| Hedinger               | Ether     | 52165    | 4       |
| Hedinger               | Ether     | 52152    | 1       |
| Hedinger               | Ether     | 52153    | 4       |
| Hedinger               | Ether     | 52155    | 1       |
| Hedinger               | Ether     | 30011406 | 1       |
| Hedinger               | Ether     | 14070804 | 1       |
| Hedinger               | Ether     | 52156    | 1       |
| Hedinger               | Ether     | 52157    | 1       |
| Hedinger / Gehe        | Ether     | 52163    | 2       |
| Hedinger / Noweda      | Ether     | 52156    | 4       |
| Hedinger/ VDL          | Ether     | 52162    | 2       |
| Hedinger/ VDL          | Ether     | 52163    | 2       |
| Hedinger/4             | Ether     | 52163    | 1       |
| Hedinger/AHD           | Ether     | 52163    | 1       |
| Hedinger/AHD           | Ether     | 52165    | 1       |
| Hedinger/Alliance      | Ether     | 52163    | 1       |
| Hedinger/Alliance      | Ether     | 52165    | 1       |
| hedinger/anzag         | Ether     | 52153    | 2       |
| Hedinger/Anzag         | Ether     | 52161    | 1       |
| Hedinger/Anzag         | Ether     | 52163    | 1       |
| hedinger/gehe          | Ether     | 52163    | 1       |
| Hedinger/Gehe          | Ether     | 52162    | 1       |
| Hedinger/Gehe          | Ether     | 52164    | 2       |
| Hedinger/Gehe          | Ether     | 52153    | 1       |
| Hedinger/Gehe          | Ether     | 52156    | 2       |
| Hedinger/Gehe          | Ether     | 52157    | 1       |
| Hedinger/Gehe/28.10.20 | Ether     | 52164    | 1       |
| Hedinger/Jenne         | Ether     | 52165    | 1       |
| Hedinger/Kehr          | Ether     | 52157    | 1       |
| Hedinger/Noweda        | Ether     | 52161    | 2       |
| Hedinger/Noweda        | Ether     | 52162    | 3       |
| Hedinger/Noweda        | Ether     | 52163    | 1       |
| Hedinger/Noweda        | Ether     | 52153    | 1       |
| Hedinger/Noweda        | Ether     | 52157    | 3       |
| Hedinger/Phönix        | Ether     | 52162    | 1       |
| Hedinger/Phönix        | Ether     | 52166    | 1       |
| Hedinger/Sanacorp      | Ether     | 52164    | 1       |
| Hedinger/Sanacorp      | Ether     | 12114902 | 1       |
| Hedinger/V.d.L.        | Ether     | 52153    | 1       |
| Heninger               | Ether     | 52162    | 3       |
| Herdingen              | Ether     | 52162    | 1       |
| Ichthyol/Phönix        | Ether     | 5978017  | 1       |
| Ichthyol-Gesellschaft  | Ether     | 5976011  | 1       |
| Kehr/Fischar           | Ether     | 5977052  | 1       |
| L12/Hedinger           | Ether     | 52161    | 1       |
| noweda/fischar         | Ether     | 5974056  | 1       |
| noweda                 | Ether     | 597801C  | 1       |
| Noweda                 | Ether     | 52162    | 1       |
| Noweda                 | Ether     | 5977058  | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Noweda                     | Ether            | 52163            | 3              |
| Noweda                     | Ether            | 52164            | 1              |
| Noweda                     | Ether            | 5971381          | 1              |
| noweda/ Otto Fischar       | Ether            | 5976066          | 1              |
| Noweda/apoident            | Ether            | 52164            | 1              |
| Noweda/Fischar             | Ether            | 5970013          | 1              |
| Euro OTC                   | Ether            | 52163            | 1              |
| noweda-Fischar             | Ether            | 5978066          | 1              |
| otto fischar               | Ether            | 5978016          | 1              |
| Otto Fischar               | Ether            | 5976019          | 1              |
| Otto Fischar               | Ether            | 5975013          | 1              |
| Otto Fischar               | Ether            | 5975089          | 1              |
| Otto Fischar               | Ether            | 597606B          | 1              |
| Otto Fischar / Anzag       | Ether            | 5978067          | 1              |
| Otto Fischar / Noweda      | Ether            | 77016            | 1              |
| Otto Fischar / Sanacorp    | Ether            | 5975015          | 1              |
| Otto Fischar /Noweda       | Ether            | 5976065          | 2              |
| Otto Fischar GmbH          | Ether            | 5972088          | 1              |
| Otto Fischar GmbH          | Ether            | 5972089          | 1              |
| Otto Fischar GmbH          | Ether            | 5979032          | 1              |
| Otto Fischar GmbH          | Ether            | 5972048          | 1              |
| Otto Fischar GmbH          | Ether            | 597208           | 1              |
| Otto Fischar GmbH          | Ether            | 5972045          | 1              |
| Otto Fischar GmbH          | Ether            | 5972082          | 1              |
| Otto Fischar GmbH          | Ether            | 597301B          | 1              |
| Otto Fischar GmbH & Co ... | Ether            | 5970015          | 2              |
| Otto Fischar GmbH & Co.... | Ether            | 5976065          | 1              |
| Otto Fischar GmbH & Co.... | Ether            | 5977016          | 1              |
| Otto Fischar GmbH & Co.... | Ether            | 5977055          | 1              |
| Otto Fischar GmbH & Co.... | Ether            | 5974102          | 2              |
| Otto Fischar GmbH & Co.KG  | Ether            | 5977017          | 1              |
| Otto Fischar GmbH & Co. KG | Ether            | 5977057          | 1              |
| Otto Fischar GmbH& Co.KG   | Ether            | 5972049          | 1              |
| Otto Fischar GmbH& Co.KG   | Ether            | 597204C          | 1              |
| Otto Fischar/ Anzag        | Ether            | 5977017          | 1              |
| Otto Fischar/ Noweda       | Ether            | 597903B          | 1              |
| Otto Fischar/AHD           | Ether            | 5978014          | 1              |
| Otto Fischar/Gehe          | Ether            | 597705B          | 1              |
| Otto Fischar/Gehe          | Ether            | 5977059          | 1              |
| Otto Fischar/GEHE          | Ether            | 597301B/311152/2 | 1              |
| otto fischar/Sana          | Ether            | 597401B          | 1              |
| Otto Fischar/Sanacorp      | Ether            | 5977054          | 1              |
| Otto Fischar/Sanacorp      | Ether            | 5974104          | 1              |
| Otto Fischar/Sanacorp      | Ether            | 597301A          | 1              |
| Otto Fischer /Anzag        | Ether            | 5979036          | 2              |
| Otto Fischer /Anzag        | Ether            | 5979032          | 1              |
| Otto Fischer /Noweda       | Ether            | 5977018          | 1              |
| Otto Fischer GmbH          | Ether            | 5976069          | 1              |
| Otto Fischer GmbH & Co.... | Ether            | 5978067          | 1              |
| Otto Fischer/ Kehr         | Ether            | 5976062          | 1              |
| Otto Fischer/Anzag         | Ether            | 5978063          | 1              |
| Otto Fischer/Kehr          | Ether            | 5976067          | 1              |
| Otto Fischer/Kehr          | Ether            | 5977051          | 1              |
| Otto Fischer/Kehr          | Ether            | 5977056          | 1              |
| Otto FischerGmbH / Alli... | Ether            | 597401B          | 1              |
| Phoenix/Fischarl           | Ether            | 5973066          | 1              |
| Phönix                     | Ether            | 5977018          | 1              |
| Phönix                     | Ether            | 52153            | 1              |
| Phönix                     | Ether            | 597204B          | 1              |
| Phönix/Fischer             | Ether            | 5977018          | 1              |

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| Supplier          | Substance | Batch   | Spectra |
|-------------------|-----------|---------|---------|
| Sanacorp          | Ether     | 5978017 | 1       |
| Sanacorp          | Ether     | 52152   | 1       |
| Sanacorp Fischar  | Ether     | 5978067 | 1       |
| Sanacorp/Hedinger | Ether     | 52163   | 2       |
| Stumpf/Fischer    | Ether     | 5974052 | 1       |

- 240 990 spectra from 1121 *Apo-Ident* customers from a total of 46 863 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Ether* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Ether* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 200           | 0              | 63 739        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 371           | 2              | 240 990       |

The substance/substance group *Ether* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.4638 % (> 98.6595 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Ether* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------------------------|---------------------------|-----------------------------------|
| Metronidazole 25% in white petrolatum | 88.14                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Ether* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31854     | 31854                  | 0.00                            | 160.40                             |
| 31855     | 31854                  | 0.51                            | 160.55                             |
| 33214     | 31854                  | 5.02                            | 150.65                             |
| 33633     | 31854                  | 4.06                            | 154.56                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Ethyl acetate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30719-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Ethyl acetate; Ethylis acetat

### Special notes

When selecting the *Ethyl acetate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Ethyl acetate             | 4      | 3      | 17     |

## Second-stage model

For differentiation of the substance/substance group *Ethyl acetate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Ethyl acetate*:

| Supplier | Substance     | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------|----------|-----------|---------|-------------|
| Caelo    | Ethyl acetate | 11357003 | 30719     | 40      | 1402681     |
| Caelo    | Ethyl acetate | 13366102 | 31385     | 40      | 20131107    |
| Caelo    | Ethyl acetate | 180804   | 34075     | 40      | 20180320*   |
| Caelo    | Ethyl acetate | 21001136 | 35547     | 50      | 20210426*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 170 spectra of 4 reference samples from the substance/substance group *Ethyl acetate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 769 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Ethyl acetate*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance     | Batch     | Sample ID | Spectra |
|----------|---------------|-----------|-----------|---------|
| Caelo    | Ethyl acetate | 15362301  | 32568     | 40      |
| Caelo    | Ethyl acetate | 15362303  | 33215     | 40      |
| Caelo    | Ethyl acetate | 192305003 | 35294     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 27 spectra from 24 *Apo-Ident* customers from 19 batches from the substance/substance group *Ethyl acetate*.
- Among them are spectra of independent samples from 17 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance     | Batch     | Spectra |
|----------------------|---------------|-----------|---------|
| Caelo                | Ethyl acetate | 12357601  | 1       |
| Caelo                | Ethyl acetate | 9081304   | 1       |
| Caelo                | Ethyl acetate | 10286201  | 1       |
| Caelo                | Ethyl acetate | 12357604  | 1       |
| Caelo                | Ethyl acetate | 15182402  | 2       |
| Caelo                | Ethyl acetate | 14305302  | 1       |
| Caelo                | Ethyl acetate | 15362301  | 1       |
| Caelo                | Ethyl acetate | 18039501  | 3       |
| Caelo                | Ethyl acetate | 16343802  | 1       |
| Caelo                | Ethyl acetate | 16943801  | 1       |
| Caelo                | Ethyl acetate | 15362303  | 1       |
| Caelo                | Ethyl acetate | 18080402  | 1       |
| Caelo                | Ethyl acetate | 15362304  | 3       |
| Caelo                | Ethyl acetate | 13366101  | 1       |
| Caelo                | Ethyl acetate | 15182404  | 1       |
| Caelo                | Ethyl acetate | 18080401  | 2       |
| Caesar & Loretz GmbH | Ethyl acetate | 18080402  | 1       |
| Caelo                | Ethyl acetate | 192305002 | 1       |
| Caelo                | Ethyl acetate | 11357003  | 2       |
| Caelo                | Ethyl acetate |           | 1       |

- 241 336 spectra from 1121 *Apo-Ident* customers from a total of 46 988 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Ethyl acetate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Ethyl acetate* and it was evaluated

how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 170           | 0              | 63 769        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 27            | 0              | 241 336       |

The substance/substance group *Ethyl acetate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.4706 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6852 %) | 100.0000 % (> 77.7778 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Ethyl acetate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance               | Distance in main model | Distance in second-stage model |
|-------------------------|------------------------|--------------------------------|
| Acetone                 | 43.95                  | –                              |
| Permethrin 25% solution | 145.48                 | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Ethyl acetate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30719     | 30719               | 0.00                         | 43.89                           |
| 31385     | 34075               | 8.05                         | 39.17                           |
| 34075     | 34075               | 0.00                         | 41.86                           |
| 35547     | 35547               | 0.00                         | 41.06                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Eucalyptus oil / Rosmary oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30875-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Eucalyptus oil / Rosmary oil; Eucalyptus oil; Oleum eucalypti; Rosemary oil; Rosmarini aetheroleum

### Special notes

When selecting the *Eucalyptus oil / Rosmary oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Eucalyptus oil / Rosmary oil | 19     | 14     | 462    |



## Second-stage model

For differentiation of the substance/substance group *Eucalyptus oil* / *Rosmary oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Eucalyptus oil* / *Rosmary oil*:

| Supplier  | Substance      | Batch            | Sample ID | Spectra | Certificate        |
|-----------|----------------|------------------|-----------|---------|--------------------|
| Bombastus | Eucalyptus oil | 279796           | 31110     | 40      | 73399              |
| Bombastus | Eucalyptus oil | 18005784         | 34523     | 40      | 127858             |
| Caelo     | Eucalyptus oil | 13106314         | 31284     | 40      | AR-15-FG-000909-01 |
| Caelo     | Eucalyptus oil | 14039604         | 31285     | 40      | 1412280            |
| Caelo     | Eucalyptus oil | 14039609         | 31298     | 40      | 20140214           |
| Caelo     | Eucalyptus oil | 14121904         | 31314     | 40      | AR-15-FG-004302-01 |
| Caelo     | Eucalyptus oil | 14039626         | 31864     | 60      | 20140211           |
| Caelo     | Eucalyptus oil | 15316504         | 31865     | 60      | 20150925           |
| Caelo     | Eucalyptus oil | 21001199         | 35553     | 50      | 20210426*          |
| Euro OTC  | Eucalyptus oil | 1406028-01       | 31527     | 60      | 20140716           |
| Euro OTC  | Eucalyptus oil | 1511015          | 31823     | 60      | 20151214*          |
| Fagron    | Eucalyptus oil | 16C15-B05-331849 | 33277     | 40      | 20160411           |
| Fagron    | Eucalyptus oil | 18F12-B03-364810 | 34759     | 40      | 20180807           |
| Caelo     | Rosemary oil   | 162769           | 32686     | 40      | 20160930*          |
| Caelo     | Rosemary oil   | 191803           | 34614     | 40      | 20190703*          |
| Euro OTC  | Rosemary oil   | 1303016-01       | 31311     | 40      | 1502125            |
| Euro OTC  | Rosemary oil   | 1511016          | 31822     | 60      | 20151214*          |
| Euro OTC  | Rosemary oil   | 2008036          | 35139     | 40      | 20201127*          |
| Fagron    | Rosemary oil   | 12E08-N05        | 30875     | 40      | 1502124            |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 870 spectra of 19 reference samples from the substance/substance group *Eucalyptus oil* / *Rosmary oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 19 different batches.
- 63 069 spectra from a total of 1288 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 560 spectra of 14 reference samples from the substance/substance group *Eucalyptus oil* / *Rosemary oil*.
- Among them are spectra of independent samples from 14 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Eucalyptus oil | 11104312 | 30859     | 40      |
| Caelo    | Eucalyptus oil | 163513   | 33084     | 40      |
| Caelo    | Eucalyptus oil | 192026   | 34649     | 40      |
| Caelo    | Eucalyptus oil | 192938   | 34723     | 40      |
| Caelo    | Eucalyptus oil | 20000642 | 35026     | 40      |
| Euro OTC | Eucalyptus oil | 1608042  | 32773     | 40      |
| Euro OTC | Eucalyptus oil | 1703030  | 33237     | 40      |
| Euro OTC | Eucalyptus oil | 1801002  | 33928     | 40      |
| Euro OTC | Eucalyptus oil | 1806016  | 34189     | 40      |
| Euro OTC | Eucalyptus oil | 1903030  | 34496     | 40      |
| Euro OTC | Eucalyptus oil | 2009023  | 35117     | 40      |
| Euro OTC | Rosemary oil   | 1608043  | 32774     | 40      |
| Euro OTC | Rosemary oil   | 1803038  | 34088     | 40      |
| Euro OTC | Rosemary oil   | 1903001  | 34420     | 40      |

- 90 931 spectra from a total of 2002 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1326 spectra from 424 *Apo-Ident* customers from 474 batches from the substance/substance group *Eucalyptus oil* / *Rosemary oil*.
- Among them are spectra of independent samples from 460 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance      | Batch    | Spectra |
|-----------------------|----------------|----------|---------|
| 14039625              | Eucalyptus oil | 14039625 | 1       |
| AHD                   | Eucalyptus oil | 307667   | 1       |
| AHD 03.12.2013        | Eucalyptus oil | 282165   | 1       |
| AHD 07.10.16 E.k:9,72 | Eucalyptus oil | 15400203 | 1       |
| ahd/lamotte           | Eucalyptus oil | 14039604 | 1       |
| Alliance Health Care  | Eucalyptus oil | 291534   | 1       |

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| Supplier            | Substance      | Batch        | Spectra |
|---------------------|----------------|--------------|---------|
| Alliance Healthcare | Eucalyptus oil | 18001402     | 1       |
| Allianz Healthcare  | Eucalyptus oil | 15400202     | 1       |
| Anzag               | Eucalyptus oil | 273707       | 1       |
| Bergland            | Eucalyptus oil | K801202      | 1       |
| Bergland / Gehe     | Eucalyptus oil | K301874      | 1       |
| Bergland / Gehe     | Eucalyptus oil | K302509      | 1       |
| Bomastus direkt     | Eucalyptus oil | 293624       | 1       |
| Bombastus           | Eucalyptus oil | 279798       | 1       |
| Bombastus           | Eucalyptus oil | 269495       | 1       |
| Bombastus           | Eucalyptus oil | 278619       | 2       |
| Bombastus           | Eucalyptus oil | 283384       | 1       |
| Bombastus           | Eucalyptus oil | 284861       | 1       |
| Bombastus           | Eucalyptus oil | 286454       | 2       |
| Bombastus           | Eucalyptus oil | 288085       | 4       |
| Bombastus           | Eucalyptus oil | 294687       | 1       |
| Bombastus           | Eucalyptus oil | 295573       | 1       |
| Bombastus           | Eucalyptus oil | 300063       | 4       |
| Bombastus           | Eucalyptus oil | 299561       | 1       |
| Bombastus           | Eucalyptus oil | 297732       | 1       |
| Bombastus           | Eucalyptus oil | 302670       | 1       |
| Bombastus           | Eucalyptus oil | 304517       | 3       |
| Bombastus           | Eucalyptus oil | 303336       | 2       |
| Bombastus           | Eucalyptus oil | 308260       | 1       |
| Bombastus           | Eucalyptus oil | 17000947     | 4       |
| Bombastus           | Eucalyptus oil | 18006426     | 1       |
| Bombastus           | Eucalyptus oil | 118005784    | 1       |
| Bombastus           | Eucalyptus oil | 19002956     | 4       |
| Bombastus           | Eucalyptus oil | 19005565     | 1       |
| Bombastus           | Eucalyptus oil | 20000339     | 4       |
| Bombastus           | Eucalyptus oil | 20005166     | 2       |
| Bombastus           | Eucalyptus oil | 91(18005784) | 1       |
| Bombastus           | Eucalyptus oil | 92(19001869) | 1       |
| Bombastus           | Eucalyptus oil | 18005267     | 4       |
| Bombastus           | Eucalyptus oil | 285615       | 2       |
| Bombastus           | Eucalyptus oil | 306025       | 4       |
| Bombastus           | Eucalyptus oil | 270004       | 1       |
| Bombastus           | Eucalyptus oil | 291597       | 2       |
| Bombastus           | Eucalyptus oil | 303327       | 2       |
| Bombastus           | Eucalyptus oil | 180057843214 | 1       |
| Bombastus           | Eucalyptus oil | 18001849     | 1       |
| Bombastus           | Eucalyptus oil | 301205       | 2       |
| Bombastus           | Eucalyptus oil | 275646       | 2       |
| Bombastus           | Eucalyptus oil | 276113       | 1       |
| Bombastus           | Eucalyptus oil | 293175       | 2       |
| Bombastus           | Eucalyptus oil | 294460       | 2       |
| Bombastus           | Eucalyptus oil | 298985       | 4       |
| Bombastus           | Eucalyptus oil | 307667       | 7       |
| Bombastus           | Eucalyptus oil | 308151       | 4       |
| Bombastus           | Eucalyptus oil | 1700387-1961 | 1       |
| Bombastus           | Eucalyptus oil | 19000587     | 4       |
| Bombastus           | Eucalyptus oil | 308248       | 2       |
| Bombastus           | Eucalyptus oil | 286740       | 2       |
| Bombastus           | Eucalyptus oil | 91101        | 1       |
| Bombastus           | Eucalyptus oil | 288028       | 1       |
| Bombastus           | Eucalyptus oil | 292317       | 1       |
| Bombastus           | Eucalyptus oil | 294181       | 1       |
| Bombastus           | Eucalyptus oil | 296325       | 3       |
| Bombastus           | Eucalyptus oil | 17000944     | 8       |
| Bombastus           | Eucalyptus oil | 90(307667)   | 1       |
| Bombastus           | Eucalyptus oil | 290094       | 1       |

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| <b>Supplier</b>        | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------------|------------------|--------------|----------------|
| Bombastus              | Eucalyptus oil   | 293087       | 3              |
| Bombastus              | Eucalyptus oil   | 296079       | 2              |
| Bombastus              | Eucalyptus oil   | 299699       | 2              |
| Bombastus              | Eucalyptus oil   | 305628       | 1              |
| Bombastus              | Eucalyptus oil   | 18001402     | 1              |
| Bombastus              | Eucalyptus oil   | 17001384     | 2              |
| Bombastus              | Eucalyptus oil   | 285362       | 2              |
| Bombastus              | Eucalyptus oil   | 19004174     | 3              |
| Bombastus              | Eucalyptus oil   | 293227       | 3              |
| Bombastus              | Eucalyptus oil   | 277671       | 1              |
| Bombastus              | Eucalyptus oil   | 281667       | 2              |
| Bombastus              | Eucalyptus oil   | 19001869     | 5              |
| Bombastus              | Eucalyptus oil   | 20003487     | 2              |
| Bombastus              | Eucalyptus oil   | 18004242     | 2              |
| Bombastus              | Eucalyptus oil   | 261706       | 1              |
| Bombastus              | Eucalyptus oil   | 300881       | 3              |
| Bombastus              | Eucalyptus oil   | 19002892     | 5              |
| Bombastus              | Eucalyptus oil   | 273707       | 1              |
| Bombastus              | Eucalyptus oil   | 283991       | 1              |
| Bombastus              | Eucalyptus oil   | 307668       | 2              |
| Bombastus              | Eucalyptus oil   | 18000176     | 8              |
| Bombastus              | Eucalyptus oil   | 19002830     | 1              |
| Bombastus              | Eucalyptus oil   | 298889       | 2              |
| Bombastus              | Eucalyptus oil   | 19000586     | 4              |
| Bombastu-Werke AG/Gehe | Eucalyptus oil   | 282165       | 1              |
| Bombastu-Werke AG/Gehe | Eucalyptus oil   | 283991       | 1              |
| Caelo                  | Eucalyptus oil   | 13106413     | 1              |
| Caelo                  | Eucalyptus oil   | 18006426     | 1              |
| Caelo                  | Eucalyptus oil   | 10051816     | 1              |
| Caelo                  | Eucalyptus oil   | 11324112     | 8              |
| Caelo                  | Eucalyptus oil   | 2112I-01978  | 1              |
| Caelo                  | Eucalyptus oil   | 12103605     | 1              |
| Caelo                  | Eucalyptus oil   | 7011302      | 1              |
| Caelo                  | Eucalyptus oil   | 11104312     | 1              |
| Caelo                  | Eucalyptus oil   | 12103607     | 4              |
| Caelo                  | Eucalyptus oil   | 513I-01978   | 1              |
| Caelo                  | Eucalyptus oil   | 11102507     | 2              |
| Caelo                  | Eucalyptus oil   | 12114112     | 5              |
| Caelo                  | Eucalyptus oil   | 276113       | 1              |
| Caelo                  | Eucalyptus oil   | 11324108     | 1              |
| Caelo                  | Eucalyptus oil   | 12103611     | 4              |
| Caelo                  | Eucalyptus oil   | 13106401     | 5              |
| Caelo                  | Eucalyptus oil   | 13106403     | 3              |
| Caelo                  | Eucalyptus oil   | 4136096      | 2              |
| Caelo                  | Eucalyptus oil   | 12103612     | 1              |
| Caelo                  | Eucalyptus oil   | 13106304     | 1              |
| Caelo                  | Eucalyptus oil   | 1439603      | 1              |
| Caelo                  | Eucalyptus oil   | 14039601     | 2              |
| Caelo                  | Eucalyptus oil   | 14039603     | 1              |
| Caelo                  | Eucalyptus oil   | 14039610     | 1              |
| Caelo                  | Eucalyptus oil   | 14039618     | 2              |
| Caelo                  | Eucalyptus oil   | 14121905     | 1              |
| Caelo                  | Eucalyptus oil   | 14039622     | 2              |
| Caelo                  | Eucalyptus oil   | 15316502     | 6              |
| Caelo                  | Eucalyptus oil   | 13106326     | 4              |
| Caelo                  | Eucalyptus oil   | 15011704     | 1              |
| Caelo                  | Eucalyptus oil   | 15063301     | 5              |
| Caelo                  | Eucalyptus oil   | 28071502     | 1              |
| Caelo                  | Eucalyptus oil   | 13106316     | 1              |
| Caelo                  | Eucalyptus oil   | 15063312     | 10             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Eucalyptus oil   | 15316501     | 8              |
| Caelo           | Eucalyptus oil   | 15400202     | 18             |
| Caelo           | Eucalyptus oil   | 15316507     | 1              |
| Caelo           | Eucalyptus oil   | 15400203     | 4              |
| Caelo           | Eucalyptus oil   | 15400210     | 13             |
| Caelo           | Eucalyptus oil   | 15400211     | 5              |
| Caelo           | Eucalyptus oil   | 16351301     | 10             |
| Caelo           | Eucalyptus oil   | 24061708     | 1              |
| Caelo           | Eucalyptus oil   | 16235508     | 1              |
| Caelo           | Eucalyptus oil   | 170303001    | 1              |
| Caelo           | Eucalyptus oil   | 17198802     | 11             |
| Caelo           | Eucalyptus oil   | 16351314     | 1              |
| Caelo           | Eucalyptus oil   | 17337707     | 4              |
| Caelo           | Eucalyptus oil   | 9061815      | 1              |
| Caelo           | Eucalyptus oil   | 18027403     | 1              |
| Caelo           | Eucalyptus oil   | 17337710     | 1              |
| Caelo           | Eucalyptus oil   | 18027417     | 3              |
| Caelo           | Eucalyptus oil   | 18171704     | 2              |
| Caelo           | Eucalyptus oil   | 18171701     | 33             |
| Caelo           | Eucalyptus oil   | 18225803     | 1              |
| Caelo           | Eucalyptus oil   | 18027409     | 1              |
| Caelo           | Eucalyptus oil   | 1817702      | 1              |
| Caelo           | Eucalyptus oil   | 18225401     | 10             |
| Caelo           | Eucalyptus oil   | 18225801     | 1              |
| Caelo           | Eucalyptus oil   | 18171707     | 15             |
| Caelo           | Eucalyptus oil   | 18225402     | 2              |
| Caelo           | Eucalyptus oil   | 18225404     | 1              |
| Caelo           | Eucalyptus oil   | 18171715     | 3              |
| Caelo           | Eucalyptus oil   | 19016705     | 1              |
| Caelo           | Eucalyptus oil   | 18225408     | 3              |
| Caelo           | Eucalyptus oil   | 19016707     | 3              |
| Caelo           | Eucalyptus oil   | 18225417     | 1              |
| Caelo           | Eucalyptus oil   | 192026002    | 1              |
| Caelo           | Eucalyptus oil   | 192026004    | 1              |
| Caelo           | Eucalyptus oil   | 192026001    | 1              |
| Caelo           | Eucalyptus oil   | 16235505     | 14             |
| Caelo           | Eucalyptus oil   | 617Q-01978   | 1              |
| Caelo           | Eucalyptus oil   | 15316514     | 1              |
| Caelo           | Eucalyptus oil   | 293087       | 1              |
| Caelo           | Eucalyptus oil   | 11324107     | 5              |
| Caelo           | Eucalyptus oil   | 1703030-01   | 1              |
| Caelo           | Eucalyptus oil   | 18000176     | 1              |
| Caelo           | Eucalyptus oil   | 19016714     | 8              |
| Caelo           | Eucalyptus oil   | 14039602     | 1              |
| Caelo           | Eucalyptus oil   | 14039612     | 1              |
| Caelo           | Eucalyptus oil   | 18225407     | 7              |
| Caelo           | Eucalyptus oil   | 20000642003  | 2              |
| Caelo           | Eucalyptus oil   | 12114111     | 1              |
| Caelo           | Eucalyptus oil   | 18171714     | 7              |
| Caelo           | Eucalyptus oil   | 14039625     | 5              |
| Caelo           | Eucalyptus oil   | 15011701     | 5              |
| Caelo           | Eucalyptus oil   | 12114107     | 2              |
| Caelo           | Eucalyptus oil   | 192938011    | 1              |
| Caelo           | Eucalyptus oil   | 15316512     | 8              |
| Caelo           | Eucalyptus oil   | 13106411     | 3              |
| Caelo           | Eucalyptus oil   | 296079       | 1              |
| Caelo           | Eucalyptus oil   | 18171702     | 4              |
| Caelo           | Eucalyptus oil   | 3322         | 1              |
| Caelo           | Eucalyptus oil   | 10318506     | 1              |
| Caelo           | Eucalyptus oil   | 3012E-01978  | 1              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Caelo                | Eucalyptus oil   | 1214E-01978  | 1              |
| Caelo                | Eucalyptus oil   | 1515Q-01978  | 1              |
| Caelo                | Eucalyptus oil   | 916M-01978   | 1              |
| Caelo                | Eucalyptus oil   | 2818A-01978  | 1              |
| Caelo                | Eucalyptus oil   | 18225802     | 1              |
| Caelo                | Eucalyptus oil   | 18225411     | 1              |
| Caelo                | Eucalyptus oil   | 307667       | 2              |
| Caelo                | Eucalyptus oil   | 16351309     | 9              |
| Caelo                | Eucalyptus oil   | 18171708     | 1              |
| Caelo                | Eucalyptus oil   | 270421       | 1              |
| Caelo                | Eucalyptus oil   | 290094       | 1              |
| Caelo                | Eucalyptus oil   | 294687       | 1              |
| Caelo                | Eucalyptus oil   | 192938005    | 10             |
| Caelo                | Eucalyptus oil   | 17337701     | 7              |
| Caelo                | Eucalyptus oil   | 13106402     | 2              |
| Caelo                | Eucalyptus oil   | 15063309     | 19             |
| Caelo                | Eucalyptus oil   | 303327       | 1              |
| Caelo                | Eucalyptus oil   | 15326512     | 1              |
| Caelo                | Eucalyptus oil   | 1608042      | 2              |
| Caelo                | Eucalyptus oil   | 16351313     | 8              |
| Caelo                | Eucalyptus oil   | 16351312     | 30             |
| Caelo                | Eucalyptus oil   | 17337702     | 2              |
| Caelo                | Eucalyptus oil   | 1871701      | 1              |
| Caelo                | Eucalyptus oil   | 18225403     | 2              |
| Caelo                | Eucalyptus oil   | 18171703     | 2              |
| Caelo                | Eucalyptus oil   | 1806016-01   | 1              |
| Caelo                | Eucalyptus oil   | 20000642007  | 2              |
| Caelo                | Eucalyptus oil   | 9351601      | 1              |
| Caelo                | Eucalyptus oil   | 18225410     | 1              |
| Caelo                | Eucalyptus oil   | 15011703     | 1              |
| Caelo                | Eucalyptus oil   | 15063303     | 1              |
| Caelo                | Eucalyptus oil   | 20004134001  | 1              |
| Caelo                | Eucalyptus oil   | 16351302     | 3              |
| Caelo                | Eucalyptus oil   | 14039623     | 1              |
| Caelo                | Eucalyptus oil   | 15063313     | 1              |
| Caelo                | Eucalyptus oil   | 15400204     | 1              |
| Caelo                | Eucalyptus oil   | 297732       | 1              |
| Caelo                | Eucalyptus oil   | 192026006    | 3              |
| Caelo                | Eucalyptus oil   | 18225416     | 1              |
| Caelo                | Eucalyptus oil   | 13106301     | 1              |
| Caelo                | Eucalyptus oil   | 14039627     | 2              |
| Caelo                | Eucalyptus oil   | 14039630     | 1              |
| Caelo                | Eucalyptus oil   | 15063302     | 1              |
| Caelo                | Eucalyptus oil   | 15011702     | 1              |
| Caelo                | Eucalyptus oil   | 306025       | 1              |
| Caelo                | Eucalyptus oil   | 18027408     | 2              |
| Caelo                | Eucalyptus oil   | 16351308     | 1              |
| Caelo                | Eucalyptus oil   | 18225413     | 4              |
| Caelo                | Eucalyptus oil   | 1906714      | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171701     | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171707     | 3              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171708     | 2              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18225402     | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18225407     | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171714     | 4              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 19016707     | 4              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171703     | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 19016714     | 3              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 18171715     | 1              |
| Caesar & Loretz GmbH | Eucalyptus oil   | 19026006     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH       | Eucalyptus oil   | 18225410         | 1              |
| Caesar & Loretz GmbH       | Eucalyptus oil   | 192938005        | 1              |
| Caesar & Loretz GmbH       | Eucalyptus oil   | 20000642003      | 1              |
| Caesar & Loretz GmbH       | Eucalyptus oil   | 192938012        | 1              |
| Caesar & Loretz GmbH       | Eucalyptus oil   | 20000642005      | 1              |
| Caesar & Loretz GmbH / ... | Eucalyptus oil   | 18225407         | 1              |
| Caesar & Loretz GmbH / ... | Eucalyptus oil   | 18171707         | 2              |
| Caesar & Loretz GmbH D-... | Eucalyptus oil   | 11102507         | 1              |
| Caesar & Loretz GmbH/ N... | Eucalyptus oil   | 18225401         | 1              |
| Caesar & Loretz GmbH/An... | Eucalyptus oil   | 18171707         | 1              |
| Caesar & Loretz GmbH/Gehe  | Eucalyptus oil   | 19016714         | 1              |
| Caesar & Loretz GmbH/Je... | Eucalyptus oil   | 18171708         | 1              |
| Caesar & Loretz GmbH/Sa... | Eucalyptus oil   | 18171714         | 2              |
| Caesar & Loretz GmbH/Sa... | Eucalyptus oil   | 192938009        | 1              |
| Caesar & Loretz GmbH/Sp... | Eucalyptus oil   | 18171707         | 1              |
| Caeser und Loretz GmbH     | Eucalyptus oil   | 19016707         | 1              |
| Cealo/AHD                  | Eucalyptus oil   | 15316512         | 1              |
| Celo                       | Eucalyptus oil   | 15400202         | 1              |
| EuRho                      | Eucalyptus oil   | 288085           | 1              |
| Euro OTC                   | Eucalyptus oil   | 1211028-01       | 4              |
| Euro OTC                   | Eucalyptus oil   | 1211028-02       | 2              |
| Euro OTC                   | Eucalyptus oil   | 1202030-01       | 1              |
| Euro OTC                   | Eucalyptus oil   | 12D05-N03        | 1              |
| Euro OTC                   | Eucalyptus oil   | 1511015-01       | 2              |
| Euro OTC                   | Eucalyptus oil   | 1903030-01       | 2              |
| Euro OTC                   | Eucalyptus oil   | 1608042-01       | 6              |
| Euro OTC                   | Eucalyptus oil   | 300881           | 1              |
| Euro OTC                   | Eucalyptus oil   | 1511015_01       | 1              |
| Euro OTC                   | Eucalyptus oil   | 180100201        | 1              |
| Euro OTC                   | Eucalyptus oil   | 278619           | 1              |
| Euro OTC                   | Eucalyptus oil   | 2003022-01       | 2              |
| Euro OTC                   | Eucalyptus oil   | 1801002-01       | 2              |
| Euro OTC                   | Eucalyptus oil   | 1806016-01       | 5              |
| Fagro/Gehe                 | Eucalyptus oil   | 14/20-B02-302706 | 1              |
| Fagron                     | Eucalyptus oil   | 12B23-N08        | 8              |
| Fagron                     | Eucalyptus oil   | 11/27-N03        | 1              |
| Fagron                     | Eucalyptus oil   | 12G25-N11        | 6              |
| Fagron                     | Eucalyptus oil   | 14A17-B40        | 3              |
| Fagron                     | Eucalyptus oil   | 14E09-B06-294681 | 1              |
| Fagron                     | Eucalyptus oil   | 14A17-B40-291551 | 1              |
| Fagron                     | Eucalyptus oil   | 15B03-B02-304362 | 3              |
| Fagron                     | Eucalyptus oil   | 15B03-B03-304361 | 1              |
| Fagron                     | Eucalyptus oil   | 14B03-B02-304361 | 1              |
| Fagron                     | Eucalyptus oil   | 16C15-B05-322992 | 2              |
| Fagron                     | Eucalyptus oil   | 15Bo3-Bo2-30462  | 1              |
| Fagron                     | Eucalyptus oil   | 11K23-N05        | 2              |
| Fagron                     | Eucalyptus oil   | 11102506         | 1              |
| Fagron                     | Eucalyptus oil   | 16C15-B05-327603 | 1              |
| Fagron                     | Eucalyptus oil   | 11D11-N02        | 1              |
| Fagron                     | Eucalyptus oil   | 13E15-N04        | 4              |
| Fagron                     | Eucalyptus oil   | 14A17B40         | 1              |
| Fagron                     | Eucalyptus oil   | C15-B05-322992   | 1              |
| Fiebig                     | Eucalyptus oil   | 305909           | 1              |
| Fiebig                     | Eucalyptus oil   | 18005267         | 1              |
| Fiebig                     | Eucalyptus oil   | 18006213         | 1              |
| Caelo                      | Eucalyptus oil   | 150111701        | 1              |
| Frey & Lau GmbH/Phoenix    | Eucalyptus oil   | 12G25-N11        | 1              |
| Gatt-Koller                | Eucalyptus oil   | 1702449          | 1              |
| Gatt-Koller                | Eucalyptus oil   | 1803744          | 1              |
| Gehe                       | Eucalyptus oil   | 296079           | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|---------------------------|------------------|-------------------|----------------|
| Gehe                      | Eucalyptus oil   | 297732            | 1              |
| Gehe                      | Eucalyptus oil   | 306637            | 1              |
| Gehe                      | Eucalyptus oil   | 19001869          | 1              |
| Gehe 20.02.15             | Eucalyptus oil   | 1406028-02        | 1              |
| Caelo                     | Eucalyptus oil   | 301115            | 1              |
| Caelo                     | Eucalyptus oil   | 15063309/1100516  | 1              |
| Ichthyol-Gesellschaft     | Eucalyptus oil   | 1610280E/15316504 | 2              |
| Jenne                     | Eucalyptus oil   | 18171707          | 3              |
| Jenne                     | Eucalyptus oil   | 18171714          | 2              |
| Kögl                      | Eucalyptus oil   | 153305164716      | 1              |
| Kögl                      | Eucalyptus oil   | 20172254          | 2              |
| L10                       | Eucalyptus oil   | 18027411          | 1              |
| L10/Bambastus             | Eucalyptus oil   | 303336            | 1              |
| L11                       | Eucalyptus oil   | 18027405          | 1              |
| L12                       | Eucalyptus oil   | 15316513          | 1              |
| L12                       | Eucalyptus oil   | 16351309          | 1              |
| L12                       | Eucalyptus oil   | 16235509          | 1              |
| L12                       | Eucalyptus oil   | 18225403          | 2              |
| Noveda                    | Eucalyptus oil   | 13106402          | 1              |
| Noweda                    | Eucalyptus oil   | 16351312          | 1              |
| Noweda                    | Eucalyptus oil   | 18225801          | 1              |
| Noweda                    | Eucalyptus oil   | 5156PT-K11        | 1              |
| Noweda                    | Eucalyptus oil   | 1806016-01        | 1              |
| Noweda                    | Eucalyptus oil   | 19000587          | 2              |
| Noweda 07.11.2019         | Eucalyptus oil   | 18171715          | 1              |
| Bombastus                 | Eucalyptus oil   | 306637            | 4              |
| Caelo                     | Eucalyptus oil   | 1608042-01        | 1              |
| Caelo                     | Eucalyptus oil   | 13106412          | 8              |
| Caelo                     | Eucalyptus oil   | 292087            | 1              |
| phoenix                   | Eucalyptus oil   | 306637            | 1              |
| Phoenix                   | Eucalyptus oil   | 16235502          | 1              |
| Phoenix                   | Eucalyptus oil   | 16351312          | 1              |
| Phoenix                   | Eucalyptus oil   | 18005784          | 1              |
| Phoenix 07.01.2019        | Eucalyptus oil   | 18171701          | 1              |
| Phoenix WE:27.01.2017 ... | Eucalyptus oil   | 15400210          | 1              |
| phönix                    | Eucalyptus oil   | 14E09-B06-294681  | 1              |
| Phönix                    | Eucalyptus oil   | 273707            | 1              |
| Phönix                    | Eucalyptus oil   | 14A17-B40         | 1              |
| Phönix                    | Eucalyptus oil   | 14A17-B40-291551  | 1              |
| Phönix                    | Eucalyptus oil   | 1801002-01        | 1              |
| Phönix 7.10.19            | Eucalyptus oil   | 18005784          | 1              |
| Phönix Gotha              | Eucalyptus oil   | 308151            | 1              |
| Bombastus                 | Eucalyptus oil   | 300798            | 1              |
| Caelo                     | Eucalyptus oil   | 15316505          | 1              |
| Fagron                    | Eucalyptus oil   | 14e09-b06-294679  | 1              |
| Fagron                    | Eucalyptus oil   | 18171701          | 1              |
| primavera                 | Eucalyptus oil   | 256A16            | 1              |
| PVL                       | Eucalyptus oil   | 1260813           | 1              |
| sana 05.12.14 5,25        | Eucalyptus oil   | 14039609          | 1              |
| Sanacorp                  | Eucalyptus oil   | 48/AKD3           | 1              |
| Sanacorp                  | Eucalyptus oil   | 15400202          | 1              |
| Sanacorp                  | Eucalyptus oil   | 16351301          | 1              |
| Sanacorp                  | Eucalyptus oil   | 16351309          | 1              |
| Sanacorp                  | Eucalyptus oil   | 16351313          | 3              |
| Sanacorp                  | Eucalyptus oil   | 16235508          | 1              |
| Sanacorp                  | Eucalyptus oil   | 17337707          | 2              |
| Sanacorp                  | Eucalyptus oil   | 18171702          | 2              |
| Sanacorp                  | Eucalyptus oil   | 18171701          | 2              |
| Sanacorp                  | Eucalyptus oil   | 18000176          | 1              |
| Sanacorp                  | Eucalyptus oil   | 11324112          | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|------------------|--------------------|----------------|
| Sanacrop                   | Eucalyptus oil   | 19016714           | 1              |
| Spangro 7.11.18            | Eucalyptus oil   | 17001384           | 1              |
| Taoasis                    | Eucalyptus oil   | 502745-108325      | 1              |
| Taoasis                    | Eucalyptus oil   | 521399-108557      | 1              |
| Taoasis                    | Eucalyptus oil   | 53970-110969       | 1              |
| Taoasis                    | Eucalyptus oil   | 527885-109905      | 1              |
| Taoasis                    | Eucalyptus oil   | 557095-114030      | 1              |
| Taoasis                    | Eucalyptus oil   | 543495-112704      | 1              |
| Taoasis                    | Eucalyptus oil   | 8745-115428        | 1              |
| Taoasis                    | Eucalyptus oil   | 8745-116747        | 1              |
| Taoasis                    | Eucalyptus oil   | 2097-475           | 1              |
| Taoasis                    | Eucalyptus oil   | 2478-6685          | 1              |
| Taoasis                    | Eucalyptus oil   | A107371-6619       | 1              |
| Taoasis                    | Eucalyptus oil   | 125802-8125        | 1              |
| Taoasis                    | Eucalyptus oil   | 125802-8443        | 1              |
| TAOASIS                    | Eucalyptus oil   | 2393               | 1              |
| Taoasis GmbH               | Eucalyptus oil   | 33364-110969       | 1              |
| VDL;5,40EUR;11.04.15       | Eucalyptus oil   | 14039625           | 1              |
| AHD , 03.09.13             | Rosemary oil     | 12246515           | 2              |
| Anzag 05.11.12 ek:7,37     | Rosemary oil     | 11287211           | 1              |
| Anzag 12.03.13 ek: 7,37EUR | Rosemary oil     | 12246508           | 1              |
| Apotheke Bauer,München     | Rosemary oil     | 201703347          | 1              |
| Bergland                   | Rosemary oil     | K601476            | 1              |
| Bergland/Sanacorp          | Rosemary oil     | C301101-3448311132 | 1              |
| Bombastus                  | Rosemary oil     | 278907             | 2              |
| Bombastus                  | Rosemary oil     | 275963             | 1              |
| Bombastus                  | Rosemary oil     | 285668             | 1              |
| Bombastus                  | Rosemary oil     | 289392             | 2              |
| Bombastus                  | Rosemary oil     | 2872889            | 1              |
| Bombastus                  | Rosemary oil     | 296037             | 1              |
| Bombastus                  | Rosemary oil     | 306506             | 5              |
| Bombastus                  | Rosemary oil     | 19003037           | 1              |
| Bombastus                  | Rosemary oil     | 298408             | 1              |
| Bombastus                  | Rosemary oil     | 17006473286        | 1              |
| Bombastus                  | Rosemary oil     | 6860867            | 1              |
| Bombastus                  | Rosemary oil     | 18003402           | 2              |
| Bombastus                  | Rosemary oil     | 19006565           | 2              |
| Bombastus                  | Rosemary oil     | 273724             | 3              |
| Bombastus                  | Rosemary oil     | 301180             | 1              |
| Bombastus                  | Rosemary oil     | 311262             | 1              |
| Bombastus                  | Rosemary oil     | 18005616           | 2              |
| Bombastus                  | Rosemary oil     | 281945             | 1              |
| Bombastus                  | Rosemary oil     | 282541             | 1              |
| Bombastus                  | Rosemary oil     | 288951             | 1              |
| Bombastus                  | Rosemary oil     | 295093             | 1              |
| Bombastus                  | Rosemary oil     | 304472             | 3              |
| Bombastus                  | Rosemary oil     | 19000812           | 3              |
| Bombastus                  | Rosemary oil     | 19006261           | 1              |
| Bombastus                  | Rosemary oil     | 19002758           | 1              |
| Bombastus                  | Rosemary oil     | 305785             | 1              |
| Bombastus                  | Rosemary oil     | 17000647           | 1              |
| Bombastus                  | Rosemary oil     | 18001783           | 3              |
| Bombastus                  | Rosemary oil     | 180035943286       | 1              |
| Bombastus                  | Rosemary oil     | 199003037          | 1              |
| Caelo                      | Rosemary oil     | 1736702            | 1              |
| Caelo                      | Rosemary oil     | 3091206            | 1              |
| Caelo                      | Rosemary oil     | 11287211           | 6              |
| Caelo                      | Rosemary oil     | 1209034-01         | 2              |
| Caelo                      | Rosemary oil     | 28051309           | 1              |
| Caelo                      | Rosemary oil     | 278907             | 2              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Rosemary oil     | 4101301          | 1              |
| Caelo           | Rosemary oil     | 12246515         | 3              |
| Caelo           | Rosemary oil     | 11031402         | 1              |
| Caelo           | Rosemary oil     | 18091402         | 1              |
| Caelo           | Rosemary oil     | 13241711         | 1              |
| Caelo           | Rosemary oil     | 1402907          | 1              |
| Caelo           | Rosemary oil     | 296036           | 1              |
| Caelo           | Rosemary oil     | 31031502         | 1              |
| Caelo           | Rosemary oil     | 15316703         | 1              |
| Caelo           | Rosemary oil     | 1608043-01       | 2              |
| Caelo           | Rosemary oil     | 15442018         | 1              |
| Caelo           | Rosemary oil     | 15442019         | 1              |
| Caelo           | Rosemary oil     | 16276905         | 1              |
| Caelo           | Rosemary oil     | 24061709         | 1              |
| Caelo           | Rosemary oil     | 16276907         | 2              |
| Caelo           | Rosemary oil     | 16276908         | 4              |
| Caelo           | Rosemary oil     | 382H25           | 1              |
| Caelo           | Rosemary oil     | 17326702         | 15             |
| Caelo           | Rosemary oil     | 9061816          | 1              |
| Caelo           | Rosemary oil     | 16276917         | 1              |
| Caelo           | Rosemary oil     | 17326707         | 1              |
| Caelo           | Rosemary oil     | 17326716         | 2              |
| Caelo           | Rosemary oil     | 17326712         | 1              |
| Caelo           | Rosemary oil     | 28111813         | 1              |
| Caelo           | Rosemary oil     | 17326713         | 3              |
| Caelo           | Rosemary oil     | 18252002         | 9              |
| Caelo           | Rosemary oil     | 18003594         | 1              |
| Caelo           | Rosemary oil     | 18252001         | 1              |
| Caelo           | Rosemary oil     | 19180302         | 1              |
| Caelo           | Rosemary oil     | 18252008         | 1              |
| Caelo           | Rosemary oil     | 191803005        | 1              |
| Caelo           | Rosemary oil     | 191803010        | 1              |
| Caelo           | Rosemary oil     | 17012014         | 1              |
| Caelo           | Rosemary oil     | 273098           | 1              |
| Caelo           | Rosemary oil     | 1117I-02012      | 1              |
| Caelo           | Rosemary oil     | 15442017         | 7              |
| Caelo           | Rosemary oil     | 12246520         | 3              |
| Caelo           | Rosemary oil     | 1319b04-302288   | 1              |
| Caelo           | Rosemary oil     | 13I19-B04-293599 | 1              |
| Caelo           | Rosemary oil     | 13/19-B04-293577 | 3              |
| Caelo           | Rosemary oil     | 150422           | 1              |
| Caelo           | Rosemary oil     | 11287208         | 3              |
| Caelo           | Rosemary oil     | 12246501         | 5              |
| Caelo           | Rosemary oil     | 12246508         | 5              |
| Caelo           | Rosemary oil     | 57(17326713)     | 1              |
| Caelo           | Rosemary oil     | 58(18252007)     | 1              |
| Caelo           | Rosemary oil     | 14092911         | 4              |
| Caelo           | Rosemary oil     | 29092003         | 1              |
| Caelo           | Rosemary oil     | 56(16276908)     | 1              |
| Caelo           | Rosemary oil     | 10374817         | 2              |
| Caelo           | Rosemary oil     | 2613M-02012      | 1              |
| Caelo           | Rosemary oil     | 2715E-02012      | 1              |
| Caelo           | Rosemary oil     | 2016E-02012      | 1              |
| Caelo           | Rosemary oil     | 3018E-02012      | 1              |
| Caelo           | Rosemary oil     | 2019U-02012      | 1              |
| Caelo           | Rosemary oil     | 191803006        | 1              |
| Caelo           | Rosemary oil     | 20004109002      | 1              |
| Caelo           | Rosemary oil     | 16276904         | 1              |
| Caelo           | Rosemary oil     | 279984           | 1              |
| Caelo           | Rosemary oil     | 12246517         | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|----------------------------|------------------|----------------------|----------------|
| Caelo                      | Rosemary oil     | 14092910             | 5              |
| Caelo                      | Rosemary oil     | 15316706             | 1              |
| Caelo                      | Rosemary oil     | 16276903-20170704Ma1 | 1              |
| Caelo                      | Rosemary oil     | 18252017             | 7              |
| Caelo                      | Rosemary oil     | 19180305             | 7              |
| Caelo                      | Rosemary oil     | 17326703             | 3              |
| Caelo                      | Rosemary oil     | 1511016-01           | 1              |
| Caelo                      | Rosemary oil     | 19180301             | 1              |
| Caelo                      | Rosemary oil     | 191803011            | 1              |
| Caelo                      | Rosemary oil     | 191803004            | 1              |
| Caelo                      | Rosemary oil     | 14092904             | 3              |
| Caelo                      | Rosemary oil     | 15316704             | 4              |
| Caelo                      | Rosemary oil     | 462K25               | 1              |
| Caesaer/Jenne              | Rosemary oil     | 17326713             | 1              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252010             | 2              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252002             | 2              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252005             | 1              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252009             | 1              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252007             | 4              |
| Caesar & Loretz GmbH       | Rosemary oil     | 18252017             | 1              |
| Caesar & Loretz GmbH       | Rosemary oil     | 19180302             | 1              |
| Caesar & Loretz GmbH       | Rosemary oil     | 19180305             | 4              |
| Caesar & Loretz GmbH / ... | Rosemary oil     | 18252017             | 1              |
| Caesar & Loretz GmbH/Fi... | Rosemary oil     | 18252002             | 1              |
| Caesar & Loretz GmbH/Fi... | Rosemary oil     | 1903001-01           | 1              |
| Caesar & Loretz GmbH/Gehe  | Rosemary oil     | 191803011            | 1              |
| Caesar & Loretz GmbH/Sa... | Rosemary oil     | 19180305             | 1              |
| Caelo                      | Rosemary oil     | 18252007             | 5              |
| Euro OTC                   | Rosemary oil     | 130801401            | 2              |
| Euro OTC                   | Rosemary oil     | 1202025-01           | 2              |
| Euro OTC                   | Rosemary oil     | 1404037-01           | 1              |
| Euro OTC                   | Rosemary oil     | 1511016-02           | 3              |
| Euro OTC                   | Rosemary oil     | 1511016-01           | 1              |
| Euro OTC                   | Rosemary oil     | 1903001-01           | 2              |
| Euro OTC                   | Rosemary oil     | 1803038-01           | 2              |
| Euro OTC                   | Rosemary oil     | 1209034-01           | 1              |
| Euro OTC                   | Rosemary oil     | 954878               | 1              |
| Euro OTC                   | Rosemary oil     | 1404037-02           | 1              |
| Euro OTC                   | Rosemary oil     | 290203901            | 1              |
| Fagron                     | Rosemary oil     | 11K21-N05            | 3              |
| Fagron                     | Rosemary oil     | 693655-N12           | 1              |
| Fagron                     | Rosemary oil     | 13A28-N03            | 3              |
| Fagron                     | Rosemary oil     | 13I19B04             | 1              |
| Fagron                     | Rosemary oil     | 13/19-B04-308855     | 2              |
| Fagron                     | Rosemary oil     | 13I19-B04-293577     | 2              |
| Fagron                     | Rosemary oil     | 1511016-02           | 1              |
| Fagron                     | Rosemary oil     | 13B18-N01            | 3              |
| Fagron                     | Rosemary oil     | 13/19-B04-287289     | 1              |
| Fagron                     | Rosemary oil     | 13I19-B04            | 5              |
| Fagron                     | Rosemary oil     | 1608043-01           | 1              |
| Fagron                     | Rosemary oil     | 16L22B84329543       | 1              |
| fargo                      | Rosemary oil     | 13A28-N03            | 2              |
| Fiebig                     | Rosemary oil     | 15442018             | 1              |
| Fiebig                     | Rosemary oil     | 16276912             | 1              |
| Fiebig                     | Rosemary oil     | 17326704             | 1              |
| Fiebig                     | Rosemary oil     | 17326714             | 1              |
| Fiebig                     | Rosemary oil     | 18252013             | 2              |
| Frey & Lau GmbH/Phoenix    | Rosemary oil     | 13/19-B04-293575     | 1              |
| Frey+Lau                   | Rosemary oil     | 905855               | 1              |
| Gatt-Koller                | Rosemary oil     | 1802349              | 1              |

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| Supplier                    | Substance      | Batch            | Spectra |
|-----------------------------|----------------|------------------|---------|
| Gehe                        | Rosemary oil   | 301180           | 1       |
| Gehe                        | Rosemary oil   | 19180305         | 1       |
| Gehe/ EuRho                 | Rosemary oil   | 1903001-01       | 1       |
| Caelo                       | Rosemary oil   | 275963           | 1       |
| Caelo                       | Rosemary oil   | 16276910         | 6       |
| Herba                       | Rosemary oil   | 5131011122331026 | 1       |
| Kögl                        | Rosemary oil   | 985929           | 3       |
| Caelo                       | Rosemary oil   | 16276903         | 3       |
| L12                         | Rosemary oil   | 17326702         | 1       |
| Caelo                       | Rosemary oil   | 15442001         | 3       |
| Noweda                      | Rosemary oil   | 10374817         | 1       |
| Noweda                      | Rosemary oil   | 11287211         | 1       |
| Noweda/Phoenix/ Taoasis     | Rosemary oil   | 3231031-117639   | 1       |
| Phoenix 07.01.2019          | Rosemary oil   | 18252002         | 1       |
| Phoenix/ Taoasis            | Rosemary oil   | 3231016          | 1       |
| Phönix                      | Rosemary oil   | 282665           | 1       |
| Phönix                      | Rosemary oil   | 131119-B04       | 1       |
| Fagron                      | Rosemary oil   | 13/19-B04-293577 | 9       |
| Primavera/Direkt            | Rosemary oil   | 1340215          | 1       |
| Primavera/Direkt            | Rosemary oil   | 1204H22          | 1       |
| Primavera/Direkt            | Rosemary oil   | 193C23           | 1       |
| Primavera/Direkt            | Rosemary oil   | 13K23            | 1       |
| Primavera/Direkt            | Rosemary oil   | 426B25           | 1       |
| Primavera/Direkt            | Rosemary oil   | 274E26           | 2       |
| Primavera/Gege              | Rosemary oil   | 179G26           | 1       |
| Primavera/Phoenix           | Rosemary oil   | 207J26           | 1       |
| Primavera/Sanacorp          | Rosemary oil   | 1058G22          | 1       |
| PVL                         | Rosemary oil   | 491212           | 1       |
| rosma                       | Rosemary oil   | 17000647         | 1       |
| Sanacorp                    | Rosemary oil   | 306506           | 2       |
| Sanacorp                    | Rosemary oil   | 17000647         | 1       |
| Sanacorp                    | Rosemary oil   | 18001783         | 1       |
| Sanacorp, 21.02.17, 8,73EUR | Rosemary oil   | 15442017         | 1       |
| Spangro 7.11.18             | Rosemary oil   | 17326702         | 1       |
| Taoasis                     | Rosemary oil   | 121217-110772    | 1       |
| Taoasis                     | Rosemary oil   | 130313-111912    | 1       |
| Taoasis                     | Rosemary oil   | 3231031-117639   | 1       |
| Taoasis                     | Rosemary oil   | 26057-118014     | 1       |
| Taoasis                     | Rosemary oil   | 2517-7232        | 1       |
| Taoasis                     | Rosemary oil   | 6761-11499       | 1       |
| Taoasis GmbH                | Rosemary oil   | 7028-105285      | 1       |
| Taoasis GmbH                | Rosemary oil   | 130815-113178    | 1       |
| Taoasis GmbH                | Rosemary oil   | 3231016-115522   | 1       |
| Taoasis/Noweda              | Rosemary oil   | 3231015-118416   | 1       |
| Taoasis/Noweda              | Rosemary oil   | 1921019-121067   | 1       |
| ACM                         | Eucalyptus oil |                  | 1       |
| Apotheker Bauer & Cie       | Eucalyptus oil |                  | 1       |
| Bombastus                   | Eucalyptus oil | 18005784         | 23      |
| Caelo                       | Eucalyptus oil |                  | 1       |
| Caelo                       | Eucalyptus oil | 14039609         | 17      |
| Caelo                       | Eucalyptus oil | 14121904         | 5       |
| Caelo                       | Eucalyptus oil | 14039626         | 8       |
| Caelo                       | Eucalyptus oil | 15316504         | 13      |
| Euro OTC                    | Eucalyptus oil | 1406028-01       | 1       |
| Caelo                       | Eucalyptus oil | 14039604         | 1       |
| phönix                      | Eucalyptus oil |                  | 2       |
| VDL 26.04.14 Preis 5,25     | Eucalyptus oil |                  | 1       |
| Euro OTC                    | Rosemary oil   | 1303016-01       | 1       |
| Fagron                      | Rosemary oil   | 12E08-N05        | 3       |
| noweda                      | Rosemary oil   |                  | 1       |

- 240 037 spectra from 1121 *Apo-Ident* customers from a total of 46 540 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Eucalyptus oil / Rosmary oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Eucalyptus oil / Rosmary oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 870           | 0              | 63 069        |
| <b>Type B</b> | 0              | 560           | 0              | 90 931        |
| <b>Type C</b> | 0              | 1317          | 9              | 240 037       |

The substance/substance group *Eucalyptus oil / Rosmary oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.3103 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.9286 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.3213 % (> 99.0950 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Eucalyptus oil / Rosmary oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                | Distance in main model | Distance in second-stage model |
|--------------------------|------------------------|--------------------------------|
| Cineole                  | 26.02                  | —                              |
| Myrtle oil               | 28.06                  | —                              |
| Sage oil                 | 28.79                  | —                              |
| Turpentine oil           | 29.35                  | —                              |
| Cypress oil              | 41.42                  | —                              |
| Juniper wood oil         | 41.77                  | —                              |
| Cajeput (essentiell oil) | 43.21                  | —                              |
| Spruce needle oil        | 45.68                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Eucalyptus oil* / *Rosmary oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30875     | 30875               | 0.00                         | 42.19                           |
| 31110     | 31285               | 5.36                         | 30.66                           |
| 31284     | 31284               | 0.00                         | 39.96                           |
| 31285     | 31285               | 0.00                         | 31.89                           |
| 31298     | 31285               | 1.57                         | 31.24                           |
| 31311     | 31311               | 0.00                         | 41.38                           |
| 31314     | 31314               | 0.00                         | 40.04                           |
| 31527     | 31823               | 3.38                         | 30.85                           |
| 31822     | 31822               | 0.00                         | 41.56                           |
| 31823     | 31823               | 0.00                         | 30.82                           |
| 31864     | 31823               | 2.33                         | 31.21                           |
| 31865     | 31314               | 6.28                         | 36.68                           |
| 32686     | 32686               | 0.00                         | 38.32                           |
| 33277     | 31823               | 12.32                        | 38.09                           |
| 34523     | 31823               | 2.55                         | 31.38                           |
| 34614     | 34614               | 0.00                         | 40.73                           |
| 34759     | 31823               | 3.77                         | 26.27                           |
| 35139     | 35139               | 0.00                         | 40.12                           |
| 35553     | 35553               | 0.00                         | 36.54                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Eugenol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31286-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Eugenol; Eugenolum

### Special notes

When selecting the *Eugenol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Eugenol                   | 5      | 3      | 12     |

## Second-stage model

For differentiation of the substance/substance group *Eugenol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Eugenol*:

| Supplier | Substance | Batch            | Sample ID | Spectra | Certificate |
|----------|-----------|------------------|-----------|---------|-------------|
| Caelo    | Eugenol   | 13401501         | 31286     | 40      | 1407436     |
| Caelo    | Eugenol   | 13401506         | 31397     | 40      | 20131213    |
| Caelo    | Eugenol   | 173534           | 33896     | 40      | 20180126*   |
| Caelo    | Eugenol   | 21002269         | 35720     | 50      | 20210803*   |
| Fagron   | Eugenol   | 16I12-B05-336284 | 34481     | 40      | 20161010    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 210 spectra of 5 reference samples from the substance/substance group *Eugenol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 729 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Eugenol*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance | Batch            | Sample ID | Spectra |
|----------|-----------|------------------|-----------|---------|
| Caelo    | Eugenol   | 20001728         | 34987     | 40      |
| Fagron   | Eugenol   | 15H11-B03-322946 | 32731     | 40      |
| Fagron   | Eugenol   | 20K26-F02-376293 | 35266     | 40      |
| Fagron   | Eugenol   | 15H11-B03-322946 | 33220     | 40      |

- 91 331 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 22 spectra from 17 *Apo-Ident* customers from 12 batches from the substance/substance group *Eugenol*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance | Batch            | Spectra |
|----------|-----------|------------------|---------|
| Caelo    | Eugenol   | 17353401         | 1       |
| Caelo    | Eugenol   | 17353403         | 3       |
| Caelo    | Eugenol   | 14165403         | 1       |
| Caelo    | Eugenol   | 18147002         | 3       |
| Caelo    | Eugenol   | 15255904         | 2       |
| Caelo    | Eugenol   | 16034703         | 3       |
| Caelo    | Eugenol   | 16034701         | 1       |
| Caelo    | Eugenol   | 15255901         | 2       |
| Caelo    | Eugenol   | 14165401         | 1       |
| Fagron   | Eugenol   | 13H14-B40-286617 | 1       |
| Caelo    | Eugenol   | 19093201         | 3       |
| Speiko   | Eugenol   | 1051             | 1       |

- 241 341 spectra from 1121 *Apo-Ident* customers from a total of 46 994 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Eugenol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Eugenol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 210           | 0              | 63 729        |
| <b>Type B</b> | 0              | 160           | 0              | 91 331        |
| <b>Type C</b> | 0              | 22            | 0              | 241 341       |

The substance/substance group *Eugenol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.1429 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| <b>Type C</b> | 100.0000 % (> 99.6853 %) | 100.0000 % (> 72.7273 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Eugenol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b> | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|------------------|-------------------------------|---------------------------------------|
| Clove oil        | 26.87                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Eugenol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31286            | 31286                      | 0.00                                | 34.50                                  |
| 31397            | 31286                      | 1.60                                | 36.23                                  |
| 33896            | 33896                      | 0.00                                | 35.14                                  |
| 34481            | 31286                      | 3.23                                | 36.10                                  |
| 35720            | 35720                      | 0.00                                | 36.17                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances,

thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Gel Cordes®**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30632-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Gel Cordes®

### Special notes

When selecting the *Gel Cordes®* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Gel Cordes®               | 5      | 2      | 29     |

## Second-stage model

For differentiation of the substance/substance group *Gel Cordes*<sup>®</sup> the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Gel Cordes*<sup>®</sup>:

| Supplier | Substance               | Batch   | Sample ID | Spectra | Certificate |
|----------|-------------------------|---------|-----------|---------|-------------|
| Ichthyol | Gel Cordes <sup>®</sup> | 12A035  | 30632     | 40      | 1405096     |
| Ichthyol | Gel Cordes <sup>®</sup> | 15A099  | 31876     | 60      | 20150624    |
| Ichthyol | Gel Cordes <sup>®</sup> | 15A099  | 32910     | 40      | 20150624    |
| Ichthyol | Gel Cordes <sup>®</sup> | 15A099  | 32911     | 40      | 20150624    |
| Ichthyol | Gel Cordes <sup>®</sup> | 18A086  | 34677     | 40      | 20181101    |
| Ichthyol | Gel Cordes <sup>®</sup> | 19A0165 | 34842     | 40      | 20190917    |
| Ichthyol | Gel Cordes <sup>®</sup> | 20A0132 | 35108     | 30      | 20200728    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 290 spectra of 7 reference samples from the substance/substance group *Gel Cordes*<sup>®</sup>. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 649 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 87 spectra of 3 reference samples from the substance/substance group *Gel Cordes*<sup>®</sup>.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance               | Batch   | Sample ID          | Spectra |
|----------|-------------------------|---------|--------------------|---------|
| Ichthyol | Gel Cordes <sup>®</sup> | 13A007  | 31083              | 40      |
| Ichthyol | Gel Cordes <sup>®</sup> | 17A047  | 33987              | 40      |
| Ichthyol | Gel Cordes <sup>®</sup> | 20A0132 | 35108 <sup>†</sup> | 7       |

- 91 404 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 150 spectra from 48 *Apo-Ident* customers from 35 batches from the substance/substance group *Gel Cordes<sup>®</sup>*.
- Among them are spectra of independent samples from 29 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                | Substance               | Batch       | Spectra |
|-------------------------|-------------------------|-------------|---------|
| 1xAnzag 2xJenne Ivthyol | Gel Cordes <sup>®</sup> | 31(17A047)  | 1       |
| AHD                     | Gel Cordes <sup>®</sup> | 16A169      | 1       |
| Anzag/Ichthyol          | Gel Cordes <sup>®</sup> | 17A047      | 1       |
| Anzag/Ichthyol          | Gel Cordes <sup>®</sup> | 17A237      | 1       |
| Audor Pharma            | Gel Cordes <sup>®</sup> | 17A047      | 3       |
| Caelo                   | Gel Cordes <sup>®</sup> | 42(17A237)  | 1       |
| Caelo                   | Gel Cordes <sup>®</sup> | 32(17A047)  | 1       |
| Caelo                   | Gel Cordes <sup>®</sup> | 13A007      | 2       |
| Caelo                   | Gel Cordes <sup>®</sup> | 17A047      | 1       |
| Caeolo                  | Gel Cordes <sup>®</sup> | 14A017      | 1       |
| Gehe                    | Gel Cordes <sup>®</sup> | 17A237      | 1       |
| Ichthol/ gehe 12.09.16  | Gel Cordes <sup>®</sup> | 15a099      | 1       |
| Ichthyol                | Gel Cordes <sup>®</sup> | 14A017      | 2       |
| Ichthyol                | Gel Cordes <sup>®</sup> | 16A169      | 13      |
| Ichthyol                | Gel Cordes <sup>®</sup> | 17A047      | 2       |
| Ichthyol                | Gel Cordes <sup>®</sup> | 17A237      | 1       |
| ICHTHYOL                | Gel Cordes <sup>®</sup> | 16A169      | 1       |
| Ichthyol / Anzag        | Gel Cordes <sup>®</sup> | 1219Q-03685 | 1       |
| Ichthyol / GEHE         | Gel Cordes <sup>®</sup> | 19A0165     | 2       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 36(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 37(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 38(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 39(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 40(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 43(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 44(17A237)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 45(18A086)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 46(18A086)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 47(18A086)  | 1       |
| Ichthyol /Anzag         | Gel Cordes <sup>®</sup> | 48(18A084)  | 1       |
| Ichthyol Gesellschaft   | Gel Cordes <sup>®</sup> | 17A047      | 1       |
| Ichthyol/ Jenne         | Gel Cordes <sup>®</sup> | 18A086      | 2       |

*continued on the next page*

<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

continued from previous page

| Supplier                   | Substance               | Batch      | Spectra |
|----------------------------|-------------------------|------------|---------|
| Ichthyol/AHD               | Gel Cordes <sup>®</sup> | 30(17A047) | 1       |
| Ichthyol/AHD               | Gel Cordes <sup>®</sup> | 33(17A237) | 1       |
| Ichthyol/AHD               | Gel Cordes <sup>®</sup> | 34(17A237) | 1       |
| Ichthyol/AHD               | Gel Cordes <sup>®</sup> | 35(17A237) | 1       |
| Ichthyol/Alkun             | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Ichthyol/Alliance          | Gel Cordes <sup>®</sup> | 15A099     | 1       |
| Ichthyol/Alliance          | Gel Cordes <sup>®</sup> | 17A237     | 2       |
| Ichthyol/Alliance Healt... | Gel Cordes <sup>®</sup> | 15A099     | 3       |
| Ichthyol/Anzag             | Gel Cordes <sup>®</sup> | 12A035     | 2       |
| Ichthyol/Gehe              | Gel Cordes <sup>®</sup> | 14A017     | 1       |
| Ichthyol/Gehe              | Gel Cordes <sup>®</sup> | 15A099     | 1       |
| Ichthyol/Gehe              | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| Ichthyol/Noweda            | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Ichthyol/Noweda            | Gel Cordes <sup>®</sup> | 17A237     | 2       |
| Ichthyol/Noweda            | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| Ichthyol/Phönix            | Gel Cordes <sup>®</sup> | 17A047     | 3       |
| Ichthyol/Phönix            | Gel Cordes <sup>®</sup> | 17A237     | 1       |
| Ichthyol/Phönix            | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| Ichthyol/Phönix            | Gel Cordes <sup>®</sup> | 19A0165    | 1       |
| Ichthyol/Sanacorp          | Gel Cordes <sup>®</sup> | 14A017     | 1       |
| Ichthyol/Sanacorp          | Gel Cordes <sup>®</sup> | 16A169     | 1       |
| Ichthyol/Sanacorp          | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Ichthyol/Spangro           | Gel Cordes <sup>®</sup> | 16A169     | 1       |
| Ichthyol-Gesellschaft      | Gel Cordes <sup>®</sup> | 19A0165    | 1       |
| ICHTHYOL-GESELLSCHAFT      | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| ICHTHYOL-GESELLSCHAFT      | Gel Cordes <sup>®</sup> | 19A0265    | 1       |
| Ichthyol-Gesellschaft C... | Gel Cordes <sup>®</sup> | 20A0132    | 1       |
| Ichthyol-Gesellschaft C... | Gel Cordes <sup>®</sup> | 13A007     | 1       |
| Ichthyol-Gesellschaft C... | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| Ichthyol-Gesellschaft/...  | Gel Cordes <sup>®</sup> | 17A237     | 3       |
| ICHTHYOL-GESELLSCHAFT/J... | Gel Cordes <sup>®</sup> | 19A0165    | 1       |
| Ichthyol-Gesellschaft/N... | Gel Cordes <sup>®</sup> | 15A099     | 2       |
| Ichtyol                    | Gel Cordes <sup>®</sup> | 718E-03685 | 1       |
| Ichtyol-Gesellschaft       | Gel Cordes <sup>®</sup> | 15A099     | 1       |
| Ichtyol-Gesellschaft       | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Ichtyol-Gesellschaft       | Gel Cordes <sup>®</sup> | 17A237     | 3       |
| Ichtyol-Gesellschaft       | Gel Cordes <sup>®</sup> | 18A086     | 2       |
| Ichtyol-Gesellschaft       | Gel Cordes <sup>®</sup> | 19A0165    | 2       |
| Ivthyol/Phoenix            | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Noweda                     | Gel Cordes <sup>®</sup> | 17A047     | 1       |
| Noweda                     | Gel Cordes <sup>®</sup> | 17A237     | 2       |
| Noweda                     | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| Noweda                     | Gel Cordes <sup>®</sup> | 20A0132    | 1       |
| Noweda/Ichthyol-Gesells... | Gel Cordes <sup>®</sup> | 14A017     | 3       |
| Noweda/Ichthyol-Gesells... | Gel Cordes <sup>®</sup> | 15A099     | 1       |
| Phoenix                    | Gel Cordes <sup>®</sup> | 18A086     | 2       |
| Phönix                     | Gel Cordes <sup>®</sup> | 18A086     | 1       |
| PHÖNIX                     | Gel Cordes <sup>®</sup> | 17A237     | 2       |
| Wolf Apotheke              | Gel Cordes <sup>®</sup> | 41(17A237) | 1       |
| Ichthyol                   | Gel Cordes <sup>®</sup> | 15A099     | 29      |
| Ichthyol                   | Gel Cordes <sup>®</sup> | 18A086     | 2       |

- 241 213 spectra from 1121 *Apo-Ident* customers from a total of 46 971 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Gel Cordes*<sup>®</sup> can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Gel Cordes*<sup>®</sup> and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 290           | 0              | 63 649        |
| <b>Type B</b> | 0              | 80            | 7              | 91 404        |
| <b>Type C</b> | 0              | 150           | 0              | 241 213       |

The substance/substance group *Gel Cordes*<sup>®</sup> can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.9310 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 91.9540 % (> 88.5057 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 100.0000 % (> 96.0000 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Gel Cordes*<sup>®</sup> in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Base cream, diluted                       | 21.40                  | —                              |
| Anionic hydrophilic cream with propyle... | 36.57                  | —                              |
| Glycolic acid 70%                         | 37.78                  | —                              |
| Lotio Cordes <sup>®</sup>                 | 39.70                  | —                              |
| Hydrophilic cream, non-ionic without p... | 42.58                  | —                              |
| Non-ionic hydrous liniment SR/DAC (NRF... | 44.85                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)   | 45.99                  | —                              |
| Sodium lactate solution 50%               | 46.72                  | —                              |
| Anionic hydrophlic cream without prese... | 48.17                  | —                              |
| Liquorice juice purified, diluted         | 49.29                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Gel Cordes*<sup>®</sup> is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30632     | 30632               | 0.00                         | 42.62                           |
| 31876     | 30632               | 15.90                        | 41.72                           |
| 32910     | 30632               | 10.40                        | 41.84                           |
| 32911     | 30632               | 11.93                        | 41.73                           |
| 34677     | 30632               | 20.55                        | 41.71                           |
| 34842     | 30632               | 22.96                        | 41.70                           |
| 35108     | 30632               | 18.10                        | 42.48                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Geranium oil, genuine**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30468-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Geranium oil, genuine; Oleum geranii verum

### Special notes

When selecting the *Geranium oil, genuine* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Geranium oil, genuine     | 4      | 3      | 12     |



## Second-stage model

For differentiation of the substance/substance group *Geranium oil, genuine* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Geranium oil, genuine*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Geranium oil, ge... | 12354109 | 31193     | 40      | 1403533     |
| Caelo    | Geranium oil, ge... | 15172205 | 31789     | 60      | 20150608    |
| Caelo    | Geranium oil, ge... | 171503   | 33316     | 40      | 20170523*   |
| Caelo    | Geranium oil, ge... | 190160   | 34646     | 40      | 20190117*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Geranium oil, genuine*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Geranium oil, genuine*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance             | Batch    | Sample ID | Spectra |
|----------|-----------------------|----------|-----------|---------|
| Caelo    | Geranium oil, genuine | 16070404 | 33438     | 40      |
| Caelo    | Geranium oil, genuine | 180259   | 34053     | 40      |
| Caelo    | Geranium oil, genuine | 193059   | 34995     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 19 spectra from 13 *Apo-Ident* customers from 12 batches from the substance/substance group *Geranium oil, genuine*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance             | Batch     | Spectra |
|----------|-----------------------|-----------|---------|
| Caelo    | Geranium oil, genuine | 35434343  | 1       |
| Caelo    | Geranium oil, genuine | 11275605  | 1       |
| Caelo    | Geranium oil, genuine | 153670202 | 1       |
| Caelo    | Geranium oil, genuine | 15370201  | 1       |
| Caelo    | Geranium oil, genuine | 18025906  | 1       |
| Caelo    | Geranium oil, genuine | 19016005  | 1       |
| Caelo    | Geranium oil, genuine | 18025903  | 1       |
| Caelo    | Geranium oil, genuine | 16070403  | 3       |
| Caelo    | Geranium oil, genuine | 18025902  | 4       |
| Caelo    | Geranium oil, genuine | 193059001 | 1       |
| Caelo    | Geranium oil, genuine | 17150301  | 3       |
| Fiebig   | Geranium oil, genuine | 193059003 | 1       |

- 241 344 spectra from 1121 *Apo-Ident* customers from a total of 46 994 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Geranium oil, genuine* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Geranium oil, genuine* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 19            | 0              | 241 344       |

The substance/substance group *Geranium oil, genuine* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6853 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Geranium oil, genuine* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|---------------------------------|-------------------------------|---------------------------------------|
| Rose oil (genuine / artificial) | 28.69                         | —                                     |
| Citronella oil                  | 52.87                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Geranium oil, genuine* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31193            | 31193                      | 0.00                                | 51.16                                  |
| 31789            | 33316                      | 3.22                                | 50.74                                  |
| 33316            | 33316                      | 0.00                                | 52.58                                  |
| 34646            | 34646                      | 0.00                                | 54.00                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical

variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Glucose syrup</b>                                             |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30934-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Glucose syrup; Glucose syrup GE 40%; Glucosum liquidum

### Special notes

When selecting the *Glucose syrup* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Glucose syrup             | 3      | 1      | 8      |

## Second-stage model

For differentiation of the substance/substance group *Glucose syrup* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Glucose syrup*:

| Supplier | Substance     | Batch            | Sample ID | Spectra | Certificate |
|----------|---------------|------------------|-----------|---------|-------------|
| Fagron   | Glucose syrup | 12I18-N11        | 30934     | 40      | 1403229     |
| Fagron   | Glucose syrup | 14G16-T01-018036 | 31603     | 60      | 20150120    |
| Fagron   | Glucose syrup | 14G16-T01-018036 | 32272     | 40      | 20150120    |
| Fagron   | Glucose syrup | 16I02-T07-039136 | 33632     | 40      | 20161222    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Glucose syrup*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 759 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Glucose syrup*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance     | Batch            | Sample ID | Spectra |
|----------|---------------|------------------|-----------|---------|
| Fagron   | Glucose syrup | 16B02-T11-029595 | 32273     | 40      |



- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 14 spectra from 13 *Apo-Ident* customers from 10 batches from the substance/substance group *Glucose syrup*.
- Among them are spectra of independent samples from 8 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance     | Batch            | Spectra |
|----------|---------------|------------------|---------|
| Caelo    | Glucose syrup | 16D02-T11-029595 | 1       |
| Caelo    | Glucose syrup | 16I02-T07-039136 | 1       |
| Fagron   | Glucose syrup | 14G16T01-018037  | 1       |
| Fagron   | Glucose syrup | 13D23-N02        | 1       |
| Fagron   | Glucose syrup | 13G03-N01        | 1       |
| Fagron   | Glucose syrup | 15H28-T01-025267 | 1       |
| Fagron   | Glucose syrup | 14G16-T01-018038 | 1       |
| Fagron   | Glucose syrup | 10J25-T52-013485 | 1       |
| Fagron   | Glucose syrup | 16B02-T11-029595 | 2       |
| Phönix   | Glucose syrup | 13D23-N02        | 1       |
| Fagron   | Glucose syrup | 16I02-T07-039136 | 2       |
| Fagron   | Glucose syrup | 14G16-T01-018036 | 1       |

- 241 349 spectra from 1121 *Apo-Ident* customers from a total of 46 996 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Glucose syrup* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Glucose syrup* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 180           | 0              | 63 759        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 14            | 0              | 241 349       |

The substance/substance group *Glucose syrup* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| Type B | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| Type C | 100.0000 % (> 99.6855 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Glucose syrup* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                            | Distance in main model | Distance in second-stage model |
|--------------------------------------|------------------------|--------------------------------|
| Honey                                | 17.85                  | —                              |
| Marshmallow syrup (conserved)        | 21.77                  | —                              |
| Ribwort plantain syrup (conserved)   | 24.96                  | —                              |
| Ipecacuanha syrup (NRF 19.1)         | 26.05                  | —                              |
| Sugar syrup DAB                      | 30.48                  | —                              |
| Raspberry syrup (conserved)          | 30.98                  | —                              |
| Fennel honey (conserved)             | 34.11                  | —                              |
| Sorbitol, liquid (non crystallising) | 34.61                  | —                              |
| Rose honey                           | 34.83                  | —                              |
| Glycerine ointment (conserved)       | 44.94                  | —                              |
| Cherry syrup (conserved)             | 45.22                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Glucose syrup* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30934     | 30934               | 0.00                         | 30.88                           |
| 31603     | 30934               | 6.50                         | 33.26                           |
| 32272     | 30934               | 7.92                         | 30.98                           |
| 33632     | 30934               | 2.92                         | 27.90                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at

least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Glycerine ointment (conserved)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30986-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Glycerine ointment (conserved); Unguentum glycerini (konserviert)

### Special notes

When selecting the *Glycerine ointment (conserved)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group      | Type A | Type B | Type C |
|--------------------------------|--------|--------|--------|
| Glycerine ointment (conserved) | 4      | 3      | 14     |

## Second-stage model

For differentiation of the substance/substance group *Glycerine ointment (conserved)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Glycerine ointment (conserved)*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Glycerine ointme... | 12288201 | 30986     | 40      | 20121017    |
| Caelo    | Glycerine ointme... | 14031701 | 31296     | 40      | 1410452     |
| Caelo    | Glycerine ointme... | 16192001 | 32589     | 40      | 20160627    |
| Caelo    | Glycerine ointme... | 18286201 | 34685     | 40      | 20181108    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Glycerine ointment (conserved)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Glycerine ointment (conserved)*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                      | Batch    | Sample ID | Spectra |
|----------|--------------------------------|----------|-----------|---------|
| Caelo    | Glycerine ointment (conserved) | 17049101 | 33240     | 40      |
| Caelo    | Glycerine ointment (conserved) | 18095401 | 34206     | 40      |
| Caelo    | Glycerine ointment (conserved) | 20002504 | 35101     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 36 spectra from 12 *Apo-Ident* customers from 16 batches from the substance/substance group *Glycerine ointment (conserved)*.
- Among them are spectra of independent samples from 14 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance                      | Batch    | Spectra |
|----------------------|--------------------------------|----------|---------|
| Caelo                | Glycerine ointment (conserved) | 14183401 | 5       |
| Caelo                | Glycerine ointment (conserved) | 16192002 | 1       |
| Caelo                | Glycerine ointment (conserved) | 17049101 | 5       |
| Caelo                | Glycerine ointment (conserved) | 17048101 | 1       |
| Caelo                | Glycerine ointment (conserved) | 18095401 | 4       |
| Caelo                | Glycerine ointment (conserved) | 15025101 | 3       |
| Caelo                | Glycerine ointment (conserved) | 19108202 | 1       |
| Caelo                | Glycerine ointment (conserved) | 18286202 | 1       |
| Caelo                | Glycerine ointment (conserved) | 17049102 | 1       |
| Caelo                | Glycerine ointment (conserved) | 16021501 | 3       |
| Caelo                | Glycerine ointment (conserved) | 17242901 | 2       |
| Caesar & Loretz GmbH | Glycerine ointment (conserved) | 19292201 | 1       |
| Caelo                | Glycerine ointment (conserved) | 18095402 | 3       |
| Caelo                | Glycerine ointment (conserved) | 13250102 | 2       |
| Caelo                | Glycerine ointment (conserved) | 14031701 | 1       |
| Caelo                | Glycerine ointment (conserved) | 16192001 | 2       |

- 241 327 spectra from 1121 *Apo-Ident* customers from a total of 46 991 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Glycerine ointment (conserved)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Glycerine ointment (conserved)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).



|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 160           | 0              | 63 779        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 36            | 0              | 241 327       |

The substance/substance group *Glycerine ointment (conserved)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6851 %) | 100.0000 % (> 83.3333 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Glycerine ointment (conserved)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in main model | Distance in second-stage model |
|------------------------------|------------------------|--------------------------------|
| Honey                        | 32.16                  | —                              |
| Rose honey                   | 34.45                  | —                              |
| Glucose syrup                | 39.20                  | —                              |
| Glycerol 85%                 | 49.85                  | —                              |
| Ipecacuanha syrup (NRF 19.1) | 53.07                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Glycerine ointment (conserved)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30986     | 31296               | 11.07                        | 28.00                           |
| 31296     | 31296               | 0.00                         | 28.49                           |
| 32589     | 31296               | 9.86                         | 25.91                           |
| 34685     | 31296               | 9.82                         | 28.14                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Glycerol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30189-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Glycerol; Glycerolum

### Special notes

When selecting the *Glycerol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Glycerol                  | 6      | 4      | 131    |

## Second-stage model

For differentiation of the substance/substance group *Glycerol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Glycerol*:

| Supplier | Substance | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------|----------|-----------|---------|-------------|
| Caelo    | Glycerol  | 12111504 | 30871     | 40      | 20120418    |
| Caelo    | Glycerol  | 13127603 | 31152     | 40      | 1405278     |
| Caelo    | Glycerol  | 13370502 | 31352     | 60      | 20131115    |
| Caelo    | Glycerol  | 162308   | 32325     | 40      | 20160809*   |
| Caelo    | Glycerol  | 162308   | 32693     | 40      | 20160809*   |
| Caelo    | Glycerol  | 171857   | 33703     | 40      | 20170724*   |
| Caelo    | Glycerol  | 171857   | 33708     | 40      | 20170724*   |
| Caelo    | Glycerol  | 191371   | 34636     | 40      | 20190612*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 340 spectra of 8 reference samples from the substance/substance group *Glycerol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 599 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Glycerol*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 4 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Glycerol  | 180984   | 34064     | 40      |
| Caelo    | Glycerol  | 183222   | 34327     | 40      |
| Caelo    | Glycerol  | 192428   | 34730     | 40      |
| Caelo    | Glycerol  | 20001472 | 35017     | 40      |

- 91 331 spectra from a total of 2012 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1357 spectra from 500 *Apo-Ident* customers from 137 batches from the substance/substance group *Glycerol*.
- Among them are spectra of independent samples from 126 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance | Batch       | Spectra |
|----------------------------|-----------|-------------|---------|
| 01791469                   | Glycerol  | 16230804    | 1       |
| AHD                        | Glycerol  | 18126607    | 1       |
| AHD / Caesar & Loretz G... | Glycerol  | 20001051004 | 1       |
| ALH                        | Glycerol  | 15406504    | 1       |
| Alliance Health Care       | Glycerol  | 20001051005 | 1       |
| Anzag                      | Glycerol  | 13127610    | 2       |
| apomix/ Phoenix            | Glycerol  | 13127608    | 1       |
| Beiersdorf AG              | Glycerol  | 15406501    | 1       |
| Bombastus                  | Glycerol  | 18098405    | 1       |
| Caelo                      | Glycerol  | 2061201     | 1       |
| Caelo                      | Glycerol  | 18126605    | 59      |
| Caelo                      | Glycerol  | 11305102    | 3       |
| Caelo                      | Glycerol  | 11118104    | 1       |
| Caelo                      | Glycerol  | 1004211590  | 1       |
| Caelo                      | Glycerol  | 510211590   | 1       |
| Caelo                      | Glycerol  | 12111503    | 4       |
| Caelo                      | Glycerol  | 1211503     | 1       |
| Caelo                      | Glycerol  | 13002902    | 1       |
| Caelo                      | Glycerol  | 11061303    | 1       |
| Caelo                      | Glycerol  | 13002903    | 8       |
| Caelo                      | Glycerol  | 12111505    | 1       |
| Caelo                      | Glycerol  | 2713M1590   | 1       |
| Caelo                      | Glycerol  | 1300291     | 1       |
| Caelo                      | Glycerol  | 1317604     | 1       |
| Caelo                      | Glycerol  | 13002907    | 1       |
| Caelo                      | Glycerol  | 13127608    | 3       |
| Caelo                      | Glycerol  | 13370501    | 2       |
| Caelo                      | Glycerol  | 17041403    | 1       |
| Caelo                      | Glycerol  | 13370503    | 15      |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Glycerol         | 133370507    | 1              |
| Caelo           | Glycerol         | 13111403     | 1              |
| Caelo           | Glycerol         | 14074303     | 6              |
| Caelo           | Glycerol         | 1474303      | 1              |
| Caelo           | Glycerol         | 4031501      | 1              |
| Caelo           | Glycerol         | 1473403      | 1              |
| Caelo           | Glycerol         | 14373404     | 3              |
| Caelo           | Glycerol         | 14373401     | 3              |
| Caelo           | Glycerol         | 18081504     | 1              |
| Caelo           | Glycerol         | 1473409      | 1              |
| Caelo           | Glycerol         | 14373413     | 32             |
| Caelo           | Glycerol         | 14373412     | 4              |
| Caelo           | Glycerol         | 15406504     | 15             |
| Caelo           | Glycerol         | 15406502     | 21             |
| Caelo           | Glycerol         | 1546502      | 1              |
| Caelo           | Glycerol         | 733514373412 | 1              |
| Caelo           | Glycerol         | 1623504      | 1              |
| Caelo           | Glycerol         | 1546501      | 1              |
| Caelo           | Glycerol         | 16230802     | 4              |
| Caelo           | Glycerol         | 1623506      | 1              |
| Caelo           | Glycerol         | 16320804     | 1              |
| Caelo           | Glycerol         | 17037504     | 18             |
| Caelo           | Glycerol         | 1620804      | 1              |
| Caelo           | Glycerol         | 17037503     | 33             |
| Caelo           | Glycerol         | 17185704     | 3              |
| Caelo           | Glycerol         | 17189703     | 1              |
| Caelo           | Glycerol         | 17185702     | 1              |
| Caelo           | Glycerol         | 17185703     | 50             |
| Caelo           | Glycerol         | 16230805     | 1              |
| Caelo           | Glycerol         | 17292804     | 3              |
| Caelo           | Glycerol         | 18098405     | 66             |
| Caelo           | Glycerol         | 19091803     | 1              |
| Caelo           | Glycerol         | 18126609     | 5              |
| Caelo           | Glycerol         | 18098409     | 1              |
| Caelo           | Glycerol         | 13822208     | 1              |
| Caelo           | Glycerol         | 19234302     | 13             |
| Caelo           | Glycerol         | 19234303     | 1              |
| Caelo           | Glycerol         | 2001051004   | 1              |
| Caelo           | Glycerol         | 20003598001  | 8              |
| Caelo           | Glycerol         | 15283603     | 1              |
| Caelo           | Glycerol         | 18096405     | 1              |
| Caelo           | Glycerol         | 20001051005  | 10             |
| Caelo           | Glycerol         | 13127604     | 10             |
| Caelo           | Glycerol         | 14074302     | 18             |
| Caelo           | Glycerol         | 13127610     | 2              |
| Caelo           | Glycerol         | 13002904     | 4              |
| Caelo           | Glycerol         | 16023503     | 8              |
| Caelo           | Glycerol         | 18098408     | 1              |
| Caelo           | Glycerol         | 13370507     | 1              |
| Caelo           | Glycerol         | 2114Q1590    | 1              |
| Caelo           | Glycerol         | 20001472002  | 3              |
| Caelo           | Glycerol         | 18322206     | 6              |
| Caelo           | Glycerol         | 19137101     | 51             |
| Caelo           | Glycerol         | 1898405      | 1              |
| Caelo           | Glycerol         | 14373403     | 21             |
| Caelo           | Glycerol         | 1791469      | 1              |
| Caelo           | Glycerol         | 1826605      | 1              |
| Caelo           | Glycerol         | 18126607     | 37             |
| Caelo           | Glycerol         | 12014304     | 14             |
| Caelo           | Glycerol         | 11217403     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caelo                      | Glycerol         | 143709           | 1              |
| Caelo                      | Glycerol         | 16023504         | 30             |
| Caelo                      | Glycerol         | 15406503         | 37             |
| Caelo                      | Glycerol         | 1718570318098405 | 1              |
| Caelo                      | Glycerol         | 171185703        | 1              |
| Caelo                      | Glycerol         | 18126602         | 64             |
| Caelo                      | Glycerol         | 22042004         | 1              |
| Caelo                      | Glycerol         | 18126603         | 10             |
| Caelo                      | Glycerol         | 119234301        | 1              |
| Caelo                      | Glycerol         | 1437343          | 1              |
| Caelo                      | Glycerol         | 15406501         | 23             |
| Caelo                      | Glycerol         | 16023506         | 43             |
| Caelo                      | Glycerol         | 16023508         | 16             |
| Caelo                      | Glycerol         | 16230804         | 66             |
| Caelo                      | Glycerol         | 20001472001      | 11             |
| Caelo                      | Glycerol         | 13127607         | 2              |
| Caelo                      | Glycerol         | 1917101          | 1              |
| Caelo                      | Glycerol         | 19234301         | 26             |
| Caelo                      | Glycerol         | 20001051002      | 1              |
| Caesar & Lorenz            | Glycerol         | 13002904         | 1              |
| Caesar & Lorenz GmbH       | Glycerol         | 17292803         | 1              |
| Caesar & Lorenz GmbH       | Glycerol         | 19137101         | 1              |
| Caesar & Lorenz GmbH       | Glycerol         | 192428002        | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 14373403         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 15406502         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 16230804         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 18126602         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 181226605        | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 18126605         | 8              |
| Caesar & Loretz GmbH       | Glycerol         | 18126607         | 6              |
| Caesar & Loretz GmbH       | Glycerol         | 18126603         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 18126609         | 4              |
| Caesar & Loretz GmbH       | Glycerol         | 18322202         | 5              |
| Caesar & Loretz GmbH       | Glycerol         | 18322206         | 4              |
| Caesar & Loretz GmbH       | Glycerol         | 19137101         | 8              |
| Caesar & Loretz GmbH       | Glycerol         | 18322208         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 19234301         | 17             |
| Caesar & Loretz GmbH       | Glycerol         | 18098405         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 192428002        | 9              |
| Caesar & Loretz GmbH       | Glycerol         | 20001051005      | 3              |
| Caesar & Loretz GmbH       | Glycerol         | 20001051004      | 8              |
| Caesar & Loretz GmbH       | Glycerol         | 19234302         | 1              |
| Caesar & Loretz GmbH       | Glycerol         | 20001472001      | 2              |
| Caesar & Loretz GmbH       | Glycerol         | 20003598001      | 3              |
| Caesar & Loretz GmbH / ... | Glycerol         | 16023506         | 1              |
| Caesar & Loretz GmbH / ... | Glycerol         | 19137101         | 1              |
| Caesar & Loretz GmbH Hi... | Glycerol         | 13127608         | 1              |
| Caesar & Loretz GmbH Hi... | Glycerol         | 14074302         | 1              |
| Caesar & Loretz GmbH Hi... | Glycerol         | 16023506         | 1              |
| Caesar & Loretz GmbH/ A... | Glycerol         | 19137101         | 1              |
| Caesar & Loretz GmbH/ G... | Glycerol         | 20001051004      | 1              |
| Caesar & Loretz GmbH/An... | Glycerol         | 20001051002      | 1              |
| Caesar & Loretz GmbH/Gehe  | Glycerol         | 192428002        | 1              |
| Caesar & Loretz GmbH/Gö... | Glycerol         | 19137101         | 2              |
| Caesar & Loretz GmbH/Je... | Glycerol         | 19137101         | 1              |
| Caesar & Loretz GmbH/Je... | Glycerol         | 192428002        | 5              |
| Caesar & Loretz GmbH/Phoe  | Glycerol         | 19137101         | 1              |
| Caesar & Loretz GmbH/Ph... | Glycerol         | 19234301         | 1              |
| Caesar & Loretz Hilden     | Glycerol         | 18126607         | 1              |
| Caesar & Loretz Hilden     | Glycerol         | 19137101         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|------------------|---------------|----------------|
| Caesar&Lorenz / Gehe       | Glycerol         | 19137101      | 1              |
| Caesar/Lorenz              | Glycerol         | 13002904      | 2              |
| Caleo/Gehe                 | Glycerol         | 17292803      | 1              |
| Cealo                      | Glycerol         | 18126602      | 1              |
| Cealo / Gehe               | Glycerol         | 18098405      | 1              |
| chemdicount                | Glycerol         | L0T01010121   | 2              |
| Chemdiscount               | Glycerol         | 91374122      | 1              |
| Cremer Oleo GmbH Hambur... | Glycerol         | 62776         | 1              |
| Dr. K. Hollborm & Söhne    | Glycerol         | 1106          | 1              |
| Euro OTC                   | Glycerol         | 16023506      | 1              |
| Euro OTC                   | Glycerol         | 18098405      | 1              |
| Euro OTC                   | Glycerol         | 16023503      | 1              |
| FABA                       | Glycerol         | 200404-2      | 1              |
| Fagron                     | Glycerol         | 13002904      | 1              |
| Fagron                     | Glycerol         | 14373409      | 2              |
| Fagron                     | Glycerol         | 14074302      | 1              |
| Fagron                     | Glycerol         | 13370503      | 1              |
| Fiebig                     | Glycerol         | 15406501      | 1              |
| Fiebig                     | Glycerol         | 18126602      | 2              |
| Fiebig                     | Glycerol         | 18126607      | 1              |
| Fiebig                     | Glycerol         | 18322206      | 1              |
| Forbury Direct Global G... | Glycerol         | 5032020       | 1              |
| Gehe                       | Glycerol         | 12014304      | 1              |
| Gehe                       | Glycerol         | 12111504      | 2              |
| Gehe                       | Glycerol         | 13002904      | 1              |
| Gehe                       | Glycerol         | 13127603      | 2              |
| Gehe                       | Glycerol         | 16023504      | 1              |
| Gehe                       | Glycerol         | 17292803      | 1              |
| Gehe                       | Glycerol         | 18322202      | 2              |
| GEHE                       | Glycerol         | 16023506      | 1              |
| GEHE                       | Glycerol         | 18098405      | 1              |
| GEHE                       | Glycerol         | 18126602      | 1              |
| Gehe 16.12.14              | Glycerol         | 13370503      | 1              |
| Gehe amax                  | Glycerol         | 18126607      | 1              |
| Gehe amax                  | Glycerol         | 20001051004   | 1              |
| Caelo                      | Glycerol         | 14373409      | 20             |
| Caelo                      | Glycerol         | 17292803      | 29             |
| Caelo                      | Glycerol         | 20001051004   | 27             |
| Caelo                      | Glycerol         | 11305101      | 1              |
| Ichthyol/Sanacorp          | Glycerol         | 13002902      | 2              |
| INTR/Phönix                | Glycerol         | 16023506      | 1              |
| Isolatech                  | Glycerol         | AZ000841      | 1              |
| Isolatech Langenfeld       | Glycerol         | E-GL-3V-6kg   | 1              |
| Caelo                      | Glycerol         | 18098406      | 7              |
| Julius Hoesch              | Glycerol         | 184829        | 1              |
| L12                        | Glycerol         | 18098405      | 1              |
| Mea Vita                   | Glycerol         | 4057824967008 | 1              |
| Merck                      | Glycerol         | K50033528813  | 1              |
| Noweda                     | Glycerol         | 14373403      | 1              |
| Noweda                     | Glycerol         | 14373413      | 1              |
| Noweda                     | Glycerol         | 16230802      | 1              |
| Noweda                     | Glycerol         | 16230804      | 1              |
| Noweda                     | Glycerol         | 18126603      | 3              |
| Noweda                     | Glycerol         | 18126602      | 1              |
| Noweda                     | Glycerol         | 18126605      | 1              |
| Noweda                     | Glycerol         | 18322202      | 1              |
| Noweda                     | Glycerol         | 192428002     | 3              |
| Noweda                     | Glycerol         | 19234301      | 1              |
| Caelo                      | Glycerol         | 18322208      | 6              |
| Caelo                      | Glycerol         | 192428002     | 32             |

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| Supplier                | Substance | Batch            | Spectra |
|-------------------------|-----------|------------------|---------|
| Olin Stade-Büttzfleth   | Glycerol  | 3002JASL41       | 1       |
| Optim Barsilay          | Glycerol  | 3002JAL41        | 1       |
| phoenix                 | Glycerol  | 16230804         | 1       |
| Phoenix                 | Glycerol  | 16023504         | 2       |
| Phoenix                 | Glycerol  | 18098405         | 4       |
| Phoenix                 | Glycerol  | 18322202         | 1       |
| Phönix                  | Glycerol  | 13002904         | 2       |
| Phönix                  | Glycerol  | 13127604         | 1       |
| Phönix                  | Glycerol  | 13127610         | 1       |
| Phönix                  | Glycerol  | 18126602         | 1       |
| Phönix                  | Glycerol  | 192428002        | 1       |
| Phönix                  | Glycerol  | 20001051004      | 1       |
| Phönix                  | Glycerol  | 20001472001      | 1       |
| Euro OTC                | Glycerol  | 15406503         | 1       |
| Phönix 22.08.12         | Glycerol  | 11305102         | 1       |
| Phönix/EuRho            | Glycerol  | 12111503         | 1       |
| Sanacorp                | Glycerol  | 17292803         | 2       |
| Sanacorp                | Glycerol  | 18126602         | 1       |
| Sanacorp                | Glycerol  | 18126607         | 1       |
| Caelo                   | Glycerol  | 18322202         | 36      |
| Smokeria SMTP GmbH      | Glycerol  | 20-03-16-SM-VG-5 | 1       |
| VWR                     | Glycerol  | 20a084103        | 1       |
| VWR Chemicals           | Glycerol  | 20a0841032       | 1       |
| VWR Chemicals           | Glycerol  | 20C104124        | 1       |
| VWR Chemicals           | Glycerol  | 20C1344102       | 1       |
| VWR Chemicals           | Glycerol  | 20A084103        | 1       |
| WHC                     | Glycerol  | 91374122         | 1       |
| Caelo                   | Glycerol  |                  | 1       |
| Caelo                   | Glycerol  | 12111504         | 3       |
| Caelo                   | Glycerol  | 13127603         | 15      |
| Caelo                   | Glycerol  | 13370502         | 9       |
| Chemidiscout / WHC GmbH | Glycerol  |                  | 1       |
| chemsolute              | Glycerol  |                  | 1       |
| Dr. K. Holborn/Wepa     | Glycerol  |                  | 1       |
| Herrlan-PSM/Phönix      | Glycerol  |                  | 2       |
| Hollborn&Söhne/Phoenix  | Glycerol  |                  | 1       |
| Shell                   | Glycerol  |                  | 1       |
| whc GmbH Phönix         | Glycerol  |                  | 1       |

- 240 006 spectra from 1121 *Apo-Ident* customers from a total of 46 875 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Glycerol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Glycerol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 340           | 0              | 63 599        |
| <b>Type B</b> | 0              | 160           | 0              | 91 331        |
| <b>Type C</b> | 0              | 1355          | 2              | 240 006       |

The substance/substance group *Glycerol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.2353 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.8526 % (> 99.6315 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Glycerol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in<br>main model | Distance in<br>second-stage model |
|--------------|---------------------------|-----------------------------------|
| Glycerol 85% | 89.08                     | –                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Glycerol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30871     | 31152                  | 4.03                            | 95.49                              |
| 31152     | 31152                  | 0.00                            | 97.86                              |
| 31352     | 31152                  | 4.50                            | 89.77                              |
| 32325     | 32325                  | 0.00                            | 119.23                             |
| 32693     | 32693                  | 0.00                            | 132.35                             |
| 33703     | 33703                  | 0.00                            | 120.55                             |
| 33708     | 33708                  | 0.00                            | 125.27                             |
| 34636     | 34636                  | 0.00                            | 119.96                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by

laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Glycerol 85%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30886-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Glycerol 85%; Glycerolum 85%

### Special notes

When selecting the *Glycerol 85%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Glycerol 85%              | 10     | 29     | 838    |

## Second-stage model

For differentiation of the substance/substance group *Glycerol 85%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Glycerol 85%*:

| Supplier | Substance    | Batch      | Sample ID | Spectra | Certificate        |
|----------|--------------|------------|-----------|---------|--------------------|
| Caelo    | Glycerol 85% | 12216606   | 30886     | 80      | 20120731           |
| Caelo    | Glycerol 85% | 13356404   | 31360     | 60      | 20131112           |
| Caelo    | Glycerol 85% | 13406202   | 31377     | 40      | 20131219           |
| Caelo    | Glycerol 85% | 17197706   | 34031     | 40      | AR-18-FG-009772-02 |
| Euro OTC | Glycerol 85% | 1409035-01 | 31588     | 60      | AR-15-FG-007030-02 |
| Euro OTC | Glycerol 85% | 1506036    | 31719     | 60      | 0000010478         |
| Euro OTC | Glycerol 85% | 1509023    | 31737     | 60      | 20151005*          |
| Euro OTC | Glycerol 85% | 1601059    | 31956     | 60      | 20160225*          |
| Euro OTC | Glycerol 85% | 2011017    | 35136     | 40      | 20201208*          |
| Fagron   | Glycerol 85% | 12H16-N04  | 30980     | 80      | 20120905           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 580 spectra of 10 reference samples from the substance/substance group *Glycerol 85%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 10 different batches.
- 63 359 spectra from a total of 1297 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



- 1340 spectra of 33 reference samples from the substance/substance group *Glycerol 85%*.
- Among them are spectra of independent samples from 29 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance    | Batch    | Sample ID | Spectra |
|----------|--------------|----------|-----------|---------|
| Caelo    | Glycerol 85% | 160637   | 32203     | 40      |
| Caelo    | Glycerol 85% | 162153   | 32326     | 40      |
| Caelo    | Glycerol 85% | 162189   | 32328     | 40      |
| Caelo    | Glycerol 85% | 162978   | 32694     | 40      |
| Caelo    | Glycerol 85% | 163550   | 33097     | 40      |
| Caelo    | Glycerol 85% | 163472   | 33098     | 40      |
| Caelo    | Glycerol 85% | 171577   | 33320     | 40      |
| Caelo    | Glycerol 85% | 172155   | 33704     | 40      |
| Caelo    | Glycerol 85% | 171977   | 33705     | 40      |
| Caelo    | Glycerol 85% | 183270   | 34326     | 40      |
| Caelo    | Glycerol 85% | 190112   | 34460     | 40      |
| Caelo    | Glycerol 85% | 191883   | 34619     | 40      |
| Caelo    | Glycerol 85% | 20001747 | 35021     | 40      |
| Caelo    | Glycerol 85% | 20002233 | 35272     | 40      |
| Caelo    | Glycerol 85% | 20001944 | 35275     | 40      |
| Caelo    | Glycerol 85% | 21000360 | 35276     | 40      |
| Caelo    | Glycerol 85% | 21001534 | 35730     | 50      |
| Caelo    | Glycerol 85% | 21001879 | 35731     | 50      |
| Euro OTC | Glycerol 85% | 1607037  | 32703     | 40      |
| Euro OTC | Glycerol 85% | 1610032  | 32828     | 40      |
| Euro OTC | Glycerol 85% | 1703003  | 33449     | 40      |
| Euro OTC | Glycerol 85% | 1708022  | 33661     | 40      |
| Euro OTC | Glycerol 85% | 1801025  | 33996     | 40      |
| Euro OTC | Glycerol 85% | 1804017  | 34091     | 40      |
| Euro OTC | Glycerol 85% | 1808009  | 34218     | 40      |
| Euro OTC | Glycerol 85% | 1901041  | 34426     | 40      |
| Euro OTC | Glycerol 85% | 1906019  | 34656     | 40      |
| Euro OTC | Glycerol 85% | 1910011  | 34748     | 40      |
| Euro OTC | Glycerol 85% | 2007039  | 35118     | 40      |
| Caelo    | Glycerol 85% | 160637   | 32314     | 40      |
| Caelo    | Glycerol 85% | 171977   | 33706     | 40      |
| Caelo    | Glycerol 85% | 171577   | 33709     | 40      |
| Caelo    | Glycerol 85% | 183270   | 34745     | 40      |

- 90151 spectra from a total of 1987 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 5479 spectra from 982 *Apo-Ident* customers from 851 batches from the substance/substance group *Glycerol 85%*.
- Among them are spectra of independent samples from 837 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance    | Batch       | Spectra |
|----------------------------|--------------|-------------|---------|
| 040607                     | Glycerol 85% | 40607       | 1       |
| 2959                       | Glycerol 85% | 2959        | 1       |
| A.H. 18.06.13 ek: 6,78EUR  | Glycerol 85% | 12273604    | 1       |
| A.Hedinger/Sana            | Glycerol 85% | 40626       | 1       |
| A.Hedinger/Sana            | Glycerol 85% | 40655       | 1       |
| A.Hedinger/Sana            | Glycerol 85% | 40667       | 1       |
| AEP                        | Glycerol 85% | 19124401    | 2       |
| AEP/ Fischar               | Glycerol 85% | 5067011     | 1       |
| AHD                        | Glycerol 85% | 13406202    | 1       |
| AHD                        | Glycerol 85% | 14306203    | 1       |
| AHD                        | Glycerol 85% | 40642       | 1       |
| AHD                        | Glycerol 85% | 5068081     | 1       |
| AHD                        | Glycerol 85% | 5068101     | 1       |
| AHD                        | Glycerol 85% | 40647       | 1       |
| AHD                        | Glycerol 85% | 5060035     | 1       |
| AHD / Hedinger             | Glycerol 85% | 40557       | 1       |
| AHD / Hedinger             | Glycerol 85% | 40607       | 1       |
| AHD/ Fischar               | Glycerol 85% | 5067081     | 1       |
| AHD/Fischar                | Glycerol 85% | 5067091     | 1       |
| AHD/Fischar                | Glycerol 85% | 5069011     | 1       |
| Ahd/PharmachemPößneck      | Glycerol 85% | 13248201    | 1       |
| Ahrenshof GmbH             | Glycerol 85% | EU649       | 1       |
| ALH                        | Glycerol 85% | 40599       | 1       |
| Bombastus                  | Glycerol 85% | 5065101     | 1       |
| Allianc. Healthc./Fischar  | Glycerol 85% | 5064091     | 1       |
| Alliance                   | Glycerol 85% | 1808009-02  | 1       |
| Alliance Health 24.06.2... | Glycerol 85% | 5538401     | 1       |
| Alliance Healthcare        | Glycerol 85% | 13144605    | 1       |
| Alliance Healthcare        | Glycerol 85% | 5066061     | 1       |
| Alliance Healthcare        | Glycerol 85% | 40655       | 1       |
| Alliance Healthcare        | Glycerol 85% | 40678       | 1       |
| Alliance Healthcare/Fis... | Glycerol 85% | 5063011     | 1       |
| Bombastus                  | Glycerol 85% | 60081703    | 1       |
| Alte Apotheke              | Glycerol 85% | 40599       | 2       |
| Anzag                      | Glycerol 85% | 40467       | 1       |
| Anzag                      | Glycerol 85% | 40471       | 1       |
| Anzag                      | Glycerol 85% | 40475       | 2       |
| Anzag                      | Glycerol 85% | 1306016-02  | 1       |
| Anzag                      | Glycerol 85% | 40579       | 1       |
| Anzag                      | Glycerol 85% | 40599       | 1       |
| Anzag                      | Glycerol 85% | 40607       | 2       |
| Anzag                      | Glycerol 85% | 40620       | 2       |
| Anzag                      | Glycerol 85% | 819409013   | 1       |
| Anzag 20.12.2012           | Glycerol 85% | 40467       | 2       |
| Anzag 3.04.18              | Glycerol 85% | 40628       | 1       |
| Anzag,7,17 Euro,16.1014    | Glycerol 85% | 13356405    | 1       |
| Anzag,7,62EUR; 27.0415     | Glycerol 85% | 14306204    | 1       |
| Anzag/                     | Glycerol 85% | 12108201    | 1       |
| Anzag/ Fischar             | Glycerol 85% | 5068021     | 2       |
| Anzag/ Hedinger            | Glycerol 85% | 40478       | 1       |
| Anzag/ Hedinger            | Glycerol 85% | 40495       | 2       |
| apo ident                  | Glycerol 85% | 1801025-01  | 1       |
| apo-ident                  | Glycerol 85% | 1708022-01  | 2       |
| apo-ident                  | Glycerol 85% | 17088022-01 | 1       |
| apo-ident                  | Glycerol 85% | 1808009-02  | 1       |
| apomix/apomix              | Glycerol 85% | 18253407    | 1       |
| Au.HedingerGmbH&CoKG/Al... | Glycerol 85% | 40626       | 1       |
| Au.HedingerGmbH&CoKG/Al... | Glycerol 85% | 40678       | 3       |
| Aug. Hedinger              | Glycerol 85% | 40566       | 2       |
| Aug. Hedinger              | Glycerol 85% | 40586       | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|------------------|--------------------|----------------|
| Aug. Hedinger              | Glycerol 85%     | 40607              | 1              |
| Aug. Hedinger GmbH & Co    | Glycerol 85%     | 40519              | 1              |
| aug. hedinger GmbH & Co... | Glycerol 85%     | 40579              | 1              |
| August Hed./               | Glycerol 85%     | 40678              | 4              |
| August Hedinger            | Glycerol 85%     | 40557              | 1              |
| BambynekFiebig             | Glycerol 85%     | 18000211           | 1              |
| BambynekFiebig             | Glycerol 85%     | 18004342           | 1              |
| Bartel                     | Glycerol 85%     | 40475              | 1              |
| Bartel                     | Glycerol 85%     | 40584              | 1              |
| Bartel/Sanacorp            | Glycerol 85%     | 40515              | 1              |
| Beyers                     | Glycerol 85%     | 19002              | 1              |
| Beyvers GmbH               | Glycerol 85%     | 19001              | 1              |
| Bombastus                  | Glycerol 85%     | 5067091            | 1              |
| Bombastus                  | Glycerol 85%     | 20002101           | 2              |
| Bombastus                  | Glycerol 85%     | 272305             | 6              |
| Bombastus                  | Glycerol 85%     | 283567             | 2              |
| Bombastus                  | Glycerol 85%     | 287120             | 4              |
| Bombastus                  | Glycerol 85%     | 289295             | 6              |
| Bombastus                  | Glycerol 85%     | 291085             | 4              |
| Bombastus                  | Glycerol 85%     | 290715             | 3              |
| Bombastus                  | Glycerol 85%     | 15146303           | 1              |
| Bombastus                  | Glycerol 85%     | 296481             | 7              |
| Bombastus                  | Glycerol 85%     | 296480             | 3              |
| Bombastus                  | Glycerol 85%     | 298593             | 8              |
| Bombastus                  | Glycerol 85%     | 300393             | 1              |
| Bombastus                  | Glycerol 85%     | 300394             | 5              |
| Bombastus                  | Glycerol 85%     | 301817             | 7              |
| Bombastus                  | Glycerol 85%     | 301818             | 3              |
| Bombastus                  | Glycerol 85%     | 305201             | 7              |
| Bombastus                  | Glycerol 85%     | 306830             | 11             |
| Bombastus                  | Glycerol 85%     | 306829             | 10             |
| Bombastus                  | Glycerol 85%     | 6474               | 1              |
| Bombastus                  | Glycerol 85%     | 1708022-01         | 4              |
| Bombastus                  | Glycerol 85%     | 18000212           | 2              |
| Bombastus                  | Glycerol 85%     | 18004342           | 8              |
| Bombastus                  | Glycerol 85%     | 18004343           | 5              |
| Bombastus                  | Glycerol 85%     | 28111803           | 1              |
| Bombastus                  | Glycerol 85%     | 18005463           | 16             |
| Bombastus                  | Glycerol 85%     | 19000628           | 10             |
| Bombastus                  | Glycerol 85%     | 20000557           | 3              |
| Bombastus                  | Glycerol 85%     | 19000627           | 7              |
| Bombastus                  | Glycerol 85%     | 282731             | 8              |
| Bombastus                  | Glycerol 85%     | 19004185P-191101-3 | 1              |
| Bombastus                  | Glycerol 85%     | 2823731            | 1              |
| Bombastus                  | Glycerol 85%     | 295501             | 7              |
| Bombastus                  | Glycerol 85%     | 279852             | 4              |
| Bombastus                  | Glycerol 85%     | 284401             | 1              |
| Bombastus                  | Glycerol 85%     | 287890             | 2              |
| Bombastus                  | Glycerol 85%     | 289296             | 2              |
| Bombastus                  | Glycerol 85%     | 292791             | 16             |
| Bombastus                  | Glycerol 85%     | 19004187           | 5              |
| Bombastus                  | Glycerol 85%     | 284400             | 5              |
| Bombastus                  | Glycerol 85%     | 19006535           | 3              |
| Bombastus                  | Glycerol 85%     | 302751             | 3              |
| Bombastus                  | Glycerol 85%     | 20000558           | 5              |
| Bombastus                  | Glycerol 85%     | 298594             | 2              |
| Bombastus                  | Glycerol 85%     | 310593             | 8              |
| Bombastus                  | Glycerol 85%     | 295502             | 2              |
| Bombastus                  | Glycerol 85%     | 308737             | 4              |
| Bombastus                  | Glycerol 85%     | 310592             | 11             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Glycerol 85%     | 19006534     | 1              |
| Bombastus       | Glycerol 85%     | 1900627      | 2              |
| Bombastus       | Glycerol 85%     | 276850       | 2              |
| Bombastus       | Glycerol 85%     | 278655       | 1              |
| Bombastus       | Glycerol 85%     | 280855       | 1              |
| Bombastus       | Glycerol 85%     | 260914PAS01  | 1              |
| Bombastus       | Glycerol 85%     | 40215PJK01   | 1              |
| Bombastus       | Glycerol 85%     | 291086       | 5              |
| Bombastus       | Glycerol 85%     | 301816       | 6              |
| Bombastus       | Glycerol 85%     | 18001893     | 3              |
| Bombastus       | Glycerol 85%     | 297034       | 2              |
| Bombastus       | Glycerol 85%     | 302750       | 2              |
| Bombastus       | Glycerol 85%     | 305199       | 1              |
| Bombastus       | Glycerol 85%     | 20001748     | 10             |
| Bombastus       | Glycerol 85%     | 20001747     | 5              |
| Bombastus       | Glycerol 85%     | 294927       | 4              |
| Bombastus       | Glycerol 85%     | 298592       | 3              |
| Bombastus       | Glycerol 85%     | 105698       | 1              |
| Bombastus       | Glycerol 85%     | 1805463      | 1              |
| Bombastus       | Glycerol 85%     | 19000626     | 1              |
| Bombastus       | Glycerol 85%     | 20001631     | 2              |
| Bombastus       | Glycerol 85%     | 19004186     | 10             |
| Bombastus       | Glycerol 85%     | 200000557    | 1              |
| Bombastus       | Glycerol 85%     | 20001471     | 5              |
| Bombastus       | Glycerol 85%     | 305200       | 7              |
| Bombastus       | Glycerol 85%     | 308738       | 7              |
| Bombastus       | Glycerol 85%     | 18000211     | 4              |
| Bombastus       | Glycerol 85%     | 40635        | 1              |
| Bombastus       | Glycerol 85%     | 18001896     | 5              |
| Bombastus       | Glycerol 85%     | 20001632     | 7              |
| Bombastus       | Glycerol 85%     | 20001470     | 1              |
| Bombastus       | Glycerol 85%     | 266584       | 1              |
| Bombastus       | Glycerol 85%     | 275075       | 2              |
| Bombastus       | Glycerol 85%     | 276852       | 3              |
| Bombastus       | Glycerol 85%     | 2812731      | 1              |
| Bombastus       | Glycerol 85%     | 300395       | 6              |
| Bombastus       | Glycerol 85%     | 302749       | 8              |
| Bombastus       | Glycerol 85%     | 20000556     | 1              |
| Bombastus       | Glycerol 85%     | 1502010-01   | 1              |
| Bombastus       | Glycerol 85%     | ChB18000212  | 1              |
| Bombstus        | Glycerol 85%     | 296481       | 1              |
| Caelo           | Glycerol 85%     | 12069604     | 1              |
| Caelo           | Glycerol 85%     | 13060007     | 4              |
| Caelo           | Glycerol 85%     | 13396407     | 1              |
| Caelo           | Glycerol 85%     | 40529        | 1              |
| Caelo           | Glycerol 85%     | 5066101      | 3              |
| Caelo           | Glycerol 85%     | 112117302    | 1              |
| Caelo           | Glycerol 85%     | 11217302     | 1              |
| Caelo           | Glycerol 85%     | 2405211589   | 1              |
| Caelo           | Glycerol 85%     | 20061210     | 1              |
| Caelo           | Glycerol 85%     | 607211589    | 1              |
| Caelo           | Glycerol 85%     | 11217303     | 1              |
| Caelo           | Glycerol 85%     | 12108201     | 19             |
| Caelo           | Glycerol 85%     | 23081201     | 1              |
| Caelo           | Glycerol 85%     | 123142       | 2              |
| Caelo           | Glycerol 85%     | 3121202      | 1              |
| Caelo           | Glycerol 85%     | 12216601     | 6              |
| Caelo           | Glycerol 85%     | 12216603     | 15             |
| Caelo           | Glycerol 85%     | 20211212-2   | 1              |
| Caelo           | Glycerol 85%     | 213E-01589   | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Glycerol 85%     | 4711A-01589  | 1              |
| Caelo           | Glycerol 85%     | 12069601     | 1              |
| Caelo           | Glycerol 85%     | 12069603     | 1              |
| Caelo           | Glycerol 85%     | 613Q-01589   | 1              |
| Caelo           | Glycerol 85%     | 19021301     | 1              |
| Caelo           | Glycerol 85%     | 1113E-01589  | 1              |
| Caelo           | Glycerol 85%     | 5062012      | 4              |
| Caelo           | Glycerol 85%     | 12273604     | 23             |
| Caelo           | Glycerol 85%     | 12278507     | 3              |
| Caelo           | Glycerol 85%     | 13039202     | 6              |
| Caelo           | Glycerol 85%     | 13060002     | 2              |
| Caelo           | Glycerol 85%     | 2413Q01589   | 1              |
| Caelo           | Glycerol 85%     | 12278501     | 1              |
| Caelo           | Glycerol 85%     | 13039203     | 19             |
| Caelo           | Glycerol 85%     | 12108206     | 1              |
| Caelo           | Glycerol 85%     | 5x12273604   | 1              |
| Caelo           | Glycerol 85%     | 5x13039203   | 1              |
| Caelo           | Glycerol 85%     | 123464       | 2              |
| Caelo           | Glycerol 85%     | 13060006     | 2              |
| Caelo           | Glycerol 85%     | 70913Gly     | 1              |
| Caelo           | Glycerol 85%     | 14101304     | 1              |
| Caelo           | Glycerol 85%     | 13144604     | 6              |
| Caelo           | Glycerol 85%     | 13144605     | 19             |
| Caelo           | Glycerol 85%     | 13248201     | 13             |
| Caelo           | Glycerol 85%     | 40483        | 1              |
| Caelo           | Glycerol 85%     | 13276204     | 11             |
| Caelo           | Glycerol 85%     | 1327603      | 1              |
| Caelo           | Glycerol 85%     | 13276201     | 2              |
| Caelo           | Glycerol 85%     | 16121301     | 1              |
| Caelo           | Glycerol 85%     | 24021402     | 1              |
| Caelo           | Glycerol 85%     | 13406203     | 1              |
| Caelo           | Glycerol 85%     | 13276024     | 1              |
| Caelo           | Glycerol 85%     | 17061404     | 1              |
| Caelo           | Glycerol 85%     | 13276208     | 3              |
| Caelo           | Glycerol 85%     | 11355301     | 1              |
| Caelo           | Glycerol 85%     | 13406204     | 6              |
| Caelo           | Glycerol 85%     | 13356406     | 11             |
| Caelo           | Glycerol 85%     | 13406205     | 4              |
| Caelo           | Glycerol 85%     | 24101401     | 1              |
| Caelo           | Glycerol 85%     | 13205003     | 1              |
| Caelo           | Glycerol 85%     | 14148104     | 3              |
| Caelo           | Glycerol 85%     | 14194911     | 1              |
| Caelo           | Glycerol 85%     | 8121402      | 1              |
| Caelo           | Glycerol 85%     | 14149410     | 20             |
| Caelo           | Glycerol 85%     | 1409035-01   | 2              |
| Caelo           | Glycerol 85%     | 1418103      | 1              |
| Caelo           | Glycerol 85%     | 14249301     | 4              |
| Caelo           | Glycerol 85%     | 40542        | 4              |
| Caelo           | Glycerol 85%     | 14148106     | 2              |
| Caelo           | Glycerol 85%     | 14306202     | 1              |
| Caelo           | Glycerol 85%     | 14306205     | 8              |
| Caelo           | Glycerol 85%     | 5051501      | 1              |
| Caelo           | Glycerol 85%     | 13356402     | 1              |
| Caelo           | Glycerol 85%     | 15050102     | 6              |
| Caelo           | Glycerol 85%     | P4114A-01589 | 1              |
| Caelo           | Glycerol 85%     | 40556        | 1              |
| Caelo           | Glycerol 85%     | 40566        | 3              |
| Caelo           | Glycerol 85%     | 15115005     | 4              |
| Caelo           | Glycerol 85%     | 1529202      | 1              |
| Caelo           | Glycerol 85%     | 15292204     | 30             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Glycerol 85%     | 15146303     | 1              |
| Caelo           | Glycerol 85%     | 15146305     | 4              |
| Caelo           | Glycerol 85%     | 15146304     | 2              |
| Caelo           | Glycerol 85%     | 14149409     | 1              |
| Caelo           | Glycerol 85%     | 15146307     | 1              |
| Caelo           | Glycerol 85%     | 15379201     | 7              |
| Caelo           | Glycerol 85%     | 15283505     | 1              |
| Caelo           | Glycerol 85%     | 1509023-01   | 2              |
| Caelo           | Glycerol 85%     | 15379207     | 4              |
| Caelo           | Glycerol 85%     | 15379208     | 4              |
| Caelo           | Glycerol 85%     | 465911       | 1              |
| Caelo           | Glycerol 85%     | 15378201     | 1              |
| Caelo           | Glycerol 85%     | 15404502     | 1              |
| Caelo           | Glycerol 85%     | 15404504     | 8              |
| Caelo           | Glycerol 85%     | 16063701     | 30             |
| Caelo           | Glycerol 85%     | 15378209     | 2              |
| Caelo           | Glycerol 85%     | 15378212     | 1              |
| Caelo           | Glycerol 85%     | 16063702     | 26             |
| Caelo           | Glycerol 85%     | 160637025    | 1              |
| Caelo           | Glycerol 85%     | 16963701     | 1              |
| Caelo           | Glycerol 85%     | 16218901     | 14             |
| Caelo           | Glycerol 85%     | 160215301    | 1              |
| Caelo           | Glycerol 85%     | 40598        | 1              |
| Caelo           | Glycerol 85%     | 5066081      | 2              |
| Caelo           | Glycerol 85%     | 16063714     | 1              |
| Caelo           | Glycerol 85%     | 2891         | 1              |
| Caelo           | Glycerol 85%     | 1215302      | 1              |
| Caelo           | Glycerol 85%     | 40607        | 2              |
| Caelo           | Glycerol 85%     | 16215308     | 1              |
| Caelo           | Glycerol 85%     | 1610032-01   | 11             |
| Caelo           | Glycerol 85%     | 16218906     | 9              |
| Caelo           | Glycerol 85%     | 40612        | 2              |
| Caelo           | Glycerol 85%     | 161006201    | 1              |
| Caelo           | Glycerol 85%     | 16297808     | 4              |
| Caelo           | Glycerol 85%     | 14061701     | 1              |
| Caelo           | Glycerol 85%     | 16347203     | 3              |
| Caelo           | Glycerol 85%     | 15071703     | 1              |
| Caelo           | Glycerol 85%     | 16347206     | 6              |
| Caelo           | Glycerol 85%     | 1621806      | 1              |
| Caelo           | Glycerol 85%     | 1703003-01   | 7              |
| Caelo           | Glycerol 85%     | 17300301     | 1              |
| Caelo           | Glycerol 85%     | 1715772      | 1              |
| Caelo           | Glycerol 85%     | 16355005     | 2              |
| Caelo           | Glycerol 85%     | 5067061      | 1              |
| Caelo           | Glycerol 85%     | 4121702      | 1              |
| Caelo           | Glycerol 85%     | 16347208     | 22             |
| Caelo           | Glycerol 85%     | 17157704     | 1              |
| Caelo           | Glycerol 85%     | 17197701     | 4              |
| Caelo           | Glycerol 85%     | 19021809     | 1              |
| Caelo           | Glycerol 85%     | 17215503     | 2              |
| Caelo           | Glycerol 85%     | 17328201     | 5              |
| Caelo           | Glycerol 85%     | 17322101     | 53             |
| Caelo           | Glycerol 85%     | 30041804     | 1              |
| Caelo           | Glycerol 85%     | 23051813     | 1              |
| Caelo           | Glycerol 85%     | 40641        | 1              |
| Caelo           | Glycerol 85%     | 17322108     | 3              |
| Caelo           | Glycerol 85%     | 1738202      | 1              |
| Caelo           | Glycerol 85%     | 30081805     | 1              |
| Caelo           | Glycerol 85%     | 17322105     | 7              |
| Caelo           | Glycerol 85%     | 18020005     | 5              |

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| Supplier | Substance    | Batch            | Spectra |
|----------|--------------|------------------|---------|
| Caelo    | Glycerol 85% | 5068021          | 1       |
| Caelo    | Glycerol 85% | 5068031          | 2       |
| Caelo    | Glycerol 85% | 310592           | 1       |
| Caelo    | Glycerol 85% | 18153705         | 3       |
| Caelo    | Glycerol 85% | 15121803         | 1       |
| Caelo    | Glycerol 85% | 18005463         | 3       |
| Caelo    | Glycerol 85% | 18253401         | 4       |
| Caelo    | Glycerol 85% | 18253404         | 43      |
| Caelo    | Glycerol 85% | 40655            | 7       |
| Caelo    | Glycerol 85% | 19011202         | 4       |
| Caelo    | Glycerol 85% | 19188301         | 25      |
| Caelo    | Glycerol 85% | 5068101          | 1       |
| Caelo    | Glycerol 85% | 40673            | 1       |
| Caelo    | Glycerol 85% | 19188303         | 1       |
| Caelo    | Glycerol 85% | 19124402         | 3       |
| Caelo    | Glycerol 85% | 19188302         | 2       |
| Caelo    | Glycerol 85% | 19235701         | 4       |
| Caelo    | Glycerol 85% | 1910011-01       | 1       |
| Caelo    | Glycerol 85% | 192976005        | 2       |
| Caelo    | Glycerol 85% | 192976004        | 18      |
| Caelo    | Glycerol 85% | 192976002        | 5       |
| Caelo    | Glycerol 85% | 20001043003      | 29      |
| Caelo    | Glycerol 85% | 192976007        | 2       |
| Caelo    | Glycerol 85% | 20000941002      | 3       |
| Caelo    | Glycerol 85% | 1043003          | 1       |
| Caelo    | Glycerol 85% | 2000104003       | 1       |
| Caelo    | Glycerol 85% | 20001043002      | 3       |
| Caelo    | Glycerol 85% | 20001747004      | 12      |
| Caelo    | Glycerol 85% | 20004357001      | 4       |
| Caelo    | Glycerol 85% | 20004357004      | 1       |
| Caelo    | Glycerol 85% | 180200           | 1       |
| Caelo    | Glycerol 85% | 183270           | 1       |
| Caelo    | Glycerol 85% | 20001043         | 1       |
| Caelo    | Glycerol 85% | 1802002          | 2       |
| Caelo    | Glycerol 85% | CHB17328201      | 1       |
| Caelo    | Glycerol 85% | 11324202         | 2       |
| Caelo    | Glycerol 85% | 19011203         | 28      |
| Caelo    | Glycerol 85% | 18000211         | 2       |
| Caelo    | Glycerol 85% | 1804017-01       | 5       |
| Caelo    | Glycerol 85% | 1808009-01       | 3       |
| Caelo    | Glycerol 85% | 18327008         | 1       |
| Caelo    | Glycerol 85% | 12278508         | 3       |
| Caelo    | Glycerol 85% | 305200           | 3       |
| Caelo    | Glycerol 85% | 12216602         | 5       |
| Caelo    | Glycerol 85% | 2714M-01589      | 1       |
| Caelo    | Glycerol 85% | 1801025-01       | 1       |
| Caelo    | Glycerol 85% | 170822-01        | 1       |
| Caelo    | Glycerol 85% | 15378203         | 17      |
| Caelo    | Glycerol 85% | 171121G/17157702 | 1       |
| Caelo    | Glycerol 85% | 40652            | 2       |
| Caelo    | Glycerol 85% | 5065081          | 1       |
| Caelo    | Glycerol 85% | 135406204        | 1       |
| Caelo    | Glycerol 85% | 5064021          | 2       |
| Caelo    | Glycerol 85% | 1697803          | 1       |
| Caelo    | Glycerol 85% | 2001043003       | 1       |
| Caelo    | Glycerol 85% | 5065061          | 1       |
| Caelo    | Glycerol 85% | 153782021Flasche | 1       |
| Caelo    | Glycerol 85% | 153782032Flasche | 1       |
| Caelo    | Glycerol 85% | 18327003         | 18      |
| Caelo    | Glycerol 85% | 19011201         | 30      |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Glycerol 85%     | 12278502             | 1              |
| Caelo           | Glycerol 85%     | 5062121              | 1              |
| Caelo           | Glycerol 85%     | 5062111              | 1              |
| Caelo           | Glycerol 85%     | 1309202              | 1              |
| Caelo           | Glycerol 85%     | 13039204             | 23             |
| Caelo           | Glycerol 85%     | 163472202-20171106Ma | 1              |
| Caelo           | Glycerol 85%     | 18020002-G20190115Ma | 1              |
| Caelo           | Glycerol 85%     | 13356405             | 12             |
| Caelo           | Glycerol 85%     | 40649                | 1              |
| Caelo           | Glycerol 85%     | 16023504             | 1              |
| Caelo           | Glycerol 85%     | 18327004             | 1              |
| Caelo           | Glycerol 85%     | 1000007843           | 1              |
| Caelo           | Glycerol 85%     | 17157707             | 1              |
| Caelo           | Glycerol 85%     | BE-08675/37460       | 1              |
| Caelo           | Glycerol 85%     | 3018I-01589          | 1              |
| Caelo           | Glycerol 85%     | 14373412             | 1              |
| Caelo           | Glycerol 85%     | 19188304             | 4              |
| Caelo           | Glycerol 85%     | 19209501             | 30             |
| Caelo           | Glycerol 85%     | 13276206             | 1              |
| Caelo           | Glycerol 85%     | 15050101             | 2              |
| Caelo           | Glycerol 85%     | 13060001             | 4              |
| Caelo           | Glycerol 85%     | 40524                | 2              |
| Caelo           | Glycerol 85%     | 16218907             | 2              |
| Caelo           | Glycerol 85%     | 1000006424           | 1              |
| Caelo           | Glycerol 85%     | 8004808001           | 1              |
| Caelo           | Glycerol 85%     | 19124401             | 37             |
| Caelo           | Glycerol 85%     | 19124404             | 5              |
| Caelo           | Glycerol 85%     | B-19188301           | 1              |
| Caelo           | Glycerol 85%     | 1607037-01           | 1              |
| Caelo           | Glycerol 85%     | 3311                 | 1              |
| Caelo           | Glycerol 85%     | 13144606             | 6              |
| Caelo           | Glycerol 85%     | 18253406             | 10             |
| Caelo           | Glycerol 85%     | 5060012              | 1              |
| Caelo           | Glycerol 85%     | 1419411              | 1              |
| Caelo           | Glycerol 85%     | 15292201             | 17             |
| Caelo           | Glycerol 85%     | 12216604             | 3              |
| Caelo           | Glycerol 85%     | 14149404             | 11             |
| Caelo           | Glycerol 85%     | 4717A-01589          | 1              |
| Caelo           | Glycerol 85%     | 1418E-01589          | 1              |
| Caelo           | Glycerol 85%     | 20001043005          | 3              |
| Caelo           | Glycerol 85%     | 20001944004          | 4              |
| Caelo           | Glycerol 85%     | 14149411             | 15             |
| Caelo           | Glycerol 85%     | 20004043005          | 1              |
| Caelo           | Glycerol 85%     | 15049801             | 3              |
| Caelo           | Glycerol 85%     | 13276202             | 1              |
| Caelo           | Glycerol 85%     | 15292203             | 20             |
| Caelo           | Glycerol 85%     | 5015Q-01589          | 1              |
| Caelo           | Glycerol 85%     | 18153706             | 4              |
| Caelo           | Glycerol 85%     | 19011204             | 3              |
| Caelo           | Glycerol 85%     | 20001747001          | 6              |
| Caelo           | Glycerol 85%     | P136/14              | 1              |
| Caelo           | Glycerol 85%     | 20001043004          | 1              |
| Caelo           | Glycerol 85%     | 1213E-01589          | 1              |
| Caelo           | Glycerol 85%     | 5068012              | 2              |
| Caelo           | Glycerol 85%     | 15283506             | 4              |
| Caelo           | Glycerol 85%     | 11324208             | 1              |
| Caelo           | Glycerol 85%     | 13144607             | 21             |
| Caelo           | Glycerol 85%     | 13248204             | 2              |
| Caelo           | Glycerol 85%     | 14148103             | 5              |
| Caelo           | Glycerol 85%     | 40567                | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Glycerol 85%     | 15378205     | 2              |
| Caelo           | Glycerol 85%     | 15404505     | 4              |
| Caelo           | Glycerol 85%     | 16063706     | 2              |
| Caelo           | Glycerol 85%     | 16063707     | 2              |
| Caelo           | Glycerol 85%     | 1601059      | 1              |
| Caelo           | Glycerol 85%     | 1607037      | 1              |
| Caelo           | Glycerol 85%     | 16297806     | 59             |
| Caelo           | Glycerol 85%     | 16297802     | 2              |
| Caelo           | Glycerol 85%     | 5067011      | 2              |
| Caelo           | Glycerol 85%     | 16297809     | 1              |
| Caelo           | Glycerol 85%     | 16355001     | 3              |
| Caelo           | Glycerol 85%     | 5067081      | 2              |
| Caelo           | Glycerol 85%     | 4617M-01589  | 1              |
| Caelo           | Glycerol 85%     | 5067111      | 2              |
| Caelo           | Glycerol 85%     | 17322107     | 14             |
| Caelo           | Glycerol 85%     | 18153702     | 65             |
| Caelo           | Glycerol 85%     | 40646        | 1              |
| Caelo           | Glycerol 85%     | 1733322107   | 1              |
| Caelo           | Glycerol 85%     | 40670        | 1              |
| Caelo           | Glycerol 85%     | 5062052      | 1              |
| Caelo           | Glycerol 85%     | 40497        | 1              |
| Caelo           | Glycerol 85%     | 40507        | 2              |
| Caelo           | Glycerol 85%     | 40515        | 2              |
| Caelo           | Glycerol 85%     | 40629        | 1              |
| Caelo           | Glycerol 85%     | 17157702     | 80             |
| Caelo           | Glycerol 85%     | 16347202     | 9              |
| Caelo           | Glycerol 85%     | 18020001     | 5              |
| Caelo           | Glycerol 85%     | 1309203      | 1              |
| Caelo           | Glycerol 85%     | 13276205     | 21             |
| Caelo           | Glycerol 85%     | 40473        | 1              |
| Caelo           | Glycerol 85%     | 1404024-01   | 1              |
| Caelo           | Glycerol 85%     | 14148105     | 1              |
| Caelo           | Glycerol 85%     | 5064091      | 1              |
| Caelo           | Glycerol 85%     | 15036904     | 20             |
| Caelo           | Glycerol 85%     | 1506036-01   | 1              |
| Caelo           | Glycerol 85%     | 15283503     | 1              |
| Caelo           | Glycerol 85%     | 1601059-01   | 10             |
| Caelo           | Glycerol 85%     | 16297803     | 20             |
| Caelo           | Glycerol 85%     | 16215310     | 4              |
| Caelo           | Glycerol 85%     | 5066111      | 4              |
| Caelo           | Glycerol 85%     | 161003201    | 2              |
| Caelo           | Glycerol 85%     | 16355002     | 34             |
| Caelo           | Glycerol 85%     | 181108185    | 1              |
| Caelo           | Glycerol 85%     | 181108186    | 1              |
| Caelo           | Glycerol 85%     | 17215502     | 4              |
| Caelo           | Glycerol 85%     | 17157911     | 1              |
| Caelo           | Glycerol 85%     | 17328202     | 2              |
| Caelo           | Glycerol 85%     | 18001        | 1              |
| Caelo           | Glycerol 85%     | 506012       | 1              |
| Caelo           | Glycerol 85%     | 190011201    | 1              |
| Caelo           | Glycerol 85%     | 5068081      | 1              |
| Caelo           | Glycerol 85%     | 192976003    | 1              |
| Caelo           | Glycerol 85%     | 1309204      | 1              |
| Caelo           | Glycerol 85%     | 13356403     | 4              |
| Caelo           | Glycerol 85%     | 15036905     | 2              |
| Caelo           | Glycerol 85%     | 15036901     | 1              |
| Caelo           | Glycerol 85%     | 1514604      | 1              |
| Caelo           | Glycerol 85%     | 1528503      | 1              |
| Caelo           | Glycerol 85%     | 15283504     | 1              |
| Caelo           | Glycerol 85%     | 1292201      | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Glycerol 85%     | 15378210     | 1              |
| Caelo           | Glycerol 85%     | 153782019    | 1              |
| Caelo           | Glycerol 85%     | 5066071      | 1              |
| Caelo           | Glycerol 85%     | 1625303      | 1              |
| Caelo           | Glycerol 85%     | 1634702      | 1              |
| Caelo           | Glycerol 85%     | 40626        | 1              |
| Caelo           | Glycerol 85%     | 18020002     | 43             |
| Caelo           | Glycerol 85%     | 1901041-01   | 1              |
| Caelo           | Glycerol 85%     | 18327001     | 3              |
| Caelo           | Glycerol 85%     | 19011208     | 12             |
| Caelo           | Glycerol 85%     | 17322104     | 59             |
| Caelo           | Glycerol 85%     | 15146301     | 6              |
| Caelo           | Glycerol 85%     | 12069605     | 1              |
| Caelo           | Glycerol 85%     | 13276203     | 17             |
| Caelo           | Glycerol 85%     | 15036903     | 14             |
| Caelo           | Glycerol 85%     | 300395       | 1              |
| Caelo           | Glycerol 85%     | 16215301     | 17             |
| Caelo           | Glycerol 85%     | 16215302     | 26             |
| Caelo           | Glycerol 85%     | 169215903    | 1              |
| Caelo           | Glycerol 85%     | 5067031      | 1              |
| Caelo           | Glycerol 85%     | 40618        | 1              |
| Caelo           | Glycerol 85%     | 1708022-01   | 8              |
| Caelo           | Glycerol 85%     | 18153703     | 4              |
| Caelo           | Glycerol 85%     | 40678        | 2              |
| Caelo           | Glycerol 85%     | 19000628     | 2              |
| Caelo           | Glycerol 85%     | 5060032      | 2              |
| Caelo           | Glycerol 85%     | 191883001    | 7              |
| Caelo           | Glycerol 85%     | 20000941003  | 11             |
| Caelo           | Glycerol 85%     | 18177005     | 1              |
| Caelo           | Glycerol 85%     | 14149403     | 6              |
| Caelo           | Glycerol 85%     | 14306204     | 12             |
| Caelo           | Glycerol 85%     | 15036902     | 10             |
| Caelo           | Glycerol 85%     | 1529201      | 1              |
| Caelo           | Glycerol 85%     | 15292202     | 14             |
| Caelo           | Glycerol 85%     | 15378202     | 14             |
| Caelo           | Glycerol 85%     | 40599        | 2              |
| Caelo           | Glycerol 85%     | 16347205     | 1              |
| Caelo           | Glycerol 85%     | 17215501     | 53             |
| Caelo           | Glycerol 85%     | 17197705     | 1              |
| Caelo           | Glycerol 85%     | 7406HH7011   | 1              |
| Caelo           | Glycerol 85%     | 18253402     | 32             |
| Caelo           | Glycerol 85%     | 18240901     | 35             |
| Caelo           | Glycerol 85%     | 1912440      | 1              |
| Caelo           | Glycerol 85%     | 40680        | 1              |
| Caelo           | Glycerol 85%     | 2004357004   | 1              |
| Caelo           | Glycerol 85%     | 18240903     | 1              |
| Caelo           | Glycerol 85%     | 16215303     | 34             |
| Caelo           | Glycerol 85%     | 15404503     | 2              |
| Caelo           | Glycerol 85%     | 16218903     | 1              |
| Caelo           | Glycerol 85%     | 17197702     | 2              |
| Caelo           | Glycerol 85%     | 18020004     | 1              |
| Caelo           | Glycerol 85%     | 2013A-01589  | 1              |
| Caelo           | Glycerol 85%     | 703003-01    | 1              |
| Caelo           | Glycerol 85%     | 192976006    | 32             |
| Caelo           | Glycerol 85%     | 40647        | 1              |
| Caeol/ Noweda   | Glycerol 85%     | 15378203     | 1              |
| Caeol/Phoenix   | Glycerol 85%     | 15292203     | 1              |
| Caeol/Phönix    | Glycerol 85%     | 16215303     | 1              |
| Caeol/Phönix    | Glycerol 85%     | 16297806     | 1              |
| Caeolo/Gehe     | Glycerol 85%     | 16297802     | 3              |

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| Supplier                    | Substance    | Batch       | Spectra |
|-----------------------------|--------------|-------------|---------|
| Caelo                       | Glycerol 85% | 20004043002 | 3       |
| Caesar & Loretz             | Glycerol 85% | 16215303    | 1       |
| Caesar & Loretz             | Glycerol 85% | 17322107    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 12108201    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 12216603    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 13144606    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18020002    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18253404    | 8       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18253402    | 3       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18240903    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18153703    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18253401    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18153702    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011201    | 3       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011202    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011203    | 5       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011209    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011208    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19011204    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19124401    | 4       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18240901    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19209501    | 6       |
| Caesar & Loretz GmbH        | Glycerol 85% | 18327008    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19188302    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19004186    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 192976004   | 4       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19124402    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 192976002   | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 192976006   | 4       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20001746    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 19188304    | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 191883002   | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20001043003 | 13      |
| Caesar & Loretz GmbH        | Glycerol 85% | 18327005    | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20000941003 | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 5060035     | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20001747004 | 4       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20000941002 | 2       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20004357001 | 3       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20004043002 | 1       |
| Caesar & Loretz GmbH        | Glycerol 85% | 20004357004 | 1       |
| Caesar & Loretz GmbH'       | Glycerol 85% | 18240901    | 3       |
| Caesar & Loretz GmbH'       | Glycerol 85% | 18153705    | 2       |
| Caesar & Loretz GmbH'       | Glycerol 85% | 19188301    | 2       |
| Caesar & Loretz GmbH'       | Glycerol 85% | 191883002   | 1       |
| Caesar & Loretz GmbH'       | Glycerol 85% | 20000941002 | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 20001043004 | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 18253404    | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 18153702    | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 19011208    | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 192976006   | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 192976006   | 1       |
| Caesar & Loretz GmbH / ...  | Glycerol 85% | 19209501    | 1       |
| Caesar & Loretz GmbH / N... | Glycerol 85% | 192976004   | 1       |
| Caesar & Loretz GmbH An...  | Glycerol 85% | 19124401    | 1       |
| Caesar & Loretz GmbH Hi...  | Glycerol 85% | 13144607    | 1       |
| Caesar & Loretz GmbH Hi...  | Glycerol 85% | 15292204    | 1       |
| Caesar & Loretz GmbH Hi...  | Glycerol 85% | 16063702    | 1       |
| Caesar & Loretz GmbH Ph...  | Glycerol 85% | 19124401    | 1       |
| Caesar & Loretz GmbH/ G...  | Glycerol 85% | 192976006   | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH/AHD   | Glycerol 85%     | 19188304     | 1              |
| Caesar & Loretz GmbH/Gehe  | Glycerol 85%     | 19209501     | 1              |
| Caesar & Loretz GmbH/Ge... | Glycerol 85%     | 200010430003 | 1              |
| Caesar & Loretz GmbH/Ge... | Glycerol 85%     | 19011203     | 1              |
| Caesar & Loretz GmbH'/G... | Glycerol 85%     | 18240901     | 1              |
| Caesar & Loretz GmbH/Je... | Glycerol 85%     | 19209501     | 3              |
| Caesar & Loretz GmbH/Je... | Glycerol 85%     | 40673        | 1              |
| Caesar & Loretz GmbH/Je... | Glycerol 85%     | 20001043003  | 2              |
| Caesar & Loretz GmbH/Kehr  | Glycerol 85%     | 18240901     | 1              |
| Caesar & Loretz GmbH/No... | Glycerol 85%     | 19011201     | 1              |
| Caesar & Loretz GmbH/No... | Glycerol 85%     | 18240903     | 1              |
| Caesar & Loretz GmbH/No... | Glycerol 85%     | 19011209     | 1              |
| Caesar & Loretz GmbH/Ph... | Glycerol 85%     | 19011201     | 1              |
| Caesar & Loretz GmbH/Ph... | Glycerol 85%     | 20001043003  | 1              |
| Caesar & Loretz GmbH/Sa... | Glycerol 85%     | 20001043003  | 2              |
| Caesar & Loretz GmbH/Sa... | Glycerol 85%     | 20000941003  | 1              |
| Caesar & Loretz GmbH/Sa... | Glycerol 85%     | 20004357001  | 1              |
| Caesar & Loretz GmbH/Sp... | Glycerol 85%     | 18253402     | 1              |
| Caesar & Loretz Hilden/... | Glycerol 85%     | 191883002    | 1              |
| Caesar & Loretz/Noweda     | Glycerol 85%     | 15379208     | 1              |
| Caesar und Loretz GmbH     | Glycerol 85%     | 17157702     | 1              |
| Caesar&Loretz              | Glycerol 85%     | 16218906     | 2              |
| Caesar&Loretz GmbH         | Glycerol 85%     | 13406202     | 2              |
| Caesar/Loretz              | Glycerol 85%     | 18153702     | 1              |
| Caesar/Noweda              | Glycerol 85%     | 2611I-01589  | 1              |
| Caleo                      | Glycerol 85%     | 15036903     | 1              |
| Caleo                      | Glycerol 85%     | 20000941002  | 2              |
| Caleo/ Noweda              | Glycerol 85%     | 17322104     | 1              |
| Caleo/No                   | Glycerol 85%     | 17322107     | 1              |
| Caleo/No                   | Glycerol 85%     | 19011203     | 1              |
| Caleo/No                   | Glycerol 85%     | 19124401     | 1              |
| Caleo/ph                   | Glycerol 85%     | 20001043003  | 1              |
| Caleo/PH                   | Glycerol 85%     | 19011201     | 1              |
| Caleo/Phönix               | Glycerol 85%     | 16355002     | 2              |
| calo                       | Glycerol 85%     | 17322101     | 1              |
| Calo/Phönix                | Glycerol 85%     | 16297802     | 1              |
| Cealo                      | Glycerol 85%     | 13276205     | 1              |
| Cealo                      | Glycerol 85%     | 16215301     | 1              |
| Cealo                      | Glycerol 85%     | 20000941002  | 1              |
| Cealo/ AHD                 | Glycerol 85%     | 16215303     | 1              |
| Cealo/Noweda               | Glycerol 85%     | 17322108     | 2              |
| Cealo/Sanacorp             | Glycerol 85%     | 19011207     | 1              |
| Cordes/Noweda              | Glycerol 85%     | 1627803      | 1              |
| Delta                      | Glycerol 85%     | 310593       | 1              |
| Ebert & Jacobi             | Glycerol 85%     | 5065061      | 1              |
| Ebert & Jacobi             | Glycerol 85%     | 5066011      | 1              |
| Eigenherstellung           | Glycerol 85%     | 295501       | 1              |
| EJ/Hedinger                | Glycerol 85%     | 40652        | 1              |
| Eu Rho                     | Glycerol 85%     | 1910011-01   | 1              |
| Eu Rho                     | Glycerol 85%     | 40683        | 1              |
| Eu Rho                     | Glycerol 85%     | 40690        | 1              |
| eurho                      | Glycerol 85%     | 287120       | 1              |
| eurho                      | Glycerol 85%     | 1703003-01   | 3              |
| eurho                      | Glycerol 85%     | 1801025-01   | 4              |
| EuRho                      | Glycerol 85%     | 1201038-01   | 1              |
| EuRho                      | Glycerol 85%     | 1301025-01   | 2              |
| EuRho                      | Glycerol 85%     | 1506036-01   | 1              |
| EuRho                      | Glycerol 85%     | 1708022-01   | 1              |
| EuRho                      | Glycerol 85%     | 1804017-01   | 1              |
| EuRho                      | Glycerol 85%     | 1808009-02   | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| EuRho           | Glycerol 85%     | 1906019-01         | 1              |
| EuRho / Phoenix | Glycerol 85%     | 1610032-01         | 1              |
| EuRho / Gehe    | Glycerol 85%     | 1409035-01         | 1              |
| EuRho / Gehe    | Glycerol 85%     | 1607037-01         | 1              |
| EuRho- Nowewda  | Glycerol 85%     | 1906019-01         | 1              |
| Eurho/Phoenix   | Glycerol 85%     | 1906019-01         | 1              |
| EuRho/Phönix    | Glycerol 85%     | 1509023-01         | 2              |
| euro            | Glycerol 85%     | 1703003-01         | 1              |
| euro            | Glycerol 85%     | BE-0983341464      | 1              |
| Euro            | Glycerol 85%     | 1601059-01         | 1              |
| Euro            | Glycerol 85%     | 1610032-01         | 2              |
| Euro / AHD      | Glycerol 85%     | 1901041-01         | 1              |
| Euro / Anzag    | Glycerol 85%     | 1808009-01         | 1              |
| Euro Gehe       | Glycerol 85%     | 1703003-01         | 1              |
| Euro OTC        | Glycerol 85%     | 140502101          | 2              |
| Euro OTC        | Glycerol 85%     | 140903501          | 1              |
| Euro OTC        | Glycerol 85%     | 302749             | 2              |
| Euro OTC        | Glycerol 85%     | 16215302           | 1              |
| Euro OTC        | Glycerol 85%     | 161003201          | 1              |
| Euro OTC        | Glycerol 85%     | 16297806           | 1              |
| Euro OTC        | Glycerol 85%     | 1708022-01         | 44             |
| Euro OTC        | Glycerol 85%     | 1801025-01         | 46             |
| Euro OTC        | Glycerol 85%     | 5068012            | 1              |
| Euro OTC        | Glycerol 85%     | 1804017            | 2              |
| Euro OTC        | Glycerol 85%     | 18000211           | 1              |
| Euro OTC        | Glycerol 85%     | 1906019-01         | 29             |
| Euro OTC        | Glycerol 85%     | 180407-01          | 1              |
| Euro OTC        | Glycerol 85%     | 1808009-01         | 22             |
| Euro OTC        | Glycerol 85%     | 1509023-01         | 24             |
| Euro OTC        | Glycerol 85%     | 8004808001         | 2              |
| Euro OTC        | Glycerol 85%     | 170509G/1607037-01 | 1              |
| Euro OTC        | Glycerol 85%     | 7406HH7011         | 2              |
| Euro OTC        | Glycerol 85%     | 161002-01          | 1              |
| Euro OTC        | Glycerol 85%     | 1506036-01         | 19             |
| Euro OTC        | Glycerol 85%     | 1601059-01         | 40             |
| Euro OTC        | Glycerol 85%     | 1610032-1          | 1              |
| Euro OTC        | Glycerol 85%     | 1910011_01         | 1              |
| Euro OTC        | Glycerol 85%     | 1306016-01         | 3              |
| Euro OTC        | Glycerol 85%     | 20122013A          | 1              |
| Euro OTC        | Glycerol 85%     | 40524              | 1              |
| Euro OTC        | Glycerol 85%     | 10112014D          | 1              |
| Euro OTC        | Glycerol 85%     | 10022015C          | 1              |
| Euro OTC        | Glycerol 85%     | 150902             | 1              |
| Euro OTC        | Glycerol 85%     | 151690             | 3              |
| Euro OTC        | Glycerol 85%     | 160703701          | 3              |
| Euro OTC        | Glycerol 85%     | 160105             | 1              |
| Euro OTC        | Glycerol 85%     | 1610032-01         | 52             |
| Euro OTC        | Glycerol 85%     | 1804017-01         | 51             |
| Euro OTC        | Glycerol 85%     | 1906019            | 1              |
| Euro OTC        | Glycerol 85%     | 1906019-1          | 1              |
| Euro OTC        | Glycerol 85%     | 1301025-02         | 2              |
| Euro OTC        | Glycerol 85%     | 1808009            | 1              |
| Euro OTC        | Glycerol 85%     | 190601901          | 3              |
| Euro OTC        | Glycerol 85%     | 2011017-01         | 2              |
| Euro OTC        | Glycerol 85%     | 1502010-01         | 16             |
| Euro OTC        | Glycerol 85%     | 160703             | 1              |
| Euro OTC        | Glycerol 85%     | 17080822-01        | 1              |
| Euro OTC        | Glycerol 85%     | 1802009-02         | 1              |
| Euro OTC        | Glycerol 85%     | 1910011-01         | 40             |
| Euro OTC        | Glycerol 85%     | 200703901          | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|-----------------|------------------|----------------|----------------|
| Euro OTC        | Glycerol 85%     | 2007039-01     | 3              |
| Euro OTC        | Glycerol 85%     | 1108032-01     | 5              |
| Euro OTC        | Glycerol 85%     | 1108032        | 1              |
| Euro OTC        | Glycerol 85%     | 1201038-01     | 6              |
| Euro OTC        | Glycerol 85%     | 1210047-01     | 8              |
| Euro OTC        | Glycerol 85%     | 1301025-01     | 8              |
| Euro OTC        | Glycerol 85%     | 1306016-02     | 7              |
| Euro OTC        | Glycerol 85%     | 120103801      | 1              |
| Euro OTC        | Glycerol 85%     | 1703003        | 2              |
| Euro OTC        | Glycerol 85%     | 1201038-01     | 1              |
| Euro OTC        | Glycerol 85%     | 191001101      | 2              |
| Euro OTC        | Glycerol 85%     | 18001025-01    | 1              |
| Euro OTC        | Glycerol 85%     | 190104101      | 2              |
| Euro OTC        | Glycerol 85%     | 18020005       | 1              |
| Euro OTC        | Glycerol 85%     | 173003-01      | 1              |
| Euro OTC        | Glycerol 85%     | 1703003-01     | 59             |
| Euro OTC        | Glycerol 85%     | 1703001-01     | 1              |
| Euro OTC        | Glycerol 85%     | GG61870088     | 1              |
| Euro OTC        | Glycerol 85%     | 1808009-02     | 40             |
| Euro OTC        | Glycerol 85%     | 180800901      | 1              |
| Euro OTC        | Glycerol 85%     | 18080092       | 1              |
| Euro OTC        | Glycerol 85%     | 170300301      | 3              |
| Euro OTC        | Glycerol 85%     | 180102501      | 6              |
| Euro OTC        | Glycerol 85%     | 180401701      | 5              |
| Euro OTC        | Glycerol 85%     | 18080009-02    | 1              |
| Euro OTC        | Glycerol 85%     | 1906018-01     | 1              |
| Euro OTC        | Glycerol 85%     | 1405021-01     | 4              |
| Euro OTC        | Glycerol 85%     | 1808009-1      | 1              |
| Euro OTC        | Glycerol 85%     | 5065061        | 1              |
| Euro OTC        | Glycerol 85%     | 170802201      | 1              |
| Euro OTC        | Glycerol 85%     | 1801-1025-01   | 1              |
| Euro OTC        | Glycerol 85%     | 1403006-01     | 8              |
| euro//Noweda    | Glycerol 85%     | 18253402       | 1              |
| Euro/Gehe       | Glycerol 85%     | 1509023-01     | 1              |
| Euro/Noweda     | Glycerol 85%     | 1607037-01     | 1              |
| Euro/Noweda     | Glycerol 85%     | 1610032-01     | 1              |
| Euro/Noweda     | Glycerol 85%     | 180102501      | 1              |
| Euro OTC        | Glycerol 85%     | 14380504       | 1              |
| Euroo/Gehe      | Glycerol 85%     | 1808009-02     | 1              |
| Euro OTC        | Glycerol 85%     | 1607037        | 1              |
| Euro OTC        | Glycerol 85%     | 18004017-01    | 1              |
| Euro OTC        | Glycerol 85%     | 1401009        | 1              |
| Euro OTC        | Glycerol 85%     | BE-08467/36621 | 2              |
| Euro OTC        | Glycerol 85%     | 1868009-02     | 1              |
| Euro OTC        | Glycerol 85%     | 160105901      | 2              |
| Euro OTC        | Glycerol 85%     | 16355002       | 1              |
| Euro OTC        | Glycerol 85%     | 1901041-01     | 16             |
| Euro OTC        | Glycerol 85%     | 191001-01      | 1              |
| Euro OTC        | Glycerol 85%     | 1607037-01     | 29             |
| Euro OTC        | Glycerol 85%     | 201017-01      | 1              |
| EuroOZC/ AHD    | Glycerol 85%     | 1906019-01     | 1              |
| EuroOZC/ Noweda | Glycerol 85%     | 1804017-01     | 1              |
| Europharm/Otto  | Glycerol 85%     | 1108032-01     | 1              |
| Caelo           | Glycerol 85%     | 40642          | 1              |
| Fagron          | Glycerol 85%     | 13060006       | 1              |
| Fagron          | Glycerol 85%     | 1203C003       | 1              |
| Fagron          | Glycerol 85%     | 12H17-N01      | 2              |
| Fagron          | Glycerol 85%     | 12G11-N02      | 1              |
| Fagron          | Glycerol 85%     | 12J05-N01      | 1              |
| Fagron          | Glycerol 85%     | 13C28-N02      | 6              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Fagron          | Glycerol 85%     | 13C-N02          | 1              |
| Fagron          | Glycerol 85%     | 13E24-N11        | 2              |
| Fagron          | Glycerol 85%     | 13D11-N05        | 1              |
| Fagron          | Glycerol 85%     | 13J01-B01-285777 | 1              |
| Fagron          | Glycerol 85%     | 14A10-B01-291982 | 1              |
| Fagron          | Glycerol 85%     | 14A10-B01-291983 | 1              |
| Fagron          | Glycerol 85%     | 13J29-B01-285782 | 1              |
| Fagron          | Glycerol 85%     | 14D25-B02-295895 | 1              |
| Fagron          | Glycerol 85%     | 14H11-B05-298257 | 2              |
| Fagron          | Glycerol 85%     | 5763701          | 1              |
| Fagron          | Glycerol 85%     | 15036903         | 1              |
| Fagron          | Glycerol 85%     | 15E18-B02-309484 | 1              |
| Fagron          | Glycerol 85%     | 1529220          | 1              |
| Fagron          | Glycerol 85%     | 16215303         | 1              |
| Fagron          | Glycerol 85%     | 18B05-B03        | 1              |
| Fagron          | Glycerol 85%     | 13I12-B03-285611 | 1              |
| Fagron          | Glycerol 85%     | 5069021          | 1              |
| Fagron          | Glycerol 85%     | 11L06-N02        | 4              |
| Fagron          | Glycerol 85%     | 12J04-N09        | 2              |
| Fagron          | Glycerol 85%     | 13c28-n02        | 2              |
| Fagron          | Glycerol 85%     | 5065101          | 1              |
| Fagron          | Glycerol 85%     | 1209C001         | 1              |
| Fagron          | Glycerol 85%     | 13J01-B01        | 1              |
| Fagron          | Glycerol 85%     | 250214PJK01      | 1              |
| Fagron          | Glycerol 85%     | 12J04-N02        | 1              |
| Fagron          | Glycerol 85%     | 13J29-B01        | 1              |
| Fagron          | Glycerol 85%     | 13J20-B01-285782 | 1              |
| Fagron          | Glycerol 85%     | 3111             | 1              |
| Fagron          | Glycerol 85%     | 56-81-5          | 1              |
| Fagron          | Glycerol 85%     | 5065111          | 2              |
| Fagron          | Glycerol 85%     | 12L04-N09        | 1              |
| Fagron          | Glycerol 85%     | 1312B03285613    | 1              |
| Fagron          | Glycerol 85%     | 13J01-B01-285781 | 2              |
| Fagron          | Glycerol 85%     | 14D25-B02-293384 | 1              |
| Fagron          | Glycerol 85%     | 15292201         | 1              |
| Fagron          | Glycerol 85%     | 18020001         | 1              |
| Fargon          | Glycerol 85%     | 1808009-01       | 1              |
| Fiebig          | Glycerol 85%     | 1322101          | 1              |
| Fiebig          | Glycerol 85%     | 17322101         | 1              |
| Fiebig          | Glycerol 85%     | 17322107         | 1              |
| Fiebig          | Glycerol 85%     | 18020002         | 2              |
| Fiebig          | Glycerol 85%     | 5068101          | 1              |
| Fiebig          | Glycerol 85%     | 18253404         | 1              |
| Fiebig          | Glycerol 85%     | 20004357001      | 1              |
| fischar         | Glycerol 85%     | 5064091          | 1              |
| fischar         | Glycerol 85%     | 5065061          | 2              |
| fischar         | Glycerol 85%     | 5066031          | 1              |
| fischar         | Glycerol 85%     | 5067081          | 1              |
| fischar         | Glycerol 85%     | 5067061          | 1              |
| fischar         | Glycerol 85%     | 5068021          | 2              |
| fischar         | Glycerol 85%     | 5068101          | 2              |
| fischar         | Glycerol 85%     | 506003           | 1              |
| fischar         | Glycerol 85%     | 5060033          | 1              |
| Fischar         | Glycerol 85%     | 5062051          | 3              |
| Fischar         | Glycerol 85%     | 5061101          | 1              |
| Fischar         | Glycerol 85%     | 5062111          | 4              |
| Fischar         | Glycerol 85%     | 5062121          | 2              |
| Fischar         | Glycerol 85%     | 5063011          | 3              |
| Fischar         | Glycerol 85%     | 5063052          | 1              |
| Fischar         | Glycerol 85%     | 5063051          | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Fischar                   | Glycerol 85%     | 5063091      | 1              |
| Fischar                   | Glycerol 85%     | 5064021      | 1              |
| Fischar                   | Glycerol 85%     | 506407       | 1              |
| Fischar                   | Glycerol 85%     | 5065011      | 3              |
| Fischar                   | Glycerol 85%     | 5064091      | 1              |
| Fischar                   | Glycerol 85%     | 5055031      | 1              |
| Fischar                   | Glycerol 85%     | 5063092      | 1              |
| Fischar                   | Glycerol 85%     | 5065012      | 3              |
| Fischar                   | Glycerol 85%     | 5065031      | 2              |
| Fischar                   | Glycerol 85%     | 5065061      | 5              |
| Fischar                   | Glycerol 85%     | 1075061      | 1              |
| Fischar                   | Glycerol 85%     | 5065081      | 2              |
| Fischar                   | Glycerol 85%     | 5065111      | 2              |
| Fischar                   | Glycerol 85%     | 5066011      | 2              |
| Fischar                   | Glycerol 85%     | 5066021      | 4              |
| Fischar                   | Glycerol 85%     | 5065101      | 1              |
| Fischar                   | Glycerol 85%     | 5066031      | 4              |
| Fischar                   | Glycerol 85%     | 5066071      | 1              |
| Fischar                   | Glycerol 85%     | 5066081      | 3              |
| Fischar                   | Glycerol 85%     | 5066101      | 7              |
| Fischar                   | Glycerol 85%     | 5066111      | 3              |
| Fischar                   | Glycerol 85%     | 5067031      | 2              |
| Fischar                   | Glycerol 85%     | 5067021      | 1              |
| Fischar                   | Glycerol 85%     | 5067061      | 2              |
| Fischar                   | Glycerol 85%     | 1077081      | 2              |
| Fischar                   | Glycerol 85%     | 5067091      | 3              |
| Fischar                   | Glycerol 85%     | 1802006B     | 1              |
| Fischar                   | Glycerol 85%     | 5068012      | 6              |
| Fischar                   | Glycerol 85%     | 5068011      | 6              |
| Fischar                   | Glycerol 85%     | 1078031      | 2              |
| Fischar                   | Glycerol 85%     | 5068021      | 5              |
| Fischar                   | Glycerol 85%     | 5068031      | 5              |
| Fischar                   | Glycerol 85%     | 5068081      | 2              |
| Fischar                   | Glycerol 85%     | 5068101      | 7              |
| Fischar                   | Glycerol 85%     | 5068121      | 1              |
| Fischar                   | Glycerol 85%     | 2068031      | 1              |
| Fischar                   | Glycerol 85%     | 5069021      | 2              |
| Fischar                   | Glycerol 85%     | 1079021      | 1              |
| Fischar                   | Glycerol 85%     | 5069051      | 2              |
| Fischar                   | Glycerol 85%     | 3430         | 1              |
| Fischar                   | Glycerol 85%     | 5069059      | 1              |
| Fischar                   | Glycerol 85%     | 5069011      | 2              |
| Fischar                   | Glycerol 85%     | 5060011      | 3              |
| Fischar                   | Glycerol 85%     | 1070011      | 2              |
| Fischar                   | Glycerol 85%     | 5060032      | 3              |
| Fischar                   | Glycerol 85%     | 5060036      | 2              |
| Fischar                   | Glycerol 85%     | 5060033      | 2              |
| Fischar                   | Glycerol 85%     | 5060035      | 3              |
| Fischar                   | Glycerol 85%     | 5060041      | 6              |
| Fischar                   | Glycerol 85%     | 1070035      | 1              |
| Fischar                   | Glycerol 85%     | 5069111      | 1              |
| Fischar                   | Glycerol 85%     | 1070033      | 1              |
| Fischar                   | Glycerol 85%     | 5060062      | 1              |
| Fischar / Alliance Hea... | Glycerol 85%     | 5065111      | 1              |
| Fischar / Alliance Hea... | Glycerol 85%     | 5066111      | 1              |
| Fischar / Anzag           | Glycerol 85%     | 5068101      | 2              |
| Fischar / Anzag           | Glycerol 85%     | 5068021      | 1              |
| Fischar / Gehe            | Glycerol 85%     | 5068012      | 3              |
| Fischar / GEHE            | Glycerol 85%     | 5060012      | 1              |
| Fischar / Geilenkirchen   | Glycerol 85%     | 5060033      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Fischar / Geilenkirchen    | Glycerol 85%     | 5060062      | 1              |
| fischar / Noweda           | Glycerol 85%     | 5068081      | 1              |
| Fischar / Noweda           | Glycerol 85%     | 50655081     | 1              |
| Fischar / Noweda           | Glycerol 85%     | 40678        | 1              |
| Fischar / Noweda           | Glycerol 85%     | 5060041      | 1              |
| Fischar / Phönix           | Glycerol 85%     | 5065031      | 2              |
| Fischar / Phönix           | Glycerol 85%     | 5066031      | 1              |
| Fischar / Phönix           | Glycerol 85%     | 5060032      | 1              |
| fischar gmbh               | Glycerol 85%     | 5063012      | 1              |
| fischar gmbh               | Glycerol 85%     | 5064021      | 1              |
| fischar gmbh               | Glycerol 85%     | 5064011      | 1              |
| Fischar GmbH               | Glycerol 85%     | 1076071      | 2              |
| Fischar GmbH               | Glycerol 85%     | 1077111      | 1              |
| Fischar GmbH               | Glycerol 85%     | 5068012      | 1              |
| Fischar GmbH               | Glycerol 85%     | 5068031      | 1              |
| Fischar GmbH               | Glycerol 85%     | 5068081      | 1              |
| Fischar GmbH               | Glycerol 85%     | 5068121      | 1              |
| Fischar GmbH               | Glycerol 85%     | 5060041      | 1              |
| Fischar GmbH/ Sanacorp ... | Glycerol 85%     | 5068031      | 1              |
| Fischar GmbH/AHD           | Glycerol 85%     | 5064091      | 1              |
| Fischar GmbH/AHD           | Glycerol 85%     | 5060041      | 1              |
| Fischar GmbH/Anzag         | Glycerol 85%     | 1070033      | 1              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5065111      | 1              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5066021      | 1              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5066111      | 1              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5067061      | 1              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5068021      | 2              |
| Fischar GmbH/Krieger       | Glycerol 85%     | 5068031      | 1              |
| fischar noweda             | Glycerol 85%     | CHB5069059   | 1              |
| Fischar Sanacorp           | Glycerol 85%     | 5069051      | 1              |
| Fischar Sanacorp           | Glycerol 85%     | AP210626-02  | 1              |
| Fischar/ AHD               | Glycerol 85%     | 5066081      | 1              |
| Fischar/ AHD               | Glycerol 85%     | 5068021      | 1              |
| Fischar/ Alliance Healt... | Glycerol 85%     | 5069111      | 1              |
| Fischar/ Gehe              | Glycerol 85%     | 1076011      | 1              |
| Fischar/ GEHE              | Glycerol 85%     | 5069021      | 1              |
| Fischar/ Now               | Glycerol 85%     | 5065011      | 1              |
| Fischar/ Now               | Glycerol 85%     | 5065111      | 2              |
| Fischar/ Now               | Glycerol 85%     | 5066031      | 1              |
| Fischar/ Now               | Glycerol 85%     | 5066071      | 4              |
| Fischar/ Noweda            | Glycerol 85%     | 5066011      | 1              |
| Fischar/ Noweda            | Glycerol 85%     | 5069059      | 1              |
| Fischar/ Noweda            | Glycerol 85%     | 5060033      | 1              |
| Fischar/ Noweda            | Glycerol 85%     | 5060041      | 1              |
| Fischar/ Phönix            | Glycerol 85%     | 5065101      | 2              |
| Fischar/ Phönix            | Glycerol 85%     | 5066081      | 1              |
| Fischar/ Phönix            | Glycerol 85%     | 5069051      | 1              |
| Fischar/ Phönix 08.05.2... | Glycerol 85%     | 5068101      | 1              |
| Fischar/ Sanacorp 12.02... | Glycerol 85%     | 5069111      | 1              |
| Fischar/AEP                | Glycerol 85%     | 5065111      | 3              |
| Fischar/AEP                | Glycerol 85%     | 5067081      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5065081      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5065061      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5065031      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5067091      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5068012      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5069051      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5068071      | 1              |
| Fischar/AHD                | Glycerol 85%     | 5069021      | 2              |
| Fischar/AHD                | Glycerol 85%     | 5060036      | 1              |

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| <b>Supplier</b>       | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------|------------------|--------------|----------------|
| Fischar/AHD           | Glycerol 85%     | 5069111      | 3              |
| Fischar/AHD           | Glycerol 85%     | 5060012      | 1              |
| Fischar/AHD           | Glycerol 85%     | 5060041      | 2              |
| Fischar/Alliance      | Glycerol 85%     | 5068071      | 1              |
| Fischar/Anzag         | Glycerol 85%     | 5062111      | 1              |
| Fischar/Anzag         | Glycerol 85%     | 5063012      | 1              |
| Fischar/E             | Glycerol 85%     | 5062011      | 1              |
| Fischar/Ebert         | Glycerol 85%     | 5066071      | 1              |
| fischar/fiebig        | Glycerol 85%     | 5069081      | 1              |
| Fischar/Fiebig        | Glycerol 85%     | 5069011      | 1              |
| fischar/gehe          | Glycerol 85%     | 5067021      | 1              |
| fischar/gehe          | Glycerol 85%     | 5067111      | 2              |
| Fischar/Gehe          | Glycerol 85%     | 5066031      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5065081      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5066111      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 1077011      | 2              |
| Fischar/Gehe          | Glycerol 85%     | 5067011      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5067061      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5068031      | 3              |
| Fischar/Gehe          | Glycerol 85%     | 5068061      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5068121      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5069021      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 1079052      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5069051      | 1              |
| Fischar/Gehe          | Glycerol 85%     | 5060035      | 1              |
| Fischar/Geilenkirchen | Glycerol 85%     | 5068012      | 1              |
| Fischar/Geilenkirchen | Glycerol 85%     | 5068101      | 4              |
| Fischar/Jenne         | Glycerol 85%     | 5068021      | 2              |
| Fischar/Kehr          | Glycerol 85%     | 5068021      | 1              |
| Fischar/Kehr          | Glycerol 85%     | 5068101      | 1              |
| Fischar/Krieger       | Glycerol 85%     | 5069111      | 1              |
| Fischar/Krieger       | Glycerol 85%     | 5069081      | 1              |
| Fischar/Krieger       | Glycerol 85%     | 5060041      | 1              |
| fischar/noweda        | Glycerol 85%     | 5066081      | 2              |
| fischar/Noweda        | Glycerol 85%     | 5064091      | 1              |
| fischar/Noweda        | Glycerol 85%     | 5067011      | 1              |
| fischar/Noweda        | Glycerol 85%     | 5069052      | 1              |
| fischar/Noweda        | Glycerol 85%     | 5060041      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5066071      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5067021      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5067031      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5067061      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5066101      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5068012      | 2              |
| Fischar/Noweda        | Glycerol 85%     | 5068011      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5068101      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5069081      | 2              |
| Fischar/Noweda        | Glycerol 85%     | 5069059      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5069051      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 40683        | 2              |
| Fischar/Noweda        | Glycerol 85%     | 5069111      | 5              |
| Fischar/Noweda        | Glycerol 85%     | 50699059     | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5060036      | 1              |
| Fischar/Noweda        | Glycerol 85%     | 5060035      | 2              |
| Fischar/Noweda        | Glycerol 85%     | 5060041      | 1              |
| fischar/Phoenix       | Glycerol 85%     | 5069081      | 2              |
| Fischar/Phoenix       | Glycerol 85%     | 5066081      | 1              |
| Fischar/Phoenix       | Glycerol 85%     | 5068012      | 1              |
| Fischar/Phoenix       | Glycerol 85%     | 1078012      | 1              |
| Fischar/Phoenix       | Glycerol 85%     | 5068071      | 1              |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------|------------------|--------------|----------------|
| Fischar/Phoenix  | Glycerol 85%     | 5068031      | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 190542805    | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 180800208    | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 5069081      | 2              |
| Fischar/Phoenix  | Glycerol 85%     | 5060012      | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 1070033      | 2              |
| Fischar/Phoenix  | Glycerol 85%     | 1070042      | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 1070061      | 1              |
| Fischar/Phoenix  | Glycerol 85%     | 5060062      | 1              |
| fishchar/Phönix  | Glycerol 85%     | 5066071      | 1              |
| fishchar/Phönix  | Glycerol 85%     | 50666061     | 1              |
| fishchar/Phönix  | Glycerol 85%     | 5067111      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5062051      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5064071      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5065031      | 2              |
| Fischar/Phönix   | Glycerol 85%     | 5066011      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5066021      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5066101      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5066111      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5067011      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5067111      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5068101      | 2              |
| Fischar/Phönix   | Glycerol 85%     | 1070011      | 2              |
| Fischar/Phönix   | Glycerol 85%     | 5060012      | 1              |
| Fischar/Phönix   | Glycerol 85%     | 10132010     | 1              |
| Fischar/Phönix   | Glycerol 85%     | 5060041      | 2              |
| Fischar/Sanacorp | Glycerol 85%     | 5069021      | 1              |
| Fischar/Sanacorp | Glycerol 85%     | 5060012      | 1              |
| Fischar/Sanacorp | Glycerol 85%     | 5060036      | 2              |
| Fischar/Sanacorp | Glycerol 85%     | 5069081      | 1              |
| Fischar/Sanacorp | Glycerol 85%     | 5060042      | 2              |
| Fischar/Sanacorp | Glycerol 85%     | 5060041      | 2              |
| Fischar/Sanacorp | Glycerol 85%     | AP210305-01  | 1              |
| FISCHAR/Sanacorp | Glycerol 85%     | 5060041      | 1              |
| Fischar/Spangro  | Glycerol 85%     | 5067061      | 1              |
| Fischar/Spangro  | Glycerol 85%     | 5060032      | 1              |
| Fischar/V.d.L.   | Glycerol 85%     | 5062111      | 1              |
| Fischar/V.d.L.   | Glycerol 85%     | 5064071      | 1              |
| Fischar-Allianz  | Glycerol 85%     | 5068121      | 2              |
| fishchar-Noweda  | Glycerol 85%     | 5068101      | 1              |
| fishchar-Noweda  | Glycerol 85%     | 1079021      | 1              |
| fishchar-Noweda  | Glycerol 85%     | 1070011      | 1              |
| fishchar-Noweda  | Glycerol 85%     | 1070033      | 1              |
| fishbar          | Glycerol 85%     | 5064091      | 1              |
| fishbar          | Glycerol 85%     | 5067061      | 1              |
| Fischbar/Anzag   | Glycerol 85%     | 5064011      | 3              |
| fischer          | Glycerol 85%     | 5063051      | 1              |
| fischer          | Glycerol 85%     | 5068081      | 1              |
| Fischer          | Glycerol 85%     | 5063091      | 1              |
| Fischer          | Glycerol 85%     | 1075012      | 1              |
| Fischer          | Glycerol 85%     | 5065101      | 1              |
| Fischer          | Glycerol 85%     | 5066021      | 1              |
| Fischer          | Glycerol 85%     | 5066061      | 2              |
| Fischer          | Glycerol 85%     | 50660631     | 1              |
| Fischer          | Glycerol 85%     | 5066071      | 1              |
| Fischer          | Glycerol 85%     | 5065111      | 1              |
| Fischer          | Glycerol 85%     | 5067031      | 1              |
| Fischer          | Glycerol 85%     | 5060012      | 1              |
| Fischer          | Glycerol 85%     | 5060035      | 1              |
| Fischer / AHD    | Glycerol 85%     | 5060012      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Fischer / Gehe             | Glycerol 85%     | 5060033      | 1              |
| Fischer / Phoenix Leipz... | Glycerol 85%     | 5065081      | 1              |
| Fischer GmbH / Phoenix ... | Glycerol 85%     | 5068012      | 1              |
| fischer, Gehe              | Glycerol 85%     | 5062051      | 1              |
| Fischer/ Gehe              | Glycerol 85%     | 5060012      | 1              |
| Fischer/ Noweda            | Glycerol 85%     | 1076111      | 1              |
| Fischer/ Noweda            | Glycerol 85%     | 1610032-01   | 1              |
| fischer/ Phoenix / 02.1... | Glycerol 85%     | 5066071      | 1              |
| Fischer/Gehe               | Glycerol 85%     | 5060035      | 1              |
| Fischer/Noweda             | Glycerol 85%     | 5065011      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5067061      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5069031      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5068031      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5069011      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5069051      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 5060034      | 1              |
| Fischer/Sanacorp           | Glycerol 85%     | 1911009-01   | 1              |
| Fishar                     | Glycerol 85%     | 5066021      | 1              |
| Fishar / Phönix            | Glycerol 85%     | 5064011      | 1              |
| Fishar/Phö                 | Glycerol 85%     | 5060012      | 1              |
| Fishar/Sanacorp            | Glycerol 85%     | 5060041      | 3              |
| Gatt-Koller                | Glycerol 85%     | 1802637      | 1              |
| Gatt-Koller                | Glycerol 85%     | 1804132      | 1              |
| Gehe                       | Glycerol 85%     | 11355301     | 1              |
| Gehe                       | Glycerol 85%     | 1001017-01   | 1              |
| Gehe                       | Glycerol 85%     | 5226901      | 1              |
| Gehe                       | Glycerol 85%     | 1201038-01   | 1              |
| Gehe                       | Glycerol 85%     | 5062051      | 1              |
| Gehe                       | Glycerol 85%     | 276850       | 2              |
| Gehe                       | Glycerol 85%     | 1210047-01   | 1              |
| Gehe                       | Glycerol 85%     | 40491        | 2              |
| Gehe                       | Glycerol 85%     | 1301025-01   | 1              |
| Gehe                       | Glycerol 85%     | 5063012      | 1              |
| Gehe                       | Glycerol 85%     | 5062121      | 1              |
| Gehe                       | Glycerol 85%     | 284401       | 1              |
| Gehe                       | Glycerol 85%     | 13356405     | 1              |
| Gehe                       | Glycerol 85%     | 14149404     | 2              |
| Gehe                       | Glycerol 85%     | 1502010-01   | 1              |
| Gehe                       | Glycerol 85%     | 15292201     | 1              |
| Gehe                       | Glycerol 85%     | 15036904     | 1              |
| Gehe                       | Glycerol 85%     | 295501       | 2              |
| Gehe                       | Glycerol 85%     | 15146301     | 1              |
| Gehe                       | Glycerol 85%     | 15036902     | 1              |
| Gehe                       | Glycerol 85%     | 15292205     | 2              |
| Gehe                       | Glycerol 85%     | 297034       | 1              |
| Gehe                       | Glycerol 85%     | 5066031      | 1              |
| Gehe                       | Glycerol 85%     | 16218901     | 3              |
| Gehe                       | Glycerol 85%     | 300395       | 1              |
| Gehe                       | Glycerol 85%     | 40607        | 1              |
| Gehe                       | Glycerol 85%     | 16215302     | 1              |
| Gehe                       | Glycerol 85%     | 16297803     | 1              |
| Gehe                       | Glycerol 85%     | 16218906     | 1              |
| Gehe                       | Glycerol 85%     | 40628        | 1              |
| Gehe                       | Glycerol 85%     | 40638        | 1              |
| Gehe                       | Glycerol 85%     | 17215501     | 1              |
| Gehe                       | Glycerol 85%     | 17322104     | 2              |
| Gehe                       | Glycerol 85%     | 18020002     | 1              |
| Gehe                       | Glycerol 85%     | 40649        | 1              |
| Gehe                       | Glycerol 85%     | 18005463     | 1              |
| Gehe                       | Glycerol 85%     | 18253404     | 2              |

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| <b>Supplier</b>    | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------|------------------|--------------|----------------|
| Gehe               | Glycerol 85%     | 1808009-02   | 1              |
| Gehe               | Glycerol 85%     | 19011201     | 1              |
| Gehe               | Glycerol 85%     | 19188301     | 1              |
| Gehe               | Glycerol 85%     | 19188304     | 1              |
| Gehe               | Glycerol 85%     | 192976007    | 1              |
| Gehe               | Glycerol 85%     | 20001043005  | 1              |
| GEHE               | Glycerol 85%     | 12216606     | 1              |
| GEHE               | Glycerol 85%     | 16215301     | 1              |
| GEHE               | Glycerol 85%     | 40635        | 1              |
| GEHE               | Glycerol 85%     | 17322104     | 1              |
| GEHE               | Glycerol 85%     | 40646        | 1              |
| GEHE               | Glycerol 85%     | 40647        | 1              |
| GEHE               | Glycerol 85%     | 40652        | 2              |
| GEHE               | Glycerol 85%     | 40667        | 1              |
| GEHE               | Glycerol 85%     | 40670        | 1              |
| GEHE               | Glycerol 85%     | 40673        | 1              |
| Caelo              | Glycerol 85%     | 5063111      | 1              |
| Gehe - Hedinger    | Glycerol 85%     | 40618        | 1              |
| Gehe / Fischar     | Glycerol 85%     | 1077081      | 1              |
| Gehe am 05.04.2014 | Glycerol 85%     | 13276205     | 2              |
| Gehe amax          | Glycerol 85%     | 5067061      | 2              |
| Gehe amax          | Glycerol 85%     | 5067111      | 1              |
| Gehe amax          | Glycerol 85%     | 5068031      | 1              |
| Gehe amax          | Glycerol 85%     | 5068081      | 2              |
| Gehe amax          | Glycerol 85%     | 5068121      | 1              |
| Gehe amax          | Glycerol 85%     | 5060062      | 1              |
| Gehe,06.05.15      | Glycerol 85%     | 14306205     | 1              |
| Bombastus          | Glycerol 85%     | 20002102     | 1              |
| Gehe/ Euro         | Glycerol 85%     | 151690       | 1              |
| GEHE/apo-ident     | Glycerol 85%     | 1610032-01   | 1              |
| Bombastus          | Glycerol 85%     | 1607037-01   | 1              |
| Bombastus          | Glycerol 85%     | 17157703     | 1              |
| Bombastus          | Glycerol 85%     | 20001746     | 2              |
| Caelo              | Glycerol 85%     | 5065111      | 2              |
| Caelo              | Glycerol 85%     | 1290317      | 1              |
| Caelo              | Glycerol 85%     | 40625        | 1              |
| Caelo              | Glycerol 85%     | 19209502     | 4              |
| Gehe/EuRho         | Glycerol 85%     | 1906019-01   | 1              |
| gehe/fischa        | Glycerol 85%     | 5060041      | 1              |
| gehe/fischa        | Glycerol 85%     | 5060042      | 1              |
| Gehe/fischar       | Glycerol 85%     | 5065101      | 1              |
| Gehe/Fischar       | Glycerol 85%     | 5066071      | 1              |
| Gehe/Fischar       | Glycerol 85%     | 5068081      | 1              |
| Gehe/Fischer       | Glycerol 85%     | 5068031      | 1              |
| Gehe/Fischer       | Glycerol 85%     | 5068081      | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40599        | 4              |
| Gehe/Hedinger      | Glycerol 85%     | 40612        | 4              |
| Gehe/Hedinger      | Glycerol 85%     | 40607        | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 2x040620     | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40620        | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40628        | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40642        | 2              |
| Gehe/Hedinger      | Glycerol 85%     | 40638        | 2              |
| Gehe/Hedinger      | Glycerol 85%     | 40652        | 2              |
| Gehe/Hedinger      | Glycerol 85%     | 40667        | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40673        | 1              |
| Gehe/Hedinger      | Glycerol 85%     | 40683        | 1              |
| Gehe-Hedinger      | Glycerol 85%     | 40522        | 1              |
| Geibo              | Glycerol 85%     | 5067081      | 1              |
| Geibo              | Glycerol 85%     | 5067111      | 2              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Geibo/EuRho          | Glycerol 85%     | 1703003-01   | 3              |
| Geibo/EuRho          | Glycerol 85%     | 17080220-01  | 1              |
| Geibo/Hedinger       | Glycerol 85%     | 40646        | 1              |
| Geo-Chem/sanacorp    | Glycerol 85%     | 12216606     | 1              |
| HanosanGmbH          | Glycerol 85%     | 329411001    | 1              |
| Hanry Lanotte/Phönix | Glycerol 85%     | 8001116001   | 1              |
| Heddinger/Sanacorp   | Glycerol 85%     | 40475        | 1              |
| Hediner GmbH         | Glycerol 85%     | 40680        | 1              |
| hedinger             | Glycerol 85%     | CH040678     | 1              |
| hedinger             | Glycerol 85%     | 40483        | 1              |
| hedinger             | Glycerol 85%     | 40494        | 1              |
| hedinger             | Glycerol 85%     | 40538        | 1              |
| hedinger             | Glycerol 85%     | 40652        | 1              |
| hedinger             | Glycerol 85%     | 40690        | 1              |
| Hedinger             | Glycerol 85%     | 40452        | 1              |
| Hedinger             | Glycerol 85%     | 40447        | 1              |
| Hedinger             | Glycerol 85%     | 40471        | 2              |
| Hedinger             | Glycerol 85%     | 40464        | 2              |
| Hedinger             | Glycerol 85%     | 40478        | 1              |
| Hedinger             | Glycerol 85%     | 40473        | 1              |
| Hedinger             | Glycerol 85%     | 40486        | 2              |
| Hedinger             | Glycerol 85%     | 40483        | 2              |
| Hedinger             | Glycerol 85%     | 40481        | 1              |
| Hedinger             | Glycerol 85%     | 40497        | 2              |
| Hedinger             | Glycerol 85%     | 40499        | 3              |
| Hedinger             | Glycerol 85%     | 40506        | 2              |
| Hedinger             | Glycerol 85%     | 40507        | 1              |
| Hedinger             | Glycerol 85%     | 40519        | 3              |
| Hedinger             | Glycerol 85%     | 40515        | 1              |
| Hedinger             | Glycerol 85%     | 40502        | 1              |
| Hedinger             | Glycerol 85%     | 40522        | 1              |
| Hedinger             | Glycerol 85%     | 40528        | 1              |
| Hedinger             | Glycerol 85%     | 40531        | 2              |
| Hedinger             | Glycerol 85%     | 40529        | 3              |
| Hedinger             | Glycerol 85%     | 40531-1      | 3              |
| Hedinger             | Glycerol 85%     | 40524        | 1              |
| Hedinger             | Glycerol 85%     | 40538        | 3              |
| Hedinger             | Glycerol 85%     | 40540        | 1              |
| Hedinger             | Glycerol 85%     | 40541        | 2              |
| Hedinger             | Glycerol 85%     | 40548        | 4              |
| Hedinger             | Glycerol 85%     | 40556        | 2              |
| Hedinger             | Glycerol 85%     | 40542        | 1              |
| Hedinger             | Glycerol 85%     | 40578        | 1              |
| Hedinger             | Glycerol 85%     | 25082015B    | 1              |
| Hedinger             | Glycerol 85%     | 40546        | 1              |
| Hedinger             | Glycerol 85%     | 40557        | 3              |
| Hedinger             | Glycerol 85%     | 40566        | 3              |
| Hedinger             | Glycerol 85%     | 40559        | 2              |
| Hedinger             | Glycerol 85%     | 40567        | 3              |
| Hedinger             | Glycerol 85%     | 40574        | 3              |
| Hedinger             | Glycerol 85%     | 40576        | 6              |
| Hedinger             | Glycerol 85%     | 40579        | 3              |
| Hedinger             | Glycerol 85%     | 40584        | 2              |
| Hedinger             | Glycerol 85%     | 40583        | 4              |
| Hedinger             | Glycerol 85%     | 40586        | 4              |
| Hedinger             | Glycerol 85%     | 40596        | 3              |
| Hedinger             | Glycerol 85%     | 40598        | 8              |
| Hedinger             | Glycerol 85%     | 40599        | 14             |
| Hedinger             | Glycerol 85%     | 40607        | 7              |
| Hedinger             | Glycerol 85%     | 40612        | 7              |

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| <b>Supplier</b>     | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------|------------------|--------------|----------------|
| Hedinger            | Glycerol 85%     | 40620        | 7              |
| Hedinger            | Glycerol 85%     | 40618        | 2              |
| Hedinger            | Glycerol 85%     | 406205369    | 1              |
| Hedinger            | Glycerol 85%     | 40628        | 9              |
| Hedinger            | Glycerol 85%     | 40625        | 1              |
| Hedinger            | Glycerol 85%     | 40626        | 7              |
| Hedinger            | Glycerol 85%     | 40632        | 1              |
| Hedinger            | Glycerol 85%     | 40629        | 3              |
| Hedinger            | Glycerol 85%     | 40635        | 4              |
| Hedinger            | Glycerol 85%     | 40639        | 2              |
| Hedinger            | Glycerol 85%     | 40647        | 3              |
| Hedinger            | Glycerol 85%     | 40644        | 2              |
| Hedinger            | Glycerol 85%     | 40646        | 3              |
| Hedinger            | Glycerol 85%     | 40652        | 6              |
| Hedinger            | Glycerol 85%     | 40655        | 2              |
| Hedinger            | Glycerol 85%     | 40664        | 1              |
| Hedinger            | Glycerol 85%     | 40660        | 2              |
| Hedinger            | Glycerol 85%     | 40665        | 4              |
| Hedinger            | Glycerol 85%     | 40671        | 2              |
| Hedinger            | Glycerol 85%     | 40678        | 5              |
| Hedinger            | Glycerol 85%     | 406678       | 1              |
| Hedinger            | Glycerol 85%     | 40683        | 3              |
| Hedinger            | Glycerol 85%     | 40685        | 1              |
| Hedinger            | Glycerol 85%     | 40680        | 1              |
| Hedinger            | Glycerol 85%     | 40691        | 2              |
| Hedinger            | Glycerol 85%     | 40697        | 1              |
| HEDINGER            | Glycerol 85%     | 40467        | 1              |
| HEDINGER            | Glycerol 85%     | 40475        | 1              |
| HEDINGER            | Glycerol 85%     | 40491        | 1              |
| HEDINGER            | Glycerol 85%     | 40497        | 1              |
| HEDINGER            | Glycerol 85%     | 40501        | 1              |
| HEDINGER            | Glycerol 85%     | 40683        | 1              |
| Hedinger / Alliance | Glycerol 85%     | 40506        | 2              |
| Hedinger / Anzag    | Glycerol 85%     | 40691        | 2              |
| Hedinger / Fiebig   | Glycerol 85%     | 40629        | 1              |
| Hedinger / Gehe     | Glycerol 85%     | 40515        | 1              |
| Hedinger / Gehe     | Glycerol 85%     | 40612        | 1              |
| Hedinger / Gehe     | Glycerol 85%     | 40635        | 2              |
| Hedinger / Gehe     | Glycerol 85%     | 40644        | 1              |
| Hedinger / Gehe     | Glycerol 85%     | 40673        | 1              |
| Hedinger / Noweda   | Glycerol 85%     | 40644        | 1              |
| Hedinger / Noweda   | Glycerol 85%     | 40671        | 1              |
| Hedinger / Phönix   | Glycerol 85%     | 40649        | 1              |
| Hedinger / Phönix   | Glycerol 85%     | 40652        | 1              |
| Hedinger / Phönix   | Glycerol 85%     | 40667        | 2              |
| Hedinger / Phönix   | Glycerol 85%     | 40665        | 1              |
| Hedinger / Phönix   | Glycerol 85%     | 40678        | 2              |
| Hedinger / Phönix   | Glycerol 85%     | 40691        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40660        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40664        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40667        | 2              |
| Hedinger / Sana     | Glycerol 85%     | 40678        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40684        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40685        | 1              |
| Hedinger / Sana     | Glycerol 85%     | 40688        | 1              |
| Hedinger / Sanacorp | Glycerol 85%     | 40451        | 1              |
| Hedinger / Sanacorp | Glycerol 85%     | 40678        | 1              |
| Hedinger / Noweda   | Glycerol 85%     | 40635        | 1              |
| Hedinger / Noweda   | Glycerol 85%     | 40660        | 1              |
| Hedinger / Noweda   | Glycerol 85%     | 40673        | 1              |

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| <b>Supplier</b>              | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|------------------------------|------------------|--------------|----------------|
| Hedinger /Phönix             | Glycerol 85%     | 40629        | 1              |
| Hedinger /Phönix             | Glycerol 85%     | 40628        | 1              |
| Hedinger /Phönix             | Glycerol 85%     | 40644        | 1              |
| Hedinger /Phönix             | Glycerol 85%     | 40652        | 1              |
| Hedinger /Phönix             | Glycerol 85%     | 40655        | 1              |
| Hedinger AHD                 | Glycerol 85%     | 40618        | 1              |
| Hedinger AHD                 | Glycerol 85%     | 40646        | 1              |
| Hedinger Gehe                | Glycerol 85%     | 40519        | 1              |
| Hedinger Gehe                | Glycerol 85%     | 40646        | 1              |
| Hedinger GmbH                | Glycerol 85%     | 40548        | 1              |
| Hedinger GmbH                | Glycerol 85%     | 40626        | 3              |
| Hedinger GmbH/Alliance ...   | Glycerol 85%     | 40673        | 1              |
| Hedinger GmbH/Kehr           | Glycerol 85%     | 40660        | 1              |
| Hedinger GmbH/Kehr           | Glycerol 85%     | 40691        | 1              |
| Hedinger GmbH/Noweda         | Glycerol 85%     | 40635        | 2              |
| Hedinger GmbH/Noweda         | Glycerol 85%     | 40662        | 3              |
| Hedinger GmbH/Noweda         | Glycerol 85%     | 40695        | 1              |
| Hedinger GmbH/Sanacorp       | Glycerol 85%     | 40697        | 1              |
| Hedinger Jenne               | Glycerol 85%     | 40462        | 1              |
| Hedinger Jenne               | Glycerol 85%     | 40501        | 1              |
| Hedinger Noweda              | Glycerol 85%     | 40662        | 1              |
| Hedinger Noweda              | Glycerol 85%     | 40684        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40471        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40475        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40480        | 2              |
| Hedinger Phönix              | Glycerol 85%     | 40495        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40507        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40548        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40542        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40607        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40618        | 2              |
| Hedinger Phönix              | Glycerol 85%     | 40626        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40632        | 2              |
| Hedinger Phönix              | Glycerol 85%     | 40649        | 1              |
| Hedinger Phönix              | Glycerol 85%     | 40647        | 2              |
| Hedinger Sanacorp            | Glycerol 85%     | 40632        | 1              |
| Hedinger Sanacorp            | Glycerol 85%     | 40683        | 1              |
| Hedinger Sanacorp            | Glycerol 85%     | 40690        | 1              |
| Hedinger Sanacorp 24.07. ... | Glycerol 85%     | 40665        | 1              |
| Hedinger/                    | Glycerol 85%     | 40680        | 1              |
| Hedinger/ VDL                | Glycerol 85%     | 40683        | 1              |
| Hedinger/ AHD                | Glycerol 85%     | 40620        | 1              |
| Hedinger/ AHD                | Glycerol 85%     | 40642        | 1              |
| Hedinger/ AHD                | Glycerol 85%     | 40691        | 1              |
| Hedinger/ Alliance Heal. ... | Glycerol 85%     | 40649        | 1              |
| Hedinger/ Alliance Heal. ... | Glycerol 85%     | 40655        | 2              |
| Hedinger/ Anzag              | Glycerol 85%     | 40491        | 1              |
| Hedinger/ Anzag              | Glycerol 85%     | 40632        | 1              |
| Hedinger/ Anzag              | Glycerol 85%     | 166 (040632) | 1              |
| Hedinger/ Anzag              | Glycerol 85%     | 167 (040665) | 1              |
| Hedinger/ Gehe               | Glycerol 85%     | 40566        | 1              |
| hedinger/ noweda             | Glycerol 85%     | 40664        | 1              |
| Hedinger/ Noweda             | Glycerol 85%     | 40515        | 1              |
| Hedinger/ Noweda             | Glycerol 85%     | 40574        | 1              |
| Hedinger/ Noweda             | Glycerol 85%     | 40620        | 1              |
| Hedinger/ Noweda             | Glycerol 85%     | 40683        | 2              |
| Hedinger/ Noweda             | Glycerol 85%     | 40697        | 1              |
| Hedinger/ Phoenix            | Glycerol 85%     | 40628        | 1              |
| Hedinger/ Sanacorp           | Glycerol 85%     | 40479        | 1              |
| Hedinger/ Sanacorp           | Glycerol 85%     | 40480        | 1              |

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| Supplier                   | Substance    | Batch       | Spectra |
|----------------------------|--------------|-------------|---------|
| Hedinger/ Sanacorp         | Glycerol 85% | 40499       | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40501       | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40531-1     | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40538       | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40546       | 2       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40559       | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40567       | 1       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40584       | 2       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40599       | 2       |
| Hedinger/ Sanacorp         | Glycerol 85% | 40612       | 1       |
| Hedinger/ VDL              | Glycerol 85% | 40671       | 1       |
| Hedinger/4                 | Glycerol 85% | 40599       | 1       |
| Hedinger/AEP               | Glycerol 85% | 40670       | 1       |
| Hedinger/AHD               | Glycerol 85% | 40586       | 1       |
| Hedinger/AHD               | Glycerol 85% | 164(040620) | 1       |
| Hedinger/AHD               | Glycerol 85% | 165(0406209 | 1       |
| Hedinger/AHD               | Glycerol 85% | 40652       | 1       |
| Hedinger/AHD               | Glycerol 85% | 40671       | 1       |
| Hedinger/AHD               | Glycerol 85% | 40675       | 1       |
| Hedinger/Alliance          | Glycerol 85% | 40584       | 1       |
| Hedinger/Alliance          | Glycerol 85% | 40626       | 1       |
| Hedinger/Alliance          | Glycerol 85% | 40632       | 1       |
| Hedinger/Alliance Healt... | Glycerol 85% | 40626       | 1       |
| Hedinger/Alliance Healt... | Glycerol 85% | 394353      | 1       |
| hedinger/anzag             | Glycerol 85% | 5538401     | 1       |
| Hedinger/Anzag             | Glycerol 85% | 40483       | 2       |
| Hedinger/Anzag             | Glycerol 85% | 40665       | 1       |
| Hedinger/Anzag             | Glycerol 85% | 40667       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40483       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40574       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40576       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40612       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40628       | 2       |
| Hedinger/Ebert             | Glycerol 85% | 40646       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40642       | 1       |
| Hedinger/Ebert             | Glycerol 85% | 40652       | 2       |
| Hedinger/Ebert             | Glycerol 85% | 40665       | 2       |
| Hedinger/Fiebig            | Glycerol 85% | 40607       | 1       |
| Hedinger/Fiebig            | Glycerol 85% | 40629       | 1       |
| Hedinger/Fiebig            | Glycerol 85% | 40644       | 1       |
| Hedinger/Fiebig            | Glycerol 85% | 40667       | 1       |
| hedinger/Gehe              | Glycerol 85% | 40501       | 1       |
| hedinger/Gehe              | Glycerol 85% | 40529       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40473       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40491       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 4091        | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40483       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40497       | 2       |
| Hedinger/Gehe              | Glycerol 85% | 3112Q-01589 | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40519       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40524       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 4052B       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40540       | 2       |
| Hedinger/Gehe              | Glycerol 85% | 40548       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40557       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40559       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40566       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40576       | 1       |
| Hedinger/Gehe              | Glycerol 85% | 40584       | 3       |
| Hedinger/Gehe              | Glycerol 85% | 40586       | 1       |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Hedinger/Gehe             | Glycerol 85%     | 40599        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40620        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40628        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40632        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40629        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40635        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40647        | 4              |
| Hedinger/Gehe             | Glycerol 85%     | 40652        | 3              |
| Hedinger/Gehe             | Glycerol 85%     | 40655        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40673        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40670        | 2              |
| Hedinger/Gehe             | Glycerol 85%     | 40671        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40683        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40690        | 1              |
| Hedinger/Gehe             | Glycerol 85%     | 40680        | 1              |
| Hedinger/Gehe/28.28.19    | Glycerol 85%     | 40664        | 1              |
| Hedinger/Gehe/29.08.19    | Glycerol 85%     | 40667        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40467        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40540        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40566        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40599        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40620        | 1              |
| Hedinger/Geibo            | Glycerol 85%     | 40678        | 1              |
| Hedinger/Holdermann 18... | Glycerol 85%     | 40452        | 1              |
| Hedinger/Jenne            | Glycerol 85%     | 40683        | 1              |
| Hedinger/Jenne            | Glycerol 85%     | 40690        | 1              |
| Hedinger/Jenne/04.06.20   | Glycerol 85%     | 40690        | 1              |
| Hedinger/Krieger          | Glycerol 85%     | 40618        | 1              |
| Hedinger/Krieger          | Glycerol 85%     | 40635        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40478        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40522        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40515        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40538        | 2              |
| Hedinger/Noweda           | Glycerol 85%     | 40542        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40557        | 2              |
| Hedinger/Noweda           | Glycerol 85%     | 40559        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40574        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40583        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40567        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40579        | 2              |
| Hedinger/Noweda           | Glycerol 85%     | 40607        | 3              |
| Hedinger/Noweda           | Glycerol 85%     | 40599        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40596        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40612        | 2              |
| Hedinger/Noweda           | Glycerol 85%     | 40618        | 5              |
| Hedinger/Noweda           | Glycerol 85%     | 40620        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40626        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40628        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40629        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40649        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40655        | 3              |
| Hedinger/Noweda           | Glycerol 85%     | 40671        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40673        | 3              |
| Hedinger/Noweda           | Glycerol 85%     | 40675        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40678        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40683        | 1              |
| Hedinger/Noweda           | Glycerol 85%     | 40691        | 1              |
| Hedinger/Ph               | Glycerol 85%     | 40646        | 1              |
| Hedinger/Ph               | Glycerol 85%     | 40670        | 1              |
| Hedinger/Phö              | Glycerol 85%     | 40618        | 3              |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-------------------|------------------|------------------|----------------|
| Hedinger/Phö      | Glycerol 85%     | 40626            | 2              |
| Hedinger/Phö      | Glycerol 85%     | 40652            | 1              |
| Hedinger/Phö      | Glycerol 85%     | 40665            | 1              |
| hedinger/Phoenix  | Glycerol 85%     | 40680            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40515            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40546            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40542            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40579            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40559            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40596            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40635            | 1              |
| Hedinger/Phoenix  | Glycerol 85%     | 40644            | 3              |
| Hedinger/Phoenix  | Glycerol 85%     | 40678            | 4              |
| Hedinger/Phönix   | Glycerol 85%     | 40483            | 2              |
| Hedinger/Phönix   | Glycerol 85%     | 40481            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40531-1          | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40546            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40559            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40567            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40576            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40583            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40598            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40599            | 2              |
| Hedinger/Phönix   | Glycerol 85%     | 40612            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40607            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40620            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40628            | 3              |
| Hedinger/Phönix   | Glycerol 85%     | 40629            | 3              |
| Hedinger/Phönix   | Glycerol 85%     | 40626            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40652            | 2              |
| Hedinger/Phönix   | Glycerol 85%     | 1808009-01       | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40673            | 1              |
| Hedinger/Phönix   | Glycerol 85%     | 40678            | 2              |
| Hedinger/Phönix   | Glycerol 85%     | 40695            | 1              |
| Hedinger/PX       | Glycerol 85%     | 40547            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40499-3354319071 | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40501            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40507            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40548            | 2              |
| Hedinger/Sanacorp | Glycerol 85%     | 61016B           | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40566            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40559            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40557            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40576            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40579            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40628            | 2              |
| Hedinger/Sanacorp | Glycerol 85%     | 40629            | 2              |
| Hedinger/Sanacorp | Glycerol 85%     | 40620            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40635            | 3              |
| Hedinger/Sanacorp | Glycerol 85%     | 40644            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40647            | 2              |
| Hedinger/Sanacorp | Glycerol 85%     | 40652            | 4              |
| Hedinger/Sanacorp | Glycerol 85%     | 40667            | 2              |
| Hedinger/Sanacorp | Glycerol 85%     | 40678            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40671            | 1              |
| Hedinger/Sanacorp | Glycerol 85%     | 40691            | 3              |
| Hedinger/Sanacorp | Glycerol 85%     | 40690            | 1              |
| Hedinger/Titz     | Glycerol 85%     | 40678            | 1              |
| Hedinger/VDL      | Glycerol 85%     | 40599            | 1              |
| Heedinger/Noweda  | Glycerol 85%     | 40576            | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Heidinger/Sanacorp         | Glycerol 85%     | 40683        | 2              |
| heidringer                 | Glycerol 85%     | 40559        | 1              |
| Hendiger/Sanacorp          | Glycerol 85%     | 40599        | 1              |
| Henry                      | Glycerol 85%     | 123304       | 1              |
| Henry Lamotte              | Glycerol 85%     | 5226901      | 2              |
| Henry Lamotte              | Glycerol 85%     | 123142       | 1              |
| Henry Lamotte              | Glycerol 85%     | 123304       | 1              |
| Henry Lamotte              | Glycerol 85%     | 5538401      | 2              |
| Henry Lamotte              | Glycerol 85%     | 5603001      | 1              |
| Henry Lamotte              | Glycerol 85%     | 124654       | 1              |
| Henry Lamotte              | Glycerol 85%     | 15292204     | 1              |
| Henry Lamotte              | Glycerol 85%     | 8002208001   | 1              |
| Henry Lamotte              | Glycerol 85%     | 1703003-01   | 1              |
| Henry Lamotte              | Glycerol 85%     | 1000013541   | 1              |
| HENRY LAMOTTE              | Glycerol 85%     | 1000013286   | 1              |
| Henry Lamotte / Anzag      | Glycerol 85%     | 125545       | 1              |
| Henry Lamotte / Anzag      | Glycerol 85%     | 8001116001   | 1              |
| Henry Lamotte / Noweda     | Glycerol 85%     | 125545       | 1              |
| Henry Lamotte / Noweda     | Glycerol 85%     | 1000006424   | 1              |
| Henry Lamotte GmbH Bremen  | Glycerol 85%     | 5142501      | 1              |
| Henry Lamotte OHLS GMBH... | Glycerol 85%     | 8006785001   | 2              |
| Henry Lamotte Oils GmbH    | Glycerol 85%     | 125545       | 1              |
| Henry Lamotte Oils GmbH    | Glycerol 85%     | 1000013286   | 1              |
| Henry Lamotte Oils GmbH... | Glycerol 85%     | 8002208001   | 1              |
| Henry Lamotte oils GmbH... | Glycerol 85%     | 8002208001   | 2              |
| Henry Lamotte Oils/ Gehe   | Glycerol 85%     | 1801025-01   | 1              |
| Henry Lamotte Olis GmbH    | Glycerol 85%     | 5603001      | 1              |
| Henry Lamotte Phönix       | Glycerol 85%     | 123142       | 1              |
| Henry Lamotte/             | Glycerol 85%     | 1000012233   | 1              |
| Henry Lamotte/ Alliance... | Glycerol 85%     | 8002720001   | 1              |
| Henry Lamotte/ Noweda      | Glycerol 85%     | 8002208001   | 1              |
| Henry Lamotte/ Noweda      | Glycerol 85%     | 8005437001   | 1              |
| Henry Lamotte/ sanacorp    | Glycerol 85%     | 1000013286   | 1              |
| Henry Lamotte/Anzag        | Glycerol 85%     | 8001116001   | 1              |
| Henry Lamotte/Jenne        | Glycerol 85%     | 123464       | 1              |
| Henry Lamotte/Jenne        | Glycerol 85%     | 1000013286   | 1              |
| Henry Lamotte/Noweda       | Glycerol 85%     | 8002720001   | 1              |
| Henry Lamotte/Noweda       | Glycerol 85%     | 1000013541   | 1              |
| Henry Lamotte/Phoenix      | Glycerol 85%     | 17215501     | 1              |
| HenryLamotte/Phönix        | Glycerol 85%     | 1000013541   | 1              |
| Hepart                     | Glycerol 85%     | 15036903     | 2              |
| Hidinger                   | Glycerol 85%     | 40691        | 1              |
| HirschApotheke             | Glycerol 85%     | 40541        | 1              |
| hochhaus-Apotheke          | Glycerol 85%     | 5066111      | 1              |
| Ichthyol/Noweda            | Glycerol 85%     | 5068031      | 1              |
| Jenne                      | Glycerol 85%     | 40599        | 1              |
| Jenne / A. Hedinger        | Glycerol 85%     | 40662        | 1              |
| Caelo                      | Glycerol 85%     | 5069051      | 1              |
| Caelo                      | Glycerol 85%     | 191883002    | 7              |
| Jenne/Lamotte              | Glycerol 85%     | 5603001      | 1              |
| Kehr                       | Glycerol 85%     | 1808009-02   | 1              |
| Kehr                       | Glycerol 85%     | 20001473     | 1              |
| Bombastus                  | Glycerol 85%     | 266037       | 1              |
| Bombastus                  | Glycerol 85%     | 269070       | 2              |
| Bombastus                  | Glycerol 85%     | 275076       | 1              |
| Bombastus                  | Glycerol 85%     | 285366       | 4              |
| Bombastus                  | Glycerol 85%     | 293387       | 4              |
| Caelo                      | Glycerol 85%     | 271511       | 1              |
| Caelo                      | Glycerol 85%     | 140113PML02  | 1              |
| Kehr / Fischar             | Glycerol 85%     | 5061071      | 1              |

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| Supplier                 | Substance    | Batch          | Spectra |
|--------------------------|--------------|----------------|---------|
| Kehr / Lamotte           | Glycerol 85% | 290114PML04    | 1       |
| Bombastus                | Glycerol 85% | 20001473       | 9       |
| Euro OTC                 | Glycerol 85% | BE-0891238366  | 1       |
| Kehr/Otto Fischar GmbH   | Glycerol 85% | 5068031        | 3       |
| Kehr/Otto Fischar GmbH   | Glycerol 85% | 5069051        | 1       |
| Kögl                     | Glycerol 85% | 20302170917    | 1       |
| Kögl                     | Glycerol 85% | 258607172917   | 1       |
| Kögl                     | Glycerol 85% | 105004171417   | 2       |
| Kögl                     | Glycerol 85% | 1700476        | 1       |
| Kögl                     | Glycerol 85% | 1800130        | 1       |
| Kögl                     | Glycerol 85% | 1800839        | 1       |
| Kögl                     | Glycerol 85% | 1802181        | 1       |
| L10                      | Glycerol 85% | 17197701       | 3       |
| L10                      | Glycerol 85% | 18020001       | 3       |
| L12                      | Glycerol 85% | 16347203       | 4       |
| L12                      | Glycerol 85% | 16347209       | 2       |
| Caelo                    | Glycerol 85% | 16218902       | 8       |
| L30                      | Glycerol 85% | 18020005       | 2       |
| Laborchemie APOLDA       | Glycerol 85% | 14149410       | 1       |
| Lamotte                  | Glycerol 85% | 5142501        | 1       |
| Lamotte                  | Glycerol 85% | 5360201        | 5       |
| Lamotte                  | Glycerol 85% | 5424901        | 4       |
| Lamotte                  | Glycerol 85% | 5424101        | 2       |
| Lamotte                  | Glycerol 85% | 5487801        | 2       |
| Lamotte                  | Glycerol 85% | 123304         | 1       |
| Lamotte                  | Glycerol 85% | 5512001        | 2       |
| Lamotte                  | Glycerol 85% | 5538401        | 2       |
| Lamotte                  | Glycerol 85% | 5603001        | 7       |
| Lamotte                  | Glycerol 85% | 5603002        | 1       |
| Lamotte Noweda           | Glycerol 85% | 8002720001     | 1       |
| Lamotte Noweda           | Glycerol 85% | 1000007843     | 1       |
| Lamotte/ Noweda          | Glycerol 85% | 8005158001     | 1       |
| Lamotte/ Noweda          | Glycerol 85% | 1000012233     | 1       |
| Lamotte//AHD             | Glycerol 85% | 125545         | 1       |
| Lamotte/AHD              | Glycerol 85% | 8001116001     | 1       |
| Lamotte/AHD              | Glycerol 85% | 8002208001     | 1       |
| Lamotte/AHD              | Glycerol 85% | 8003194001     | 1       |
| Lamotte/AHD              | Glycerol 85% | 1000007843     | 1       |
| Lamotte/AHD              | Glycerol 85% | 8005158001     | 1       |
| Lamotte/Alliance         | Glycerol 85% | 5603001        | 1       |
| Lamotte/Gehe             | Glycerol 85% | 1000013005     | 2       |
| Lamotte/Krieger/27.11.13 | Glycerol 85% | 5538401        | 3       |
| Lamotte/Noweda           | Glycerol 85% | 123464         | 1       |
| Lamotte/Noweda           | Glycerol 85% | 5538401        | 1       |
| LAMOTTE/NOWEDA           | Glycerol 85% | 5538401        | 2       |
| Lamotte/Phoenix          | Glycerol 85% | 8002720001     | 2       |
| lamotte/phönix           | Glycerol 85% | 5538401        | 2       |
| Lamotte/Sanacorp         | Glycerol 85% | 124654         | 2       |
| Lamotte/Sanacorp         | Glycerol 85% | 1000013286     | 1       |
| Leyh Pharma GmbH         | Glycerol 85% | BE-08675/37460 | 1       |
| Marktapotheke            | Glycerol 85% | 40599          | 1       |
| Midas                    | Glycerol 85% | 40618          | 1       |
| Midas                    | Glycerol 85% | 40632          | 1       |
| Nachprüfung              | Glycerol 85% | 3082019-4      | 1       |
| Nauto                    | Glycerol 85% | 16218906       | 1       |
| Nokun                    | Glycerol 85% | 5067061        | 1       |
| noweda                   | Glycerol 85% | 13276202       | 1       |
| noweda                   | Glycerol 85% | 13356403       | 1       |
| Noweda                   | Glycerol 85% | 40464          | 1       |
| Noweda                   | Glycerol 85% | 12108201       | 1       |

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| <b>Supplier</b>          | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|------------------|--------------|----------------|
| Noweda                   | Glycerol 85%     | 5226901      | 1              |
| Noweda                   | Glycerol 85%     | 272305       | 1              |
| Noweda                   | Glycerol 85%     | 40475        | 1              |
| Noweda                   | Glycerol 85%     | 5062121      | 2              |
| Noweda                   | Glycerol 85%     | 40483        | 1              |
| Noweda                   | Glycerol 85%     | 278655       | 1              |
| Noweda                   | Glycerol 85%     | 1506036-01   | 1              |
| Noweda                   | Glycerol 85%     | 5066071      | 1              |
| Noweda                   | Glycerol 85%     | 5067061      | 1              |
| Noweda                   | Glycerol 85%     | 1708022-01   | 1              |
| Noweda                   | Glycerol 85%     | 308738       | 1              |
| Noweda                   | Glycerol 85%     | 310593       | 1              |
| Noweda                   | Glycerol 85%     | 18020002     | 2              |
| Noweda                   | Glycerol 85%     | 40647        | 2              |
| Noweda                   | Glycerol 85%     | 1804017-01   | 1              |
| Noweda                   | Glycerol 85%     | 5068101      | 2              |
| Noweda                   | Glycerol 85%     | 1901041-01   | 1              |
| Noweda                   | Glycerol 85%     | 18253404     | 1              |
| Noweda                   | Glycerol 85%     | BE-09161     | 1              |
| Noweda                   | Glycerol 85%     | 19000627     | 1              |
| Noweda                   | Glycerol 85%     | 40673        | 1              |
| Noweda                   | Glycerol 85%     | 19001        | 1              |
| Noweda                   | Glycerol 85%     | 40684        | 1              |
| Noweda                   | Glycerol 85%     | 1070033      | 1              |
| Noweda                   | Glycerol 85%     | 200001747    | 1              |
| Noweda                   | Glycerol 85%     | 20001632     | 1              |
| Noweda                   | Glycerol 85%     | 192976002    | 1              |
| Noweda                   | Glycerol 85%     | 20000941003  | 1              |
| Noweda / Hedinger        | Glycerol 85%     | 40626        | 1              |
| Noweda / Hedinger        | Glycerol 85%     | 40652        | 2              |
| Noweda/ Fischar          | Glycerol 85%     | 5065011      | 1              |
| Noweda/ Fischar          | Glycerol 85%     | 5065061      | 2              |
| Noweda/ Fischar          | Glycerol 85%     | 5060036      | 2              |
| Noweda/ Hedinger         | Glycerol 85%     | 40642        | 1              |
| Noweda/ Hedinger         | Glycerol 85%     | 40652        | 1              |
| Noweda/ Lamotte          | Glycerol 85%     | 8005437001   | 1              |
| Caelo                    | Glycerol 85%     | 15292205     | 22             |
| Caelo                    | Glycerol 85%     | 14149406     | 13             |
| Caelo                    | Glycerol 85%     | 1536902      | 1              |
| Caelo                    | Glycerol 85%     | 1629706      | 1              |
| Euro OTC                 | Glycerol 85%     | 1405021-02   | 8              |
| Euro OTC                 | Glycerol 85%     | 1401009-01   | 7              |
| Noweda/Fischar           | Glycerol 85%     | 5064021      | 1              |
| Noweda/Fischar           | Glycerol 85%     | 5067061      | 1              |
| Noweda/Hedinger          | Glycerol 85%     | 40499        | 1              |
| Noweda/Hedinger          | Glycerol 85%     | 40509        | 1              |
| Noweda/Hedinger          | Glycerol 85%     | 40574        | 2              |
| Noweda/Hedinger          | Glycerol 85%     | 40586        | 1              |
| Noweda/Hedinger          | Glycerol 85%     | 40652        | 1              |
| Noweda/Ichthyol          | Glycerol 85%     | 5064071      | 1              |
| Noweda/Otto Fischar GmbH | Glycerol 85%     | 5066071      | 1              |
| otto fischar             | Glycerol 85%     | 1075111      | 1              |
| otto fischar             | Glycerol 85%     | P2018/108    | 1              |
| otto fischar             | Glycerol 85%     | 5060036      | 1              |
| otto Fischar             | Glycerol 85%     | 5065111      | 1              |
| Otto Fischar             | Glycerol 85%     | 5062011      | 2              |
| Otto Fischar             | Glycerol 85%     | 5062051      | 1              |
| Otto Fischar             | Glycerol 85%     | 5060121      | 1              |
| Otto Fischar             | Glycerol 85%     | 5064021      | 1              |
| Otto Fischar             | Glycerol 85%     | 5065012      | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|---------------------------|------------------|---------------|----------------|
| Otto Fischar              | Glycerol 85%     | 1075061       | 1              |
| Otto Fischar              | Glycerol 85%     | 10751111      | 1              |
| Otto Fischar              | Glycerol 85%     | 5066031       | 1              |
| Otto Fischar              | Glycerol 85%     | 5066081       | 2              |
| Otto Fischar              | Glycerol 85%     | 1076021       | 1              |
| Otto Fischar              | Glycerol 85%     | 5067011       | 1              |
| Otto Fischar              | Glycerol 85%     | 5066111       | 1              |
| Otto Fischar              | Glycerol 85%     | 5066061       | 1              |
| Otto Fischar              | Glycerol 85%     | 5067061       | 1              |
| Otto Fischar              | Glycerol 85%     | 5066101       | 2              |
| Otto Fischar              | Glycerol 85%     | 5068012       | 1              |
| Otto Fischar              | Glycerol 85%     | 5068031       | 3              |
| Otto Fischar              | Glycerol 85%     | 1078011       | 1              |
| Otto Fischar              | Glycerol 85%     | 5068081       | 1              |
| Otto Fischar              | Glycerol 85%     | 5069051       | 4              |
| Otto Fischar              | Glycerol 85%     | 5060031       | 1              |
| Otto Fischar              | Glycerol 85%     | 5060032       | 1              |
| Otto Fischar              | Glycerol 85%     | 1070033       | 2              |
| Otto Fischar              | Glycerol 85%     | 5060033       | 1              |
| Otto Fischar              | Glycerol 85%     | 5060036       | 1              |
| Otto Fischar              | Glycerol 85%     | 5060041       | 1              |
| Otto Fischar              | Glycerol 85%     | 5060062       | 1              |
| Otto Fischar              | Glycerol 85%     | 5060012       | 1              |
| Otto Fischar / gehe       | Glycerol 85%     | 5067111       | 1              |
| Otto Fischar / Gehe       | Glycerol 85%     | 5068031       | 1              |
| Otto Fischar / Gehe       | Glycerol 85%     | 5068081       | 1              |
| Otto Fischar / GEHE       | Glycerol 85%     | 5065081       | 1              |
| Otto Fischar / GEHE       | Glycerol 85%     | 5066021       | 2              |
| OTTO Fischar / GEHE       | Glycerol 85%     | 5060036       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5062121       | 2              |
| Otto Fischar GmbH         | Glycerol 85%     | 5062051       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5062052       | 2              |
| Otto Fischar GmbH         | Glycerol 85%     | 5064021       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5065031       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5065081       | 2              |
| Otto Fischar GmbH         | Glycerol 85%     | 5066081       | 2              |
| Otto Fischar GmbH         | Glycerol 85%     | 5066061       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5067021       | 2              |
| Otto Fischar GmbH         | Glycerol 85%     | 15092017-MW-A | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 1077011       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 506711        | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5068012       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5068101       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5068121       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5069081       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5060032       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5060034       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5060036       | 1              |
| Otto Fischar GmbH         | Glycerol 85%     | 5060011       | 1              |
| Otto Fischar GmbH & Co KG | Glycerol 85%     | 5069081       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5065012       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5065061       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5066071       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 1077011       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5067111       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5069021       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5060041       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5060012       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 5068012       | 1              |
| Otto Fischar GmbH & Co... | Glycerol 85%     | 50068031      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Otto Fischar GmbH & Co...  | Glycerol 85%     | 5060011      | 1              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5065031      | 1              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5066021      | 1              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5066061      | 1              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5066111      | 3              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5067061      | 1              |
| Otto Fischar GmbH & Co...  | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar GmbH & Co...  | Glycerol 85%     | 5068121      | 1              |
| Otto Fischar GmbH & Co...  | Glycerol 85%     | 5069021      | 1              |
| Otto Fischar GmbH & Co.KG  | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar GmbH / All... | Glycerol 85%     | 5067031      | 1              |
| Otto Fischar GmbH / All... | Glycerol 85%     | 5067061      | 1              |
| Otto Fischar GmbH / All... | Glycerol 85%     | 5067081      | 1              |
| Otto Fischar GmbH / All... | Glycerol 85%     | 5067111      | 1              |
| Otto Fischar GmbH / All... | Glycerol 85%     | 5068081      | 1              |
| Otto Fischar GmbH / Gehe   | Glycerol 85%     | 1076021      | 1              |
| Otto Fischar GmbH / Gehe   | Glycerol 85%     | 5066071      | 1              |
| Otto Fischar GmbH / Pho... | Glycerol 85%     | 5068081      | 2              |
| Otto- Fischar GmbH und ... | Glycerol 85%     | 5067011      | 1              |
| Otto Fischar GmbH& Co KG   | Glycerol 85%     | 5060036      | 1              |
| Otto Fischar GmbH&Co KG    | Glycerol 85%     | 5067091      | 1              |
| Otto Fischar GmbH&Co KG    | Glycerol 85%     | 5068021      | 1              |
| Otto Fischar GmbH&Co KG    | Glycerol 85%     | 5068101      | 1              |
| Otto Fischar GmbH&Co KG    | Glycerol 85%     | 5069081      | 1              |
| Otto Fischar GmbH&Co.KG    | Glycerol 85%     | 5069081      | 1              |
| Otto Fischar GmbH&Co.KG    | Glycerol 85%     | 5060041      | 1              |
| Otto Fischar GmbH&Co.KG    | Glycerol 85%     | 506041       | 1              |
| Otto Fischar GmbH&CoKG     | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar GmbH/ Noweda  | Glycerol 85%     | 5066011      | 4              |
| Otto Fischar GmbH/ Sana... | Glycerol 85%     | 5067091      | 1              |
| Otto Fischar GmbH/ Sana... | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar GmbH/ Sana... | Glycerol 85%     | 5068081      | 1              |
| Otto Fischar GmbH/ Sana... | Glycerol 85%     | 5068101      | 1              |
| Otto Fischar GmbH/Gehe     | Glycerol 85%     | 5066011      | 1              |
| Otto Fischar GmbH/Noweda   | Glycerol 85%     | 5060036      | 1              |
| Otto Fischar GmbH/Phoenix  | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar GmbH/Phoenix  | Glycerol 85%     | 5068021      | 1              |
| Otto Fischar GmbH/Phoenix  | Glycerol 85%     | 5068031      | 1              |
| Otto Fischar GmbH/Phoenix  | Glycerol 85%     | 5069059      | 2              |
| Otto Fischar GmbH/Phönix   | Glycerol 85%     | 5069011      | 1              |
| Otto Fischar/ Noweda       | Glycerol 85%     | 1076111      | 1              |
| Otto Fischar/ Noweda       | Glycerol 85%     | 1077111      | 1              |
| Otto Fischar/ Noweda       | Glycerol 85%     | 5069059      | 1              |
| Otto Fischar/ Noweda       | Glycerol 85%     | 5060012      | 2              |
| Otto Fischar/AHD           | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5063012      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5067011      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5067091      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5068012      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5068031      | 3              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5068081      | 1              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5068121      | 4              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5069021      | 2              |
| Otto Fischar/Gehe          | Glycerol 85%     | 5060036      | 1              |
| Otto Fischar/Noweda        | Glycerol 85%     | 1070011      | 1              |
| Otto Fischar/Noweda        | Glycerol 85%     | 5060033      | 2              |
| Otto Fischar/Phoenix       | Glycerol 85%     | 5063011      | 1              |
| Otto Fischar/Phoenix       | Glycerol 85%     | 5069051      | 1              |
| Otto Fischar/Phoenix       | Glycerol 85%     | 5069021      | 1              |
| Otto Fischar/Phoenix       | Glycerol 85%     | 5096051      | 1              |

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| Supplier                   | Substance    | Batch      | Spectra |
|----------------------------|--------------|------------|---------|
| Otto Fischar/Sanacorp      | Glycerol 85% | 5068121    | 1       |
| Otto Fischar/Sanacorp      | Glycerol 85% | 5060062    | 1       |
| otto fischer               | Glycerol 85% | 23081604   | 1       |
| Otto Fischer               | Glycerol 85% | 5064011    | 1       |
| Otto Fischer               | Glycerol 85% | 5065081    | 1       |
| Otto Fischer               | Glycerol 85% | 5065111    | 1       |
| Otto Fischer               | Glycerol 85% | 5067011    | 1       |
| Otto Fischer               | Glycerol 85% | 5067111    | 1       |
| Otto Fischer               | Glycerol 85% | 5068021    | 1       |
| Otto Fischer GmbH          | Glycerol 85% | 5062121    | 1       |
| Otto Fischer GmbH          | Glycerol 85% | 5066031    | 1       |
| Otto Fischer GmbH          | Glycerol 85% | 5068031    | 1       |
| Otto Fischer GmbH          | Glycerol 85% | 1070033    | 1       |
| Otto Fischer GmbH & Co...  | Glycerol 85% | 5068081    | 1       |
| Otto Fischer GmbH & Co.KG  | Glycerol 85% | 5067011    | 1       |
| Otto Fischer GmbH & Co.KG  | Glycerol 85% | 5069051    | 1       |
| Otto Fischer GmbH / San... | Glycerol 85% | 5060032    | 1       |
| Otto Fischer GmbH&Co.KG    | Glycerol 85% | 5067031    | 1       |
| Otto Fischer GmbH&Co.KG    | Glycerol 85% | 5060012    | 1       |
| otto fischer gmbh/ Phoe... | Glycerol 85% | 5068031    | 3       |
| otto fischer gmbh/ Phoe... | Glycerol 85% | 5067111    | 1       |
| Otto Fischer GmH/Sanacorp  | Glycerol 85% | 5060041    | 1       |
| Otto Fischer/Gehe          | Glycerol 85% | 5066101    | 1       |
| Otto Fischer/Krieger       | Glycerol 85% | 5066061    | 1       |
| Otto Fischer/Krieger       | Glycerol 85% | 5067091    | 1       |
| Otto Fischer/Krieger       | Glycerol 85% | 5068012    | 1       |
| Otto Fischer/Noweda        | Glycerol 85% | 5063012    | 1       |
| Otto Fschar GmbH & Co. KG  | Glycerol 85% | 5067081    | 1       |
| Caelo                      | Glycerol 85% | 19011209   | 10      |
| Paul W. Beyvers GmbH       | Glycerol 85% | 17001      | 1       |
| Paul W. Beyvers GmbH       | Glycerol 85% | 17003      | 1       |
| Paul W. Beyvers GmbH       | Glycerol 85% | 18001      | 1       |
| Paul W. Beyvers GmbH       | Glycerol 85% | 18002      | 1       |
| Paul W. Beyvers GmbH/ A... | Glycerol 85% | 17003      | 1       |
| Paul W. Beyvers GmbH/ P... | Glycerol 85% | 19002      | 1       |
| Perrigo/Phönix             | Glycerol 85% | 284401     | 1       |
| Ph.Eur./Noweda             | Glycerol 85% | 5060041    | 1       |
| Ph.Eur.7.0                 | Glycerol 85% | 14148106   | 1       |
| Ph/Hedinger                | Glycerol 85% | 40629      | 1       |
| Ph/Hedinger                | Glycerol 85% | 40632      | 1       |
| Ph/Hedinger                | Glycerol 85% | 40644      | 1       |
| Ph/Hedinger                | Glycerol 85% | 40660      | 1       |
| Ph/Hedinger                | Glycerol 85% | 40680      | 1       |
| Pharmachem/ Phönix         | Glycerol 85% | 1607037-01 | 2       |
| Phoenix                    | Glycerol 85% | 12273604   | 1       |
| Phoenix                    | Glycerol 85% | 13039203   | 2       |
| Phoenix                    | Glycerol 85% | 13144607   | 2       |
| Phoenix                    | Glycerol 85% | 1405021-01 | 1       |
| Phoenix                    | Glycerol 85% | 15036903   | 1       |
| Phoenix                    | Glycerol 85% | 40586      | 1       |
| Phoenix                    | Glycerol 85% | 40596      | 1       |
| Phoenix                    | Glycerol 85% | 3047       | 1       |
| Phoenix                    | Glycerol 85% | 3109       | 1       |
| Phoenix                    | Glycerol 85% | 17157702   | 1       |
| Phoenix                    | Glycerol 85% | 310592     | 1       |
| Phoenix                    | Glycerol 85% | 1801025-01 | 1       |
| Phoenix                    | Glycerol 85% | 5068031    | 1       |
| Phoenix                    | Glycerol 85% | 3227       | 1       |
| Phoenix                    | Glycerol 85% | 5068101    | 1       |
| Phoenix                    | Glycerol 85% | 19011201   | 2       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Phoenix                    | Glycerol 85%     | 3360         | 1              |
| Phoenix                    | Glycerol 85%     | 1808009-02   | 1              |
| Phoenix                    | Glycerol 85%     | 19011202     | 1              |
| Phoenix                    | Glycerol 85%     | 18327003     | 1              |
| Phoenix                    | Glycerol 85%     | 19011203     | 2              |
| Phoenix                    | Glycerol 85%     | 19188301     | 1              |
| Phoenix                    | Glycerol 85%     | 5069081      | 1              |
| Phoenix                    | Glycerol 85%     | 19004186     | 1              |
| Phoenix 5.3.14             | Glycerol 85%     | 13144606     | 1              |
| PHOENIX am 14.01.2014      | Glycerol 85%     | 13060007     | 1              |
| Phoenix Leipzig / 23.06... | Glycerol 85%     | 5066101      | 1              |
| Phoenix Leipzig 18.08.17   | Glycerol 85%     | 5067031      | 1              |
| Caelo                      | Glycerol 85%     | 40481        | 1              |
| Phoenix/ Hedinger          | Glycerol 85%     | 40673        | 1              |
| Phoenix/ Otto Fischer G... | Glycerol 85%     | 5067081      | 1              |
| phönix                     | Glycerol 85%     | 40586        | 1              |
| phönix                     | Glycerol 85%     | 40598        | 1              |
| phönix                     | Glycerol 85%     | 16218907     | 1              |
| phönix                     | Glycerol 85%     | 40612        | 1              |
| Phönix                     | Glycerol 85%     | 12108201     | 2              |
| Phönix                     | Glycerol 85%     | 13039203     | 1              |
| Phönix                     | Glycerol 85%     | 40481        | 1              |
| Phönix                     | Glycerol 85%     | 5063011      | 1              |
| Phönix                     | Glycerol 85%     | 12273604     | 1              |
| Phönix                     | Glycerol 85%     | 40501        | 1              |
| Phönix                     | Glycerol 85%     | 40507        | 1              |
| Phönix                     | Glycerol 85%     | 13356406     | 1              |
| Phönix                     | Glycerol 85%     | 14149403     | 1              |
| Phönix                     | Glycerol 85%     | 40596        | 1              |
| Phönix                     | Glycerol 85%     | 106063702    | 1              |
| Phönix                     | Glycerol 85%     | 8001116001   | 1              |
| Phönix                     | Glycerol 85%     | 40599        | 1              |
| Phönix                     | Glycerol 85%     | 5066081      | 1              |
| Phönix                     | Glycerol 85%     | 40628        | 1              |
| Phönix                     | Glycerol 85%     | 18240901     | 1              |
| Phönix                     | Glycerol 85%     | 19011201     | 1              |
| Phönix                     | Glycerol 85%     | 1906019-01   | 1              |
| Phönix                     | Glycerol 85%     | 40478        | 1              |
| Phönix                     | Glycerol 85%     | 19004187     | 1              |
| Phönix                     | Glycerol 85%     | 20001043004  | 1              |
| Phönix                     | Glycerol 85%     | 5060042      | 1              |
| Phönix                     | Glycerol 85%     | 201093010    | 1              |
| Phönix                     | Glycerol 85%     | 20004357001  | 1              |
| PHÖNIX                     | Glycerol 85%     | 40626        | 3              |
| PHÖNIX                     | Glycerol 85%     | 40632        | 1              |
| PHÖNIX                     | Glycerol 85%     | 40660        | 1              |
| Phönix Hedinger            | Glycerol 85%     | 40620        | 1              |
| Caelo                      | Glycerol 85%     | 15404511     | 1              |
| Phönix / Lamotte           | Glycerol 85%     | 8002720001   | 1              |
| Phönix 14.01.2014          | Glycerol 85%     | 13060001     | 1              |
| Phönix 17.06.2019          | Glycerol 85%     | 19011201     | 1              |
| Phönix 28.10.2019          | Glycerol 85%     | 19124401     | 1              |
| Phönix Gotha               | Glycerol 85%     | 275075       | 1              |
| Phönix Gotha               | Glycerol 85%     | 15146301     | 1              |
| Phönix Gotha               | Glycerol 85%     | 1804017-01   | 1              |
| Phönix Gotha               | Glycerol 85%     | 5060032      | 1              |
| Phönix Gotha               | Glycerol 85%     | 5060012      | 1              |
| Phönix Göttingen 19.03...  | Glycerol 85%     | 40652        | 1              |
| Caelo                      | Glycerol 85%     | 171577020    | 1              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Phönix/ Fischar             | Glycerol 85%     | 5067031      | 1              |
| Phönix/ Fischar             | Glycerol 85%     | 5068101      | 1              |
| Phönix/ HEDINGER            | Glycerol 85%     | 4067B        | 1              |
| Bombastus                   | Glycerol 85%     | 18005462     | 10             |
| Caelo                       | Glycerol 85%     | 1405021      | 1              |
| Caelo                       | Glycerol 85%     | 18001896     | 1              |
| Fagron                      | Glycerol 85%     | 14306202     | 2              |
| Phönix/ Fischar             | Glycerol 85%     | 5067091      | 1              |
| Phönix/ Fischer             | Glycerol 85%     | 50600313     | 1              |
| Phönix/Henry Lamotte        | Glycerol 85%     | 1000007843   | 2              |
| Phönix/Henry Lamotte        | Glycerol 85%     | 8005437001   | 1              |
| Phönix/Henry Lamotte/Ph...  | Glycerol 85%     | 8005158001   | 1              |
| Rondell Apotheke            | Glycerol 85%     | 40576        | 1              |
| Roth Chemical               | Glycerol 85%     | 40291599     | 1              |
| Sana                        | Glycerol 85%     | 40647        | 1              |
| Sanacorp                    | Glycerol 85%     | 15036903     | 1              |
| Sanacorp                    | Glycerol 85%     | 15292204     | 1              |
| sanacorp                    | Glycerol 85%     | 14149411     | 1              |
| Sanacorp                    | Glycerol 85%     | 273719       | 1              |
| Sanacorp                    | Glycerol 85%     | 12273604     | 3              |
| Sanacorp                    | Glycerol 85%     | 40480        | 1              |
| Sanacorp                    | Glycerol 85%     | 278655       | 1              |
| Sanacorp                    | Glycerol 85%     | 40495        | 1              |
| Sanacorp                    | Glycerol 85%     | 280855       | 2              |
| Sanacorp                    | Glycerol 85%     | 13039204     | 1              |
| Sanacorp                    | Glycerol 85%     | 40506        | 1              |
| Sanacorp                    | Glycerol 85%     | 72/AKD1      | 1              |
| Sanacorp                    | Glycerol 85%     | 13276205     | 1              |
| Sanacorp                    | Glycerol 85%     | 14149410     | 2              |
| Sanacorp                    | Glycerol 85%     | 15036902     | 1              |
| Sanacorp                    | Glycerol 85%     | 78/AKD7      | 1              |
| Sanacorp                    | Glycerol 85%     | 15292205     | 2              |
| Sanacorp                    | Glycerol 85%     | 79/AKD12     | 1              |
| Sanacorp                    | Glycerol 85%     | 17157702     | 2              |
| Sanacorp                    | Glycerol 85%     | 17215501     | 1              |
| Sanacorp                    | Glycerol 85%     | 16347208     | 1              |
| Sanacorp                    | Glycerol 85%     | 173222104    | 1              |
| Sanacorp                    | Glycerol 85%     | 17322101     | 1              |
| Sanacorp                    | Glycerol 85%     | 1801025-01   | 1              |
| Sanacorp                    | Glycerol 85%     | 17322104     | 1              |
| Sanacorp                    | Glycerol 85%     | 18153702     | 1              |
| Sanacorp                    | Glycerol 85%     | 1804017-01   | 2              |
| Sanacorp                    | Glycerol 85%     | 40652        | 1              |
| Sanacorp                    | Glycerol 85%     | 18253402     | 1              |
| Sanacorp                    | Glycerol 85%     | 18002        | 1              |
| Sanacorp                    | Glycerol 85%     | 19124401     | 4              |
| Sanacorp                    | Glycerol 85%     | 19002        | 1              |
| Sanacorp                    | Glycerol 85%     | 192976002    | 1              |
| Sanacorp                    | Glycerol 85%     | 20001043003  | 1              |
| Sanacorp 09.12.15           | Glycerol 85%     | 152902202    | 1              |
| Caelo                       | Glycerol 85%     | 14149404     | 1              |
| Caelo                       | Glycerol 85%     | 182553404    | 1              |
| Sanacorp 25.10.2017         | Glycerol 85%     | 16347202     | 1              |
| sanacorp, 7,66EUR, 17.09... | Glycerol 85%     | 16063701     | 1              |
| Sanacorp/ Heddinge          | Glycerol 85%     | 4071         | 1              |
| Sanacorp/ Heddinge          | Glycerol 85%     | 400473       | 1              |
| Sanacorp/ Hedinger          | Glycerol 85%     | 40502        | 1              |
| Caelo                       | Glycerol 85%     | 11324201     | 3              |
| Caelo                       | Glycerol 85%     | 2/AKD52      | 1              |
| Caelo                       | Glycerol 85%     | 73/AKD2      | 1              |

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| Supplier                   | Substance    | Batch          | Spectra |
|----------------------------|--------------|----------------|---------|
| Caelo                      | Glycerol 85% | 16347209       | 6       |
| Sanacorp/Fischar           | Glycerol 85% | 1076021        | 1       |
| Sanacorp/Fischar           | Glycerol 85% | 5067061        | 1       |
| Sanacorp/Fischar           | Glycerol 85% | 5060035        | 1       |
| Sanacorp/Hedinger          | Glycerol 85% | 40683          | 1       |
| Sanacorp/Otto Fischar      | Glycerol 85% | 1079021        | 1       |
| Sanacorp                   | Glycerol 85% | 19188301       | 1       |
| sancorp                    | Glycerol 85% | 19011203       | 1       |
| Spangro 31.07.2018         | Glycerol 85% | 17322104       | 1       |
| spinnrad                   | Glycerol 85% | 914409013      | 1       |
| Spinnrad                   | Glycerol 85% | 713048084      | 1       |
| Spinnrad                   | Glycerol 85% | 1116409015     | 1       |
| Spinnrad GmbH              | Glycerol 85% | 919409014      | 1       |
| Spinnrad GmbH/Sanacorp     | Glycerol 85% | 917409013      | 1       |
| Spinnrad/Phoenix           | Glycerol 85% | 418409012      | 1       |
| Stumpf / Hedinger          | Glycerol 85% | 40557          | 1       |
| Caelo                      | Glycerol 85% | 14306203       | 18      |
| Stumpf/Hedinger            | Glycerol 85% | 40531          | 1       |
| Stumpf/Hedinger            | Glycerol 85% | 40576          | 1       |
| Taoasis                    | Glycerol 85% | 40628          | 2       |
| Taoasis                    | Glycerol 85% | 40647          | 1       |
| Taoasis                    | Glycerol 85% | 40655          | 1       |
| Taoasis/Sanacorp           | Glycerol 85% | 17197702       | 1       |
| Test                       | Glycerol 85% | Test           | 1       |
| VDL;16.3.16;7,57EUR        | Glycerol 85% | 15292205       | 1       |
| Verbio AG                  | Glycerol 85% | Be-08675/37460 | 1       |
| Verbio AG                  | Glycerol 85% | BE-08912/38366 | 1       |
| Verbio AG/Gehe             | Glycerol 85% | 1708022-01     | 1       |
| WE:23.03.2016 Sanacorp     | Glycerol 85% | 15292205       | 1       |
|                            | Glycerol 85% | 13356404       | 1       |
| Alliance Health 27.11.2... | Glycerol 85% |                | 1       |
| Caelo                      | Glycerol 85% | 12216606       | 12      |
| Caelo                      | Glycerol 85% | 13356404       | 10      |
| Caelo                      | Glycerol 85% | 13406202       | 9       |
| Caelo                      | Glycerol 85% |                | 7       |
| Caelo                      | Glycerol 85% | 17197706       | 14      |
| Euro OTC                   | Glycerol 85% | 1409035-01     | 19      |
| Fischar/Phönix             | Glycerol 85% |                | 1       |
| Henry Lamotte              | Glycerol 85% |                | 1       |
| Herbeta / Noweda           | Glycerol 85% |                | 2       |
| Herbeta Arzneimittel       | Glycerol 85% |                | 2       |
| Herbeta Arzneimittel Be... | Glycerol 85% |                | 1       |
| Herbeta Berlin             | Glycerol 85% |                | 1       |
| noweda                     | Glycerol 85% |                | 1       |
| Otto                       | Glycerol 85% |                | 1       |
| Sanacorp                   | Glycerol 85% |                | 1       |

- 235 884 spectra from 1120 *Apo-Ident* customers from a total of 46 180 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Glycerol 85%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose,



all relevant spectra of the various substances were compared with *Glycerol 85%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 580           | 0              | 63 359        |
| <b>Type B</b> | 0              | 1340          | 0              | 90 151        |
| <b>Type C</b> | 0              | 5466          | 13             | 235 884       |

The substance/substance group *Glycerol 85%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.9655 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.5522 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.7627 % (> 99.7080 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Glycerol 85%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                      | Distance in main model | Distance in second-stage model |
|--------------------------------|------------------------|--------------------------------|
| Glycerine ointment (conserved) | 35.71                  | –                              |
| Honey                          | 52.86                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Glycerol 85%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30886     | 31737               | 2.16                         | 47.62                           |
| 30980     | 31737               | 1.71                         | 48.54                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31360            | 31956                      | 1.38                                | 47.84                                  |
| 31377            | 31737                      | 1.27                                | 49.23                                  |
| 31588            | 31588                      | 0.00                                | 47.76                                  |
| 31719            | 31719                      | 0.00                                | 49.19                                  |
| 31737            | 31737                      | 0.00                                | 49.70                                  |
| 31956            | 31956                      | 0.00                                | 49.09                                  |
| 34031            | 34031                      | 0.00                                | 47.86                                  |
| 35136            | 35136                      | 0.00                                | 51.54                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Glycolic acid 70%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30491-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Glycolic acid 70%; Acidum glycolicum 70%

### Special notes

When selecting the *Glycolic acid 70%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Glycolic acid 70%         | 3      | 3      | 16     |

## Second-stage model

For differentiation of the substance/substance group *Glycolic acid 70%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Glycolic acid 70%*:

| Supplier | Substance         | Batch      | Sample ID | Spectra | Certificate |
|----------|-------------------|------------|-----------|---------|-------------|
| Euro OTC | Glycolic acid 70% | 1406006-01 | 31620     | 60      | 20140708    |
| Euro OTC | Glycolic acid 70% | 1406006-01 | 31647     | 60      | 20140708    |
| Euro OTC | Glycolic acid 70% | 1604050    | 32281     | 40      | 20160510*   |
| Euro OTC | Glycolic acid 70% | 1604050-03 | 34184     | 40      | 20180315    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 200 spectra of 4 reference samples from the substance/substance group *Glycolic acid 70%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 739 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Glycolic acid 70%*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance         | Batch      | Sample ID | Spectra |
|----------|-------------------|------------|-----------|---------|
| Euro OTC | Glycolic acid 70% | 1604050-01 | 33225     | 40      |
| Euro OTC | Glycolic acid 70% | 2007032    | 35083     | 40      |
| Euro OTC | Glycolic acid 70% | 2103013    | 35268     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 36 spectra from 21 *Apo-Ident* customers from 17 batches from the substance/substance group *Glycolic acid 70%*.
- Among them are spectra of independent samples from 16 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance         | Batch       | Spectra |
|-----------|-------------------|-------------|---------|
| Caelo     | Glycolic acid 70% | 121002201   | 1       |
| Caelo     | Glycolic acid 70% | 18912183    | 1       |
| Eu Rho/XX | Glycolic acid 70% | 2007032-01  | 1       |
| Euro OTC  | Glycolic acid 70% | 1604050-01  | 9       |
| Euro OTC  | Glycolic acid 70% | 160405001   | 4       |
| Euro OTC  | Glycolic acid 70% | 16040501-01 | 1       |
| Euro OTC  | Glycolic acid 70% | 1604050-02  | 3       |
| Euro OTC  | Glycolic acid 70% | 3079344     | 1       |
| Euro OTC  | Glycolic acid 70% | 160405002   | 1       |
| Euro OTC  | Glycolic acid 70% | 164050-01   | 1       |
| Euro OTC  | Glycolic acid 70% | 1109027-01  | 1       |
| Euro OTC  | Glycolic acid 70% | 1210022-01  | 2       |
| Euro OTC  | Glycolic acid 70% | 1401014-01  | 1       |
| Euro OTC  | Glycolic acid 70% | 160405003   | 2       |
| Merck     | Glycolic acid 70% | S7410686    | 1       |
| Caelo     | Glycolic acid 70% | 1604050-03  | 1       |
| Phoenix   | Glycolic acid 70% | 1205037-01  | 1       |
| Euro OTC  | Glycolic acid 70% | 1604050-03  | 4       |

- 241 327 spectra from 1121 *Apo-Ident* customers from a total of 46 989 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Glycolic acid 70%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Glycolic acid 70%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 200           | 0              | 63 739        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 36            | 0              | 241 327       |

The substance/substance group *Glycolic acid 70%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6851 %) | 100.0000 % (> 83.3333 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Glycolic acid 70%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                               | Distance in main model | Distance in second-stage model |
|-----------------------------------------|------------------------|--------------------------------|
| Anionic hydrophilic cream SR (NRF p.27) | 98.14                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Glycolic acid 70%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31620     | 32281               | 1.61                         | 75.00                           |
| 31647     | 32281               | 4.09                         | 71.57                           |
| 32281     | 32281               | 0.00                         | 75.05                           |
| 34184     | 32281               | 8.24                         | 71.67                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by

laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Guaiazulene 25%, water-soluble**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30857-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Guaiazulene 25%, water-soluble

### Special notes

When selecting the *Guaiazulene 25%, water-soluble* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group      | Type A | Type B | Type C |
|--------------------------------|--------|--------|--------|
| Guaiazulene 25%, water-soluble | 4      | 3      | 52     |

## Second-stage model

For differentiation of the substance/substance group *Guaiazulene 25%, water-soluble* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Guaiazulene 25%, water-soluble*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Guaiazulene 25%,... | 12246703 | 30857     | 40      | 20120831    |
| Caelo    | Guaiazulene 25%,... | 13334401 | 31157     | 40      | 1411565     |
| Caelo    | Guaiazulene 25%,... | 14130601 | 31462     | 60      | 20140423    |
| Caelo    | Guaiazulene 25%,... | 190157   | 34455     | 40      | 20190131*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Guaiazulene 25%, water-soluble*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Guaiazulene 25%, water-soluble*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                      | Batch    | Sample ID | Spectra |
|----------|--------------------------------|----------|-----------|---------|
| Caelo    | Guaiazulene 25%, water-soluble | 161905   | 32321     | 40      |
| Caelo    | Guaiazulene 25%, water-soluble | 173365   | 34100     | 40      |
| Caelo    | Guaiazulene 25%, water-soluble | 20001542 | 34997     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 287 spectra from 156 *Apo-Ident* customers from 56 batches from the substance/substance group *Guaiazulene 25%, water-soluble*.
- Among them are spectra of independent samples from 52 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                      | Batch            | Spectra |
|---------------------|--------------------------------|------------------|---------|
| Alliance Healthcare | Guaiazulene 25%, water-soluble | 13044901         | 1       |
| Alliance Healthcare | Guaiazulene 25%, water-soluble | 19015703         | 1       |
| anzag               | Guaiazulene 25%, water-soluble | 14G24-B03-301884 | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 11303702         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 11303703         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 11060603         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 12246704         | 6       |
| Caelo               | Guaiazulene 25%, water-soluble | 12G31-N03        | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 12158701         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 13044901         | 8       |
| Caelo               | Guaiazulene 25%, water-soluble | 13334406         | 4       |
| Caelo               | Guaiazulene 25%, water-soluble | 17041405         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 14130605         | 8       |
| Caelo               | Guaiazulene 25%, water-soluble | 14252104         | 7       |
| Caelo               | Guaiazulene 25%, water-soluble | 154022302        | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 2011905          | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 19015702         | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 19015709         | 2       |
| Caelo               | Guaiazulene 25%, water-soluble | 20001542002      | 3       |
| Caelo               | Guaiazulene 25%, water-soluble | 12246701         | 2       |
| Caelo               | Guaiazulene 25%, water-soluble | 15402306         | 7       |
| Caelo               | Guaiazulene 25%, water-soluble | 13044906         | 4       |
| Caelo               | Guaiazulene 25%, water-soluble | 17021503         | 8       |
| Caelo               | Guaiazulene 25%, water-soluble | 1514U-03150      | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 1515M-03150      | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 516Q-03150       | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 117I-03150       | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 5217M-03150      | 1       |
| Caelo               | Guaiazulene 25%, water-soluble | 13044904         | 7       |
| Caelo               | Guaiazulene 25%, water-soluble | 17021508         | 5       |
| Caelo               | Guaiazulene 25%, water-soluble | 15075503         | 11      |
| Caelo               | Guaiazulene 25%, water-soluble | 17336503         | 10      |
| Caelo               | Guaiazulene 25%, water-soluble | 17336504         | 10      |
| Caelo               | Guaiazulene 25%, water-soluble | 192795004        | 12      |
| Caelo               | Guaiazulene 25%, water-soluble | 15075501         | 15      |

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| Supplier                   | Substance                      | Batch            | Spectra |
|----------------------------|--------------------------------|------------------|---------|
| Caelo                      | Guaiazulene 25%, water-soluble | 15402302         | 11      |
| Caelo                      | Guaiazulene 25%, water-soluble | 17336510         | 1       |
| Caelo                      | Guaiazulene 25%, water-soluble | 18176712         | 3       |
| Caelo                      | Guaiazulene 25%, water-soluble | 13334407         | 4       |
| Caelo                      | Guaiazulene 25%, water-soluble | 17192601         | 21      |
| Caelo                      | Guaiazulene 25%, water-soluble | 14252102         | 6       |
| Caelo                      | Guaiazulene 25%, water-soluble | 16190502         | 12      |
| Caelo                      | Guaiazulene 25%, water-soluble | 16190504         | 11      |
| Caelo                      | Guaiazulene 25%, water-soluble | 19015703         | 7       |
| Caerol/ Noweda             | Guaiazulene 25%, water-soluble | 15402302         | 1       |
| Caesar & Loretz GmbH       | Guaiazulene 25%, water-soluble | 19015703         | 4       |
| Caesar & Loretz GmbH       | Guaiazulene 25%, water-soluble | 192795004        | 2       |
| Caesar & Loretz GmbH Hi... | Guaiazulene 25%, water-soluble | 15402306         | 1       |
| Caesar & Loretz GmbH/ N... | Guaiazulene 25%, water-soluble | 19015703         | 1       |
| Caesar & Loretz GmbH/Je... | Guaiazulene 25%, water-soluble | 19015703         | 1       |
| Ebert & Jacobi             | Guaiazulene 25%, water-soluble | 17336503         | 1       |
| Euro OTC                   | Guaiazulene 25%, water-soluble | 13334406         | 1       |
| Euro OTC                   | Guaiazulene 25%, water-soluble | 17192601         | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 11H30-N03        | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 12G31-N03        | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 14G24B03         | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 17021503         | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 14B12-B07-292053 | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 13g31-n03        | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 152716-0001      | 1       |
| Fagron                     | Guaiazulene 25%, water-soluble | 513936           | 1       |
| gehe                       | Guaiazulene 25%, water-soluble | 17021503         | 1       |
| Gehe                       | Guaiazulene 25%, water-soluble | 13334406         | 1       |
| Gehe                       | Guaiazulene 25%, water-soluble | 13334401         | 1       |
| Gehe                       | Guaiazulene 25%, water-soluble | 17021503         | 1       |
| Caelo                      | Guaiazulene 25%, water-soluble | 18176704         | 6       |
| Noweda                     | Guaiazulene 25%, water-soluble | 13044901         | 1       |
| Noweda                     | Guaiazulene 25%, water-soluble | 17021508         | 1       |
| Noweda                     | Guaiazulene 25%, water-soluble | 18176704         | 1       |
| Noweda                     | Guaiazulene 25%, water-soluble | 19015703         | 1       |
| Phoenix                    | Guaiazulene 25%, water-soluble | 17021503         | 1       |
| Phoenix                    | Guaiazulene 25%, water-soluble | 18176704         | 1       |
| Phönix                     | Guaiazulene 25%, water-soluble | 17336504         | 1       |
| Phönix                     | Guaiazulene 25%, water-soluble | 192795004        | 1       |
| sanacorp                   | Guaiazulene 25%, water-soluble | 14G24-B03        | 1       |
| Sanacorp                   | Guaiazulene 25%, water-soluble | 12246701         | 2       |
| Sanacorp                   | Guaiazulene 25%, water-soluble | 4/AKD2           | 1       |
| Caelo                      | Guaiazulene 25%, water-soluble | 12019802         | 1       |
|                            | Guaiazulene 25%, water-soluble | 14B12-B07-292053 | 1       |
| Caelo                      | Guaiazulene 25%, water-soluble | 13334401         | 6       |
| Caelo                      | Guaiazulene 25%, water-soluble | 12246703         | 3       |
| Caelo                      | Guaiazulene 25%, water-soluble | 14130601         | 10      |
| Caelo                      | Guaiazulene 25%, water-soluble |                  | 1       |

- 241 076 spectra from 1121 *Apo-Ident* customers from a total of 46 952 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Guaiazulene 25%, water-soluble* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Guaiazulene 25%, water-soluble* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 180           | 0              | 63 759        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 277           | 10             | 241 076       |

The substance/substance group *Guaiazulene 25%, water-soluble* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 96.5157 % (> 95.4704 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Guaiazulene 25%, water-soluble* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                 | Distance in main model | Distance in second-stage model |
|---------------------------|------------------------|--------------------------------|
| Pasta Cordes <sup>®</sup> | 41.21                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Guaiazulene 25%, water-soluble* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30857     | 31157               | 2.67                         | 57.06                           |
| 31157     | 31157               | 0.00                         | 57.96                           |
| 31462     | 31157               | 4.39                         | 60.27                           |
| 34455     | 34455               | 0.00                         | 91.87                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Honeys**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30761-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Honeys; Honey; Mel; Mel rosatum; Rose honey

### Special notes

When selecting the *Honeys* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Honeys                    | 9      | 3      | 60     |

### Second-stage model

For differentiation of the substance/substance group *Honeys* the following second-stage model is used:



*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Honeys*:

| Supplier | Substance  | Batch    | Sample ID | Spectra | Certificate |
|----------|------------|----------|-----------|---------|-------------|
| Caelo    | Honey      | 12132005 | 30761     | 40      | 1402562     |
| Caelo    | Honey      | 13269412 | 31341     | 40      | 20130913    |
| Caelo    | Honey      | 150791   | 32214     | 40      | 20150508*   |
| Caelo    | Honey      | 162659   | 32698     | 40      | 20161026*   |
| Caelo    | Honey      | 21001397 | 35548     | 50      | 20210507*   |
| Caelo    | Rose honey | 15406006 | 31957     | 60      | 20160120    |
| Caelo    | Rose honey | 16104802 | 32988     | 40      | 1708304     |
| Caelo    | Rose honey | 171208   | 33333     | 40      | 20170619*   |
| Caelo    | Rose honey | 20003441 | 35297     | 40      | 20201116*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 390 spectra of 9 reference samples from the substance/substance group *Honeys*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 549 spectra from a total of 1298 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 200 spectra of 5 reference samples from the substance/substance group *Honeys*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance  | Batch  | Sample ID | Spectra |
|----------|------------|--------|-----------|---------|
| Caelo    | Honey      | 171325 | 33718     | 40      |
| Caelo    | Honey      | 171332 | 33719     | 40      |
| Caelo    | Rose honey | 181215 | 34050     | 40      |
| Caelo    | Honey      | 171325 | 33720     | 40      |
| Caelo    | Rose honey | 171208 | 33721     | 40      |

- 91 291 spectra from a total of 2012 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 119 spectra from 37 *Apo-Ident* customers from 63 batches from the substance/substance group *Honeys*.
- Among them are spectra of independent samples from 60 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance | Batch    | Spectra |
|----------------------------|-----------|----------|---------|
| AHD                        | Honey     | 18026703 | 1       |
| Caelo                      | Honey     | 18173506 | 1       |
| Caelo                      | Honey     | 12132007 | 1       |
| Caelo                      | Honey     | 12132012 | 1       |
| Caelo                      | Honey     | 13269413 | 1       |
| Caelo                      | Honey     | 15079110 | 1       |
| Caelo                      | Honey     | 15417714 | 1       |
| Caelo                      | Honey     | 17132502 | 2       |
| Caelo                      | Honey     | 16265908 | 1       |
| Caelo                      | Honey     | 18026703 | 2       |
| Caelo                      | Honey     | 9011902  | 1       |
| Caelo                      | Honey     | 18173504 | 3       |
| Caelo                      | Honey     | 19114702 | 2       |
| Caelo                      | Honey     | 16265901 | 2       |
| Caelo                      | Honey     | 15079102 | 1       |
| Caelo                      | Honey     | L064168  | 1       |
| Caelo                      | Honey     | 15079111 | 1       |
| Caelo                      | Honey     | L051150  | 1       |
| Caelo                      | Honey     | 12382406 | 1       |
| Caelo                      | Honey     | 13269405 | 2       |
| Caesar & Loretz GmbH       | Honey     | 18173504 | 2       |
| Caesar & Loretz GmbH, 4... | Honey     | 12382405 | 3       |
| Caesar & Loretz GmbH, 4... | Honey     | 12132011 | 2       |
| Caesar & Loretz GmbH, 4... | Honey     | 12382410 | 2       |
| Caesar & Loretz GmbH, 4... | Honey     | 13269401 | 3       |
| Caesar & Loretz GmbH, 4... | Honey     | 13269404 | 1       |
| Caelo                      | Honey     | 15417703 | 1       |
| Caelo                      | Honey     | 18026702 | 3       |
| L12                        | Honey     | 16265909 | 3       |
| L12                        | Honey     | 18173501 | 2       |
| Caelo                      | Honey     | 15417707 | 4       |
| L30                        | Honey     | 15417714 | 4       |
| L30                        | Honey     | 17133201 | 2       |

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| Supplier                | Substance  | Batch       | Spectra |
|-------------------------|------------|-------------|---------|
| L30                     | Honey      | 17132502    | 1       |
| L30                     | Honey      | 3024337     | 1       |
| Midas                   | Honey      | 16265906    | 1       |
| Noweda                  | Honey      | 15079102    | 1       |
| Noweda                  | Honey      | 16265911    | 1       |
| Noweda                  | Honey      | 18173508    | 2       |
| Noweda                  | Honey      | 20000367005 | 2       |
| Noweda                  | Honey      | 19114706    | 1       |
| Noweda                  | Honey      | 19114704    | 1       |
| Noweda/Apomix           | Honey      | 13269401    | 1       |
| Caelo                   | Honey      | 13269403    | 4       |
| Caelo                   | Honey      | 15079103    | 1       |
| Phönix                  | Honey      | 13269403    | 1       |
| PHÖNIX                  | Honey      | 16265901    | 1       |
| Caelo                   | Rose honey | 12105302    | 1       |
| Caelo                   | Rose honey | 11258901    | 1       |
| Caelo                   | Rose honey | 12105305    | 2       |
| Caelo                   | Rose honey | 12315005    | 1       |
| Caelo                   | Rose honey | 13170902    | 2       |
| Caelo                   | Rose honey | 4811M-02884 | 1       |
| Caelo                   | Rose honey | 13170906    | 1       |
| Caelo                   | Rose honey | 5091401     | 1       |
| Caelo                   | Rose honey | 14125603    | 1       |
| Caelo                   | Rose honey | 14125605    | 1       |
| Caelo                   | Rose honey | 15406004    | 2       |
| Caelo                   | Rose honey | 18121503    | 2       |
| Caelo                   | Rose honey | 17120803    | 3       |
| Caelo                   | Rose honey | 18121501    | 3       |
| Caelo                   | Rose honey | 18314205    | 2       |
| Caelo                   | Rose honey | 18314202    | 1       |
| Caelo                   | Rose honey | 192745001   | 1       |
| Caelo                   | Rose honey | 1712803     | 1       |
| Caelo                   | Rose honey | 14125607    | 1       |
| Caelo                   | Rose honey | 20002889002 | 1       |
| Caelo                   | Rose honey | 13170904    | 1       |
| Caesar & Loretz GmbH    | Rose honey | 18121501    | 1       |
| Ebert & Jacobi 02.08.16 | Rose honey | 15406006    | 1       |
| Fagron                  | Rose honey | 16104802    | 1       |
| Hedinger/Phönix         | Rose honey | 17120803    | 1       |
| Caelo                   | Honey      | 13269412    | 3       |
| Caelo                   | Rose honey | 15406006    | 4       |

- 241 244 spectra from 1121 *Apo-Ident* customers from a total of 46 943 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Honeys* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Honeys* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 390           | 0              | 63 549        |
| Type B | 0              | 200           | 0              | 91 291        |
| Type C | 0              | 119           | 0              | 241 242       |

The substance/substance group *Honeys* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.4615 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.0000 %) |
| Type C | 100.0000 % (> 99.6844 %) | 100.0000 % (> 94.9580 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Honeys* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                            | Distance in main model | Distance in second-stage model |
|--------------------------------------|------------------------|--------------------------------|
| Fennel honey (conserved)             | 17.67                  | –                              |
| Glycerine ointment (conserved)       | 22.42                  | –                              |
| Sorbitol, liquid (non crystallising) | 27.27                  | –                              |
| Glucose syrup                        | 32.42                  | –                              |
| Raspberry syrup (conserved)          | 44.72                  | –                              |
| Ipecacuanha syrup (NRF 19.1)         | 50.23                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Honeys* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30761     | 30761               | 0.00                         | 32.35                           |
| 31341     | 30761               | 7.48                         | 17.67                           |
| 31957     | 32988               | 2.49                         | 26.98                           |

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| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 32214     | 32214               | 0.00                         | 39.35                           |
| 32698     | 32698               | 0.00                         | 22.32                           |
| 32988     | 32988               | 0.00                         | 26.08                           |
| 33333     | 33333               | 0.00                         | 26.60                           |
| 35297     | 35297               | 0.00                         | 44.12                           |
| 35548     | 35548               | 0.00                         | 64.58                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Hydrophilic base emulsion (NRF p.25)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30709-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Hydrophilic base emulsion (NRF p.25); Emulsio basalis hydrophilica

### Special notes

When selecting the *Hydrophilic base emulsion (NRF p.25)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group            | Type A | Type B | Type C |
|--------------------------------------|--------|--------|--------|
| Hydrophilic base emulsion (NRF p.25) | 15     | 26     | 310    |

## Second-stage model

For differentiation of the substance/substance group *Hydrophilic base emulsion (NRF p.25)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Hydrophilic base emulsion (NRF p.25)*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Hydrophilic base... | 12173002 | 30709     | 40      | 20120628    |
| Caelo    | Hydrophilic base... | 13305501 | 31176     | 40      | 1403535     |
| Caelo    | Hydrophilic base... | 14063502 | 31340     | 20      | 20140307    |
| Caelo    | Hydrophilic base... | 161156   | 32290     | 40      | 20160415*   |
| Caelo    | Hydrophilic base... | 161155   | 32291     | 40      | 20160415*   |
| Caelo    | Hydrophilic base... | 161154   | 32292     | 40      | 20160415*   |
| Caelo    | Hydrophilic base... | 170444   | 33154     | 40      | 20170217*   |
| Caelo    | Hydrophilic base... | 170443   | 33155     | 40      | 20170217*   |
| Caelo    | Hydrophilic base... | 163400   | 33156     | 40      | 20161215*   |
| Caelo    | Hydrophilic base... | 163398   | 33157     | 40      | 20161215*   |
| Caelo    | Hydrophilic base... | 183112   | 34536     | 40      | 20181220*   |
| Caelo    | Hydrophilic base... | 183113   | 34537     | 40      | 20181220*   |
| Caelo    | Hydrophilic base... | 190281   | 34538     | 40      | 20190306*   |
| Caelo    | Hydrophilic base... | 190282   | 34539     | 40      | 20190306*   |
| Caelo    | Hydrophilic base... | 21002117 | 35595     | 50      | 20210805*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 590 spectra of 15 reference samples from the substance/substance group *Hydrophilic base emulsion (NRF p.25)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 15 different batches.
- 63 349 spectra from a total of 1292 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



*Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 1100 spectra of 27 reference samples from the substance/substance group *Hydrophilic base emulsion* (NRF p.25).
- Among them are spectra of independent samples from 26 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID          | Spectra |
|----------|---------------------------------|----------|--------------------|---------|
| Caelo    | Hydrophilic base emulsion (N... | 163399   | 33158              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171184   | 33412              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171247   | 33413              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171182   | 33414              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171183   | 33415              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171702   | 33573              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 171703   | 33574              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 173421   | 33971              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 180316   | 34133              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 181075   | 34134              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 181806   | 34248              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 182588   | 34313              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 191402   | 34769              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 191809   | 34770              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 192047   | 34774              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 20000295 | 34971              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 20001762 | 34972              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 20002078 | 35115              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 21000737 | 35304              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 21000345 | 35305              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 21000346 | 35306              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 21000347 | 35481              | 40      |
| Caelo    | Hydrophilic base emulsion (N... | 21001238 | 35516              | 50      |
| Caelo    | Hydrophilic base emulsion (N... | 21001239 | 35517              | 50      |
| Caelo    | Hydrophilic base emulsion (N... | 21002118 | 35596              | 50      |
| Caelo    | Hydrophilic base emulsion (N... | 21002119 | 35597              | 50      |
| Caelo    | Hydrophilic base emulsion (N... | 14063502 | 31340 <sup>†</sup> | 20      |

- 90 391 spectra from a total of 1989 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3094 spectra from 559 *Apo-Ident* customers from 315 batches from the substance/substance group *Hydrophilic base emulsion* (NRF p.25).

<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

- Among them are spectra of independent samples from 309 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| 06,15                      | Hydrophilic base emulsion (N... | 13394302    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 1762001     | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 18311030    | 2       |
| AEP                        | Hydrophilic base emulsion (N... | 18031601    | 2       |
| AHC 15.08.13 EK4,56        | Hydrophilic base emulsion (N... | 13107703    | 1       |
| AHD                        | Hydrophilic base emulsion (N... | 14063502    | 2       |
| aliance healthcare 5.12... | Hydrophilic base emulsion (N... | 13305501    | 1       |
| Allianc. Health. /ca       | Hydrophilic base emulsion (N... | 16264202    | 1       |
| Alliance H.                | Hydrophilic base emulsion (N... | 16340001    | 1       |
| Alliance health            | Hydrophilic base emulsion (N... | 14360201    | 2       |
| Alliance Health 23.01.2... | Hydrophilic base emulsion (N... | 13394302    | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 13195902    | 4       |
| Allianz Healthcare         | Hydrophilic base emulsion (N... | 16340001    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 14239103    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 16115602    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 17044401    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 17170301    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 18258801    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 19181101    | 1       |
| Anzag                      | Hydrophilic base emulsion (N... | 19181001    | 1       |
| Anzag 03.04.13 ek: 4,56EUR | Hydrophilic base emulsion (N... | 13039701    | 4       |
| Anzag 19.12.12 ek:4,33     | Hydrophilic base emulsion (N... | 12310102    | 3       |
| Anzag 27.11.12 ek:4,33     | Hydrophilic base emulsion (N... | 12230301    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 15439901    | 10      |
| Caelo                      | Hydrophilic base emulsion (N... | 2000092101  | 1       |
| Apotheke Lützelbach        | Hydrophilic base emulsion (N... | 2718Q-03325 | 1       |
| Bayvers                    | Hydrophilic base emulsion (N... | 17124702    | 2       |
| Bombastus                  | Hydrophilic base emulsion (N... | 1288103     | 1       |
| Bombastus                  | Hydrophilic base emulsion (N... | 15337601    | 4       |
| Bombastus                  | Hydrophilic base emulsion (N... | 17227001    | 1       |
| Bombastus                  | Hydrophilic base emulsion (N... | 1825801     | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 1633901     | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 18107604    | 4       |
| Caelo                      | Hydrophilic base emulsion (N... | 10071203    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 12071901    | 4       |
| Caelo                      | Hydrophilic base emulsion (N... | 12072002    | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 12128401    | 5       |
| Caelo                      | Hydrophilic base emulsion (N... | 19091204    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 28111203    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 1218401     | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 23101202    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 1213003     | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 12230302    | 4       |
| Caelo                      | Hydrophilic base emulsion (N... | 12230301    | 8       |
| Caelo                      | Hydrophilic base emulsion (N... | 12230203    | 5       |
| Caelo                      | Hydrophilic base emulsion (N... | 28121206    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 12310101    | 11      |
| Caelo                      | Hydrophilic base emulsion (N... | 13039701    | 15      |
| Caelo                      | Hydrophilic base emulsion (N... | 20031306    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 26031302    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 11274001    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 13076803    | 19      |
| Caelo                      | Hydrophilic base emulsion (N... | 12288103    | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 30041304    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 10051303    | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 6051304     | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 13076801    | 18      |

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| Supplier | Substance                       | Batch     | Spectra |
|----------|---------------------------------|-----------|---------|
| Caelo    | Hydrophilic base emulsion (N... | 12295002  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 13076702  | 12      |
| Caelo    | Hydrophilic base emulsion (N... | 11274003  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1306801   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15061302  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 10082013A | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 9081301   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 13195901  | 20      |
| Caelo    | Hydrophilic base emulsion (N... | 13195801  | 10      |
| Caelo    | Hydrophilic base emulsion (N... | 2101304   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18111307  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 12121308  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 13397601  | 46      |
| Caelo    | Hydrophilic base emulsion (N... | 24011403  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 30011504  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 21031403  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 29041406  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20061407  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14063503  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 13394303  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14140901  | 12      |
| Caelo    | Hydrophilic base emulsion (N... | 15081402  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14238802  | 6       |
| Caelo    | Hydrophilic base emulsion (N... | 14238901  | 33      |
| Caelo    | Hydrophilic base emulsion (N... | 1428901   | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 29101402  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14351202  | 7       |
| Caelo    | Hydrophilic base emulsion (N... | 23011503  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1507702   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1507002   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14360301  | 32      |
| Caelo    | Hydrophilic base emulsion (N... | 11031504  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14360401  | 3       |
| Caelo    | Hydrophilic base emulsion (N... | 22042015A | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15077101  | 31      |
| Caelo    | Hydrophilic base emulsion (N... | 29041502  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15076901  | 14      |
| Caelo    | Hydrophilic base emulsion (N... | 30051501  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2061501   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 23062015D | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 23071507  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15209801  | 23      |
| Caelo    | Hydrophilic base emulsion (N... | 18081512  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15337601  | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 2737      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 152009902 | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15440101  | 25      |
| Caelo    | Hydrophilic base emulsion (N... | 1537301   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2811      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16115602  | 51      |
| Caelo    | Hydrophilic base emulsion (N... | 1071602   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15442001  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16264202  | 8       |
| Caelo    | Hydrophilic base emulsion (N... | 16249202  | 6       |
| Caelo    | Hydrophilic base emulsion (N... | 16249301  | 17      |
| Caelo    | Hydrophilic base emulsion (N... | 15255816  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2897      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16244101  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16264201  | 6       |
| Caelo    | Hydrophilic base emulsion (N... | 16339901  | 65      |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Hydrophilic base emulsion (N... | 16325801     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1624101      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1634002      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 21031704     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17044301     | 5       |
| Caelo    | Hydrophilic base emulsion (N... | 16340001     | 10      |
| Caelo    | Hydrophilic base emulsion (N... | 19041711     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17118401     | 12      |
| Caelo    | Hydrophilic base emulsion (N... | 17061705     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 162640101    | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17124702     | 26      |
| Caelo    | Hydrophilic base emulsion (N... | 3140817      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 21081705     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16091701     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17170101     | 9       |
| Caelo    | Hydrophilic base emulsion (N... | 17170201     | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 6121702      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17342203     | 5       |
| Caelo    | Hydrophilic base emulsion (N... | 19021803     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 172268021    | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17342301     | 15      |
| Caelo    | Hydrophilic base emulsion (N... | 25041803     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18031601     | 16      |
| Caelo    | Hydrophilic base emulsion (N... | 23051803     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 9061831      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18107602     | 29      |
| Caelo    | Hydrophilic base emulsion (N... | 30081803     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 12091802     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1801702      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 28111808     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18180702     | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 18180601     | 38      |
| Caelo    | Hydrophilic base emulsion (N... | 18311202     | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 19028101     | 52      |
| Caelo    | Hydrophilic base emulsion (N... | 18289001     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 19140101     | 24      |
| Caelo    | Hydrophilic base emulsion (N... | 19140102     | 42      |
| Caelo    | Hydrophilic base emulsion (N... | 18311303     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 19181001     | 58      |
| Caelo    | Hydrophilic base emulsion (N... | 192827002    | 4       |
| Caelo    | Hydrophilic base emulsion (N... | 1928203      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 200009296002 | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 200002985001 | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20000090001  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20001762001  | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 20000921001  | 17      |
| Caelo    | Hydrophilic base emulsion (N... | 20003314002  | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 21000345001  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16115401     | 7       |
| Caelo    | Hydrophilic base emulsion (N... | 2x18107602   | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 162433201    | 1       |
| Caelo    | Hydrophilic base emulsion (N... | CH-B17342101 | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20000922002  | 3       |
| Caelo    | Hydrophilic base emulsion (N... | 14141003     | 4       |
| Caelo    | Hydrophilic base emulsion (N... | 14238101     | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2517M-03325  | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18311301     | 8       |
| Caelo    | Hydrophilic base emulsion (N... | 20000922003  | 12      |
| Caelo    | Hydrophilic base emulsion (N... | 18258901     | 22      |
| Caelo    | Hydrophilic base emulsion (N... | 21001238002  | 1       |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Caelo    | Hydrophilic base emulsion (N... | 17A007           | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17226903         | 28      |
| Caelo    | Hydrophilic base emulsion (N... | 15440102         | 5       |
| Caelo    | Hydrophilic base emulsion (N... | 1918001          | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16115302         | 14      |
| Caelo    | Hydrophilic base emulsion (N... | 2x18258901       | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 19140120         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 16071701         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15077002         | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 13305401         | 32      |
| Caelo    | Hydrophilic base emulsion (N... | 1902801          | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17124701         | 5       |
| Caelo    | Hydrophilic base emulsion (N... | 192827001        | 17      |
| Caelo    | Hydrophilic base emulsion (N... | 17226801         | 66      |
| Caelo    | Hydrophilic base emulsion (N... | 19028201         | 21      |
| Caelo    | Hydrophilic base emulsion (N... | 19225601         | 30      |
| Caelo    | Hydrophilic base emulsion (N... | 19180901         | 12      |
| Caelo    | Hydrophilic base emulsion (N... | 19204701         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 161115401        | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18107501         | 71      |
| Caelo    | Hydrophilic base emulsion (N... | 18258903         | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 13107702         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15337301         | 34      |
| Caelo    | Hydrophilic base emulsion (N... | 152100001        | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 154401014        | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18107601         | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 18258902         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20000296001      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18031802         | 16      |
| Caelo    | Hydrophilic base emulsion (N... | 3310             | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2x192827001      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2000092203       | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20001763002      | 18      |
| Caelo    | Hydrophilic base emulsion (N... | 14239103         | 7       |
| Caelo    | Hydrophilic base emulsion (N... | 13107703         | 18      |
| Caelo    | Hydrophilic base emulsion (N... | 15439801         | 37      |
| Caelo    | Hydrophilic base emulsion (N... | 1463502          | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 200000295001     | 3       |
| Caelo    | Hydrophilic base emulsion (N... | 20002079001      | 3       |
| Caelo    | Hydrophilic base emulsion (N... | 17118301         | 35      |
| Caelo    | Hydrophilic base emulsion (N... | 17342101         | 63      |
| Caelo    | Hydrophilic base emulsion (N... | 173420101        | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 18180701         | 20      |
| Caelo    | Hydrophilic base emulsion (N... | 13076802         | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 13394304         | 11      |
| Caelo    | Hydrophilic base emulsion (N... | 14360403         | 6       |
| Caelo    | Hydrophilic base emulsion (N... | 914E-03325       | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1514U-03325      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 15076803         | 9       |
| Caelo    | Hydrophilic base emulsion (N... | 1515J-03325      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1316Q-03325      | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 1634001          | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 20000920001      | 6       |
| Caelo    | Hydrophilic base emulsion (N... | 20000918001      | 2       |
| Caelo    | Hydrophilic base emulsion (N... | 1902810119225601 | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 2000314002       | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 14238801         | 18      |
| Caelo    | Hydrophilic base emulsion (N... | 153337801        | 1       |
| Caelo    | Hydrophilic base emulsion (N... | 17124703         | 7       |
| Caelo    | Hydrophilic base emulsion (N... | 18180603         | 2       |

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| Supplier        | Substance                       | Batch                | Spectra |
|-----------------|---------------------------------|----------------------|---------|
| Caelo           | Hydrophilic base emulsion (N... | 18311302             | 40      |
| Caelo           | Hydrophilic base emulsion (N... | 1831102              | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 20000295001          | 36      |
| Caelo           | Hydrophilic base emulsion (N... | 1911001              | 2       |
| Caelo           | Hydrophilic base emulsion (N... | 13305601             | 10      |
| Caelo           | Hydrophilic base emulsion (N... | 15440001             | 30      |
| Caelo           | Hydrophilic base emulsion (N... | 9225601              | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 12173003             | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 12310102             | 16      |
| Caelo           | Hydrophilic base emulsion (N... | 14238701             | 11      |
| Caelo           | Hydrophilic base emulsion (N... | 15337801             | 30      |
| Caelo           | Hydrophilic base emulsion (N... | 17227001             | 14      |
| Caelo           | Hydrophilic base emulsion (N... | 18107701             | 14      |
| Caelo           | Hydrophilic base emulsion (N... | 10831701             | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 15440002             | 8       |
| Caelo           | Hydrophilic base emulsion (N... | 16115303             | 11      |
| Caelo           | Hydrophilic base emulsion (N... | 13305503             | 5       |
| Caelo           | Hydrophilic base emulsion (N... | 15209901             | 14      |
| Caelo           | Hydrophilic base emulsion (N... | 16249201             | 24      |
| Caelo           | Hydrophilic base emulsion (N... | 16249302             | 13      |
| Caelo           | Hydrophilic base emulsion (N... | 16340002             | 4       |
| Caelo           | Hydrophilic base emulsion (N... | 17342202             | 27      |
| Caelo           | Hydrophilic base emulsion (N... | 18259001             | 10      |
| Caelo           | Hydrophilic base emulsion (N... | 1818061              | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 17124701-20170818Ma9 | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 15210001             | 17      |
| Caelo           | Hydrophilic base emulsion (N... | 16264203             | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 15029901             | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 15337701             | 11      |
| Caelo           | Hydrophilic base emulsion (N... | 17170301             | 60      |
| Caelo           | Hydrophilic base emulsion (N... | 18258801             | 51      |
| Caelo           | Hydrophilic base emulsion (N... | 19028202             | 9       |
| Caelo           | Hydrophilic base emulsion (N... | 19140201             | 4       |
| Caelo           | Hydrophilic base emulsion (N... | 191401202            | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 19181101             | 12      |
| Caelo           | Hydrophilic base emulsion (N... | 20000922001          | 19      |
| Caelo           | Hydrophilic base emulsion (N... | 2000092202           | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 20002079003          | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 20003314001          | 12      |
| Caelo           | Hydrophilic base emulsion (N... | 21000346001          | 6       |
| Caelo           | Hydrophilic base emulsion (N... | 19225501             | 6       |
| Caelo           | Hydrophilic base emulsion (N... | 14063601             | 27      |
| Caelo           | Hydrophilic base emulsion (N... | 16264101             | 42      |
| Caelo           | Hydrophilic base emulsion (N... | 14360202             | 4       |
| Caelo           | Hydrophilic base emulsion (N... | 15077003             | 5       |
| Caelo           | Hydrophilic base emulsion (N... | 181007602            | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 13039702             | 2       |
| Caelo           | Hydrophilic base emulsion (N... | 13394402             | 4       |
| Caelo           | Hydrophilic base emulsion (N... | 14063702             | 10      |
| Caelo           | Hydrophilic base emulsion (N... | 14238702             | 4       |
| Caelo           | Hydrophilic base emulsion (N... | 15337602             | 5       |
| Caelo           | Hydrophilic base emulsion (N... | 6115401              | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 16339801             | 13      |
| Caelo           | Hydrophilic base emulsion (N... | 18258901             | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 200002950001         | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 1624202              | 1       |
| Caelo           | Hydrophilic base emulsion (N... | 20002079002          | 7       |
| Caeo/Noweda     | Hydrophilic base emulsion (N... | 15440001             | 1       |
| Caesar & Lorenz | Hydrophilic base emulsion (N... | 13195901             | 1       |
| Caesar & Lorenz | Hydrophilic base emulsion (N... | 14238901             | 1       |

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| Supplier                   | Substance                       | Batch               | Spectra |
|----------------------------|---------------------------------|---------------------|---------|
| Caesar & Lorenz GmbH       | Hydrophilic base emulsion (N... | 17342101            | 1       |
| Caesar & Lorenz GmbH       | Hydrophilic base emulsion (N... | 192827001           | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 191401020           | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 2000331400106138395 | 1       |
| caesar & loretz            | Hydrophilic base emulsion (N... | 16115302            | 1       |
| Caesar & Loretz            | Hydrophilic base emulsion (N... | 13195801            | 1       |
| Caesar & Loretz            | Hydrophilic base emulsion (N... | 19028101            | 1       |
| Caesar & Loretz            | Hydrophilic base emulsion (N... | 19140102            | 2       |
| caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 13394304            | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 15077002            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18258901            | 3       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18311302            | 7       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18311202            | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18258801            | 10      |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18180701            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18180702            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18107501            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18311303            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18180601            | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19028201            | 4       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 18311301            | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19028101            | 9       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19140201            | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19028202            | 4       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19140101            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19180901            | 7       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19140102            | 6       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19181001            | 11      |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19181101            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19225601            | 6       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 192827002           | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19225501            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000296002         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000295001         | 8       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000922002         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 192827001           | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000922003         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000920001         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000921001         | 8       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 19282703            | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20000919001         | 4       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20001763002         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20001762001         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20002079001         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 2002079001          | 1       |
| Caesar & Loretz GmbH       | Hydrophilic base emulsion (N... | 20003314001         | 4       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 19140102            | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 16339901            | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 17342101            | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 18311302            | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 18311302            | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 16264201            | 2       |
| Caesar & Loretz GmbH / ... | Hydrophilic base emulsion (N... | 18258901            | 2       |
| Caesar & Loretz GmbH Hi... | Hydrophilic base emulsion (N... | 15439801            | 1       |
| Caesar & Loretz GmbH Hi... | Hydrophilic base emulsion (N... | 16115602            | 1       |
| Caesar & Loretz GmbH Hi... | Hydrophilic base emulsion (N... | 16151602            | 1       |
| Caesar & Loretz GmbH, 4... | Hydrophilic base emulsion (N... | 12310101            | 1       |
| Caesar & Loretz GmbH, 4... | Hydrophilic base emulsion (N... | 13107703            | 1       |
| Caesar & Loretz GmbH/AHD   | Hydrophilic base emulsion (N... | 20002078002         | 1       |
| Caesar & Loretz GmbH/Al... | Hydrophilic base emulsion (N... | 19225601            | 3       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 19028202    | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 18311202    | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 19028201    | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 19028101    | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 19225601    | 2       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 19181001    | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 20000921001 | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic base emulsion (N... | 20003314001 | 1       |
| Caesar & Loretz GmbH/GEHE  | Hydrophilic base emulsion (N... | 19225601    | 1       |
| Caesar & Loretz GmbH/GEHE  | Hydrophilic base emulsion (N... | 20000295001 | 1       |
| Caesar & Loretz GmbH/Ge... | Hydrophilic base emulsion (N... | 20000921001 | 1       |
| Caesar & Loretz GmbH/Je... | Hydrophilic base emulsion (N... | 20000922001 | 1       |
| Caesar & Loretz GmbH/Mi... | Hydrophilic base emulsion (N... | 19028101    | 1       |
| Caesar & Loretz GmbH/No... | Hydrophilic base emulsion (N... | 19181001    | 1       |
| Caesar & Loretz GmbH/Ph... | Hydrophilic base emulsion (N... | 19180901    | 2       |
| Caesar & Loretz GmbH/Ph... | Hydrophilic base emulsion (N... | 19225601    | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic base emulsion (N... | 19140102    | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic base emulsion (N... | 19181001    | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic base emulsion (N... | 19225501    | 3       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic base emulsion (N... | 20000922003 | 1       |
| Caesar & Loretz/AHD        | Hydrophilic base emulsion (N... | 16249201    | 1       |
| Caesar&Loretz GmbH         | Hydrophilic base emulsion (N... | 15439801    | 1       |
| Caesar&Loretz GmbH         | Hydrophilic base emulsion (N... | 15337301    | 1       |
| Caesar&Loretz GmbH         | Hydrophilic base emulsion (N... | 18180601    | 1       |
| Caesar&Loretz GmbH/ All... | Hydrophilic base emulsion (N... | 16264202    | 1       |
| Caesar&Loretz GmbH/ Gehe   | Hydrophilic base emulsion (N... | 15439801    | 1       |
| Caesar&Loretz GmbH/ San... | Hydrophilic base emulsion (N... | 18107602    | 1       |
| Caesar&Loretz GmbH/AHD     | Hydrophilic base emulsion (N... | 19028201    | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic base emulsion (N... | 13195901    | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic base emulsion (N... | 13397601    | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic base emulsion (N... | 15077101    | 2       |
| Caesar&lorenz,AHC          | Hydrophilic base emulsion (N... | 14063601    | 1       |
| Caesar/Lorenz              | Hydrophilic base emulsion (N... | 13076702    | 1       |
| Caesar/Noweda              | Hydrophilic base emulsion (N... | 12071901    | 1       |
| Caesar/Noweda              | Hydrophilic base emulsion (N... | 5011E-03325 | 1       |
| Caesar/Noweda              | Hydrophilic base emulsion (N... | 15440101    | 1       |
| Cealeo/Phönix              | Hydrophilic base emulsion (N... | 17342101    | 1       |
| Cealo                      | Hydrophilic base emulsion (N... | 15077101    | 3       |
| Cealo                      | Hydrophilic base emulsion (N... | 17170201    | 1       |
| Cealo/ Anzag               | Hydrophilic base emulsion (N... | 19225601    | 1       |
| Cealo/Gehe                 | Hydrophilic base emulsion (N... | 18311302    | 1       |
| cealo/noveda               | Hydrophilic base emulsion (N... | 15209901    | 1       |
| Cealo/Sana                 | Hydrophilic base emulsion (N... | 18031601    | 1       |
| Ebert & Jacobi             | Hydrophilic base emulsion (N... | 17226903    | 1       |
| Ebert & Jacobi             | Hydrophilic base emulsion (N... | 192827001   | 1       |
| Ebert 12.09.2016           | Hydrophilic base emulsion (N... | 16115602    | 1       |
| Eigen/Defektur             | Hydrophilic base emulsion (N... | 15337602    | 1       |
| Eigene Herstellung         | Hydrophilic base emulsion (N... | 13305601    | 1       |
| EuRho/Sanac                | Hydrophilic base emulsion (N... | 13305601    | 3       |
| Euro OTC                   | Hydrophilic base emulsion (N... | 16115602    | 1       |
| Euro OTC                   | Hydrophilic base emulsion (N... | 16249302    | 2       |
| euro//Noweda               | Hydrophilic base emulsion (N... | 18258801    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 13305401    | 5       |
| Fagron                     | Hydrophilic base emulsion (N... | 18107701    | 4       |
| Fagron                     | Hydrophilic base emulsion (N... | 18180601    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 17226801    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 16115302    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 16264101    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 13195901    | 1       |
| Fagron                     | Hydrophilic base emulsion (N... | 15439801    | 2       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Fiebig                     | Hydrophilic base emulsion (N... | 15210001         | 1       |
| Fiebig ek:4,26EUR 18.09.12 | Hydrophilic base emulsion (N... | 12173003         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 13195801         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 13397601         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 14140901         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 14238802         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 14239103         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 15076901         | 3       |
| Gehe                       | Hydrophilic base emulsion (N... | 15076803         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 15077003         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 15337602         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 15337701         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 15440102         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 15439901         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 16115401         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 16340002         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 17118401         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 17170101         | 3       |
| Gehe                       | Hydrophilic base emulsion (N... | 17342301         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 18031701         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 17170201         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 18031802         | 2       |
| Gehe                       | Hydrophilic base emulsion (N... | 18258701         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 19181001         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 19225601         | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 20000922002      | 1       |
| Gehe                       | Hydrophilic base emulsion (N... | 192827002        | 1       |
| GEHE                       | Hydrophilic base emulsion (N... | 18107501         | 1       |
| GEHE 10.03.2014            | Hydrophilic base emulsion (N... | 14063502         | 2       |
| Gehe 21-01-2019            | Hydrophilic base emulsion (N... | 18180601         | 1       |
| GEHE 29.01.2019            | Hydrophilic base emulsion (N... | 18180601         | 1       |
| Gehe am 6.03.2014          | Hydrophilic base emulsion (N... | 13195801         | 1       |
| GEHE/ Braun                | Hydrophilic base emulsion (N... | 18180702         | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 1310773          | 2       |
| Caelo                      | Hydrophilic base emulsion (N... | 13196001         | 11      |
| Caelo                      | Hydrophilic base emulsion (N... | 16264101/1310117 | 1       |
| Henry Lamotte Oils GmbH... | Hydrophilic base emulsion (N... | 13397601         | 1       |
| Herstellung                | Hydrophilic base emulsion (N... | 13305501         | 2       |
| Hubertus Apotheke          | Hydrophilic base emulsion (N... | 15209901         | 1       |
| Jenne                      | Hydrophilic base emulsion (N... | 192827002        | 1       |
| Euro OTC                   | Hydrophilic base emulsion (N... | 19028201         | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 18031701         | 70      |
| Lamotte                    | Hydrophilic base emulsion (N... | 16264102         | 1       |
| lamotte phönix             | Hydrophilic base emulsion (N... | 18107602         | 1       |
| Maros                      | Hydrophilic base emulsion (N... | 5006613          | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 12230301         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 13076801         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 15209801         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 16340002         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 17044301         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 1626402          | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 17118401         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 18107501         | 2       |
| Noweda                     | Hydrophilic base emulsion (N... | 19028101         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 19140102         | 1       |
| Noweda                     | Hydrophilic base emulsion (N... | 19181001         | 1       |
| Caelo                      | Hydrophilic base emulsion (N... | 14141004         | 15      |
| Caelo                      | Hydrophilic base emulsion (N... | 14360201         | 17      |
| Caelo                      | Hydrophilic base emulsion (N... | 13394302         | 10      |
| Caelo                      | Hydrophilic base emulsion (N... | 181070602        | 1       |

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| Supplier              | Substance                       | Batch       | Spectra |
|-----------------------|---------------------------------|-------------|---------|
| Caelo                 | Hydrophilic base emulsion (N... | 18107603    | 25      |
| Caelo                 | Hydrophilic base emulsion (N... | 2000092001  | 1       |
| Pala                  | Hydrophilic base emulsion (N... | 180031802   | 2       |
| Pala                  | Hydrophilic base emulsion (N... | 18107701    | 1       |
| Pala                  | Hydrophilic base emulsion (N... | 20000296002 | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 13195901    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 13397601    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 14063502    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 14063701    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 16249302    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 17118301    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 3045        | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 17170301    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 3130        | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 17342101    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 17342202    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 3233        | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 18107602    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 18107501    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 18258901    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 18258801    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 3379        | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 19028201    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 19181001    | 1       |
| Phoenix               | Hydrophilic base emulsion (N... | 19140101    | 1       |
| PHOENIX               | Hydrophilic base emulsion (N... | 19028101    | 1       |
| PHOENIX 03.06.2014    | Hydrophilic base emulsion (N... | 14063701    | 1       |
| PHOENIX am 27.01.2014 | Hydrophilic base emulsion (N... | 13305401    | 1       |
| Euro OTC              | Hydrophilic base emulsion (N... | 14063702    | 2       |
| Phonix                | Hydrophilic base emulsion (N... | 14063601    | 1       |
| phönix                | Hydrophilic base emulsion (N... | 16339901    | 1       |
| phönix                | Hydrophilic base emulsion (N... | 17044401    | 2       |
| Phönix                | Hydrophilic base emulsion (N... | 13039701    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 13076803    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 17342202    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 18031701    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 18180702    | 2       |
| Phönix                | Hydrophilic base emulsion (N... | 18107603    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 18180601    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 18258801    | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 19028101    | 2       |
| Phönix                | Hydrophilic base emulsion (N... | 20001763002 | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 20000921001 | 1       |
| Phönix                | Hydrophilic base emulsion (N... | 20003313002 | 1       |
| PHÖNIX                | Hydrophilic base emulsion (N... | 17342101    | 1       |
| Caelo                 | Hydrophilic base emulsion (N... | 17044401    | 40      |
| Caelo                 | Hydrophilic base emulsion (N... | 1704401     | 1       |
| Caelo                 | Hydrophilic base emulsion (N... | 13730153    | 1       |
| Caelo                 | Hydrophilic base emulsion (N... | 1710301     | 1       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 13195801    | 1       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 17226801    | 1       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 18180601    | 1       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 18258801    | 3       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 18311302    | 2       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 19181001    | 3       |
| Phönix Gotha          | Hydrophilic base emulsion (N... | 19181101    | 1       |
| Phönix/Phönix         | Hydrophilic base emulsion (N... | 17118301    | 1       |
| sanacorp              | Hydrophilic base emulsion (N... | 15210001    | 2       |
| Sanacorp              | Hydrophilic base emulsion (N... | 12128401    | 2       |
| Sanacorp              | Hydrophilic base emulsion (N... | 12230203    | 1       |

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| Supplier    | Substance                       | Batch       | Spectra |
|-------------|---------------------------------|-------------|---------|
| Sanacorp    | Hydrophilic base emulsion (N... | 13039702    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 13195901    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 13305401    | 5       |
| Sanacorp    | Hydrophilic base emulsion (N... | 13397601    | 2       |
| Sanacorp    | Hydrophilic base emulsion (N... | 14063601    | 3       |
| Sanacorp    | Hydrophilic base emulsion (N... | 14141004    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 14360301    | 2       |
| Sanacorp    | Hydrophilic base emulsion (N... | 14238901    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 15337301    | 2       |
| Sanacorp    | Hydrophilic base emulsion (N... | 17124701    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 17227001    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 18031702    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 17170201    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 18107501    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 18107602    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 1810601     | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 19028201    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 19140102    | 2       |
| Sanacorp    | Hydrophilic base emulsion (N... | 19181001    | 2       |
| Sanacorp    | Hydrophilic base emulsion (N... | 19181101    | 1       |
| Sanacorp    | Hydrophilic base emulsion (N... | 20000296002 | 2       |
| SANACORP    | Hydrophilic base emulsion (N... | 19028101    | 1       |
| Caelo       | Hydrophilic base emulsion (N... | 14239002    | 3       |
| Caelo       | Hydrophilic base emulsion (N... | 15209902    | 8       |
| Euro OTC    | Hydrophilic base emulsion (N... | 13196001    | 1       |
| Fagron      | Hydrophilic base emulsion (N... | 17118401    | 1       |
| wepa/Sanaco | Hydrophilic base emulsion (N... | 16115303    | 1       |
| Caelo       | Hydrophilic base emulsion (N... | 12173002    | 5       |
| Caelo       | Hydrophilic base emulsion (N... |             | 3       |
| Caelo       | Hydrophilic base emulsion (N... | 13305501    | 5       |
| Caelo       | Hydrophilic base emulsion (N... | 14063502    | 13      |
| Sanacorp    | Hydrophilic base emulsion (N... |             | 1       |

- 238 269 spectra from 1121 *Apo-Ident* customers from a total of 46 705 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Hydrophilic base emulsion (NRF p.25)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Hydrophilic base emulsion (NRF p.25)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 590           | 0              | 63 349        |
| <b>Type B</b> | 0              | 1097          | 3              | 90 391        |
| <b>Type C</b> | 0              | 2975          | 119            | 238 269       |

The substance/substance group *Hydrophilic base emulsion (NRF p.25)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.9831 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.7273 % (> 99.4545 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 96.1538 % (> 96.0569 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Hydrophilic base emulsion (NRF p.25)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Non-ionic hydrous liniment SR/DAC (NRF... | 17.58                  | —                              |
| Polyhexanide solution 20%                 | 25.34                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)       | 27.22                  | —                              |
| Gel basis Audor®                          | 28.64                  | —                              |
| Chest elixir                              | 30.21                  | —                              |
| Dextrorotary lactic acid 20%              | 30.90                  | —                              |
| Hydrophilic cream, non-ionic SR (NRF p... | 34.32                  | —                              |
| Fortified wine                            | 37.23                  | —                              |
| Hydrophilic cream, non-ionic without p... | 40.08                  | —                              |
| Lotio Cordes®                             | 42.11                  | —                              |
| Liquorice juice purified, diluted         | 42.97                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)   | 43.41                  | —                              |
| Condurango wine                           | 44.22                  | —                              |
| Anionic hydrophilic cream with propyle... | 44.88                  | —                              |
| Acetic acid 30%                           | 47.09                  | —                              |
| Aluminium acetotartrate solution          | 47.22                  | —                              |
| Glycolic acid 70%                         | 49.29                  | —                              |
| Chlorhexidine digluconate solution        | 49.36                  | —                              |
| Base cream, hydrophobic DAC               | 49.64                  | —                              |
| Base cream, diluted                       | 49.94                  | —                              |
| Water                                     | 50.53                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Hydrophilic base emulsion (NRF p.25)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30709     | 33157               | 4.25                         | 31.02                           |
| 31176     | 31176               | 0.00                         | 30.38                           |
| 31340     | 32290               | 4.53                         | 28.27                           |
| 32290     | 32290               | 0.00                         | 32.08                           |
| 32291     | 32291               | 0.00                         | 33.13                           |
| 32292     | 32292               | 0.00                         | 32.98                           |
| 33154     | 33154               | 0.00                         | 30.76                           |
| 33155     | 33155               | 0.00                         | 26.35                           |
| 33156     | 33156               | 0.00                         | 28.23                           |
| 33157     | 33157               | 0.00                         | 26.98                           |
| 34536     | 34536               | 0.00                         | 31.00                           |
| 34537     | 34537               | 0.00                         | 31.34                           |
| 34538     | 34538               | 0.00                         | 29.61                           |
| 34539     | 34539               | 0.00                         | 30.38                           |
| 35595     | 35595               | 0.00                         | 31.45                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Hydrophilic ointments</b>                                     |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30631-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Hydrophilic ointments; Anionic hydrophilic cream DAB; Anionic hydrophilic cream SR (NRF p.27); Anionic hydrophilic cream with propylene glycol; Anionic hydrophilic cream without preservatives; Base cream, diluted; Base cream, hydrophobic DAC; Cremor basalis hydrophobicus; Hydrophilic cream, non-ionic SR (NRF p.26); Hydrophilic cream, non-ionic without preservatives SR; Skin care ointment W/L SR; Skin care ointment W/L SR (without preservatives); Transdermal base cream; Unguentum emulsificans aquosum cum propylenglycolum; Unguentum emulsificans aquosum DAB; Unguentum emulsificans aquosum N sine conservante SR; Unguentum emulsificans aquosum N SR (NRF S. 26); Unguentum emulsificans aquosum sine conservante; Unguentum emulsificans aquosum SR (NRF S. 27); Wolff® base half-fat cream

### Special notes

When selecting the *Hydrophilic ointments* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Hydrophilic ointments     | 117    | 279    | 5410   |

## Second-stage model

For differentiation of the substance/substance group *Hydrophilic ointments* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Hydrophilic ointments*:

| Supplier  | Substance           | Batch     | Sample ID | Spectra | Certificate        |
|-----------|---------------------|-----------|-----------|---------|--------------------|
| Caelo     | Anionic hydrophi... | 14138901  | 31440     | 40      | AR-15-FG-008131-01 |
| Caelo     | Anionic hydrophi... | 154004    | 32022     | 60      | 20151117*          |
| Caelo     | Anionic hydrophi... | 154005    | 32023     | 60      | 20151118*          |
| Caelo     | Anionic hydrophi... | 154007    | 32024     | 60      | 20151124*          |
| Caelo     | Anionic hydrophi... | 154009    | 32025     | 60      | 20151130*          |
| Caelo     | Anionic hydrophi... | 154012    | 32026     | 60      | 20151130*          |
| Caelo     | Anionic hydrophi... | 154012    | 32027     | 60      | 20151130*          |
| Caelo     | Anionic hydrophi... | 154013    | 32028     | 60      | 20151120*          |
| Caelo     | Anionic hydrophi... | 154014    | 32029     | 60      | 20151124*          |
| Caelo     | Anionic hydrophi... | 154015    | 32030     | 60      | 20151117*          |
| Caelo     | Anionic hydrophi... | 154317    | 32031     | 60      | 20151215*          |
| Caelo     | Anionic hydrophi... | 154317    | 32032     | 60      | 20151215*          |
| Caelo     | Anionic hydrophi... | 153971    | 32038     | 60      | 20151113*          |
| Caelo     | Anionic hydrophi... | 153971    | 32039     | 60      | 20151113*          |
| Caelo     | Anionic hydrophi... | 153573    | 32052     | 60      | 20151015*          |
| Caelo     | Anionic hydrophi... | 153573    | 32053     | 60      | 20151015*          |
| Caelo     | Anionic hydrophi... | 161525    | 32435     | 40      | 20160518*          |
| Caelo     | Anionic hydrophi... | 161525    | 32436     | 40      | 20160518*          |
| Caelo     | Anionic hydrophi... | 21000288  | 35383     | 40      | 20210126*          |
| Caelo     | Anionic hydrophi... | 21000289  | 35384     | 40      | 20210127*          |
| Caelo     | Anionic hydrophi... | 21000290  | 35385     | 40      | 20210128*          |
| Caelo     | Anionic hydrophi... | 21000292  | 35386     | 40      | 20210129*          |
| Caelo     | Anionic hydrophi... | 21000295  | 35389     | 40      | 20210129*          |
| Caelo     | Anionic hydrophi... | 21000374  | 35390     | 40      | 20210215*          |
| Caelo     | Anionic hydrophi... | 21000924  | 35393     | 40      | 20210331*          |
| Caelo     | Anionic hydrophi... | 21000925  | 35394     | 40      | 20210401*          |
| Caelo     | Anionic hydrophi... | 21000928  | 35397     | 40      | 20210407*          |
| Caelo     | Anionic hydrophi... | 20004461  | 35398     | 40      | 20210122*          |
| Caelo     | Anionic hydrophi... | 21000929  | 35399     | 40      | 20210412*          |
| Caelo     | Anionic hydrophi... | 21001502  | 35531     | 50      | 20210507*          |
| Caelo     | Anionic hydrophi... | 21001814  | 35535     | 50      | 20210602*          |
| Caelo     | Anionic hydrophi... | 21001494  | 35564     | 50      | 20210428*          |
| apomix    | Anionic hydrophi... | 25A210812 | 30895     | 60      | 20120821           |
| apomix    | Anionic hydrophi... | 04A050219 | 34507     | 40      | 20190205           |
| Bombastus | Anionic hydrophi... | 280574    | 31054     | 40      | 1405103            |
| Bombastus | Anionic hydrophi... | 19000650  | 34506     | 40      | 20190205           |
| Caelo     | Anionic hydrophi... | 14063303  | 31450     | 40      | 20140512           |
| Caelo     | Anionic hydrophi... | 161075    | 32115     | 40      | 20160406*          |
| Caelo     | Anionic hydrophi... | 161075    | 32116     | 40      | 20160406*          |
| Caelo     | Anionic hydrophi... | 153295    | 32123     | 40      | 20150924*          |
| Caelo     | Anionic hydrophi... | 153296    | 32124     | 40      | 20150924*          |
| Caelo     | Anionic hydrophi... | 153865    | 32125     | 40      | 20151211*          |

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| Supplier   | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|------------|---------------------|------------------|-----------|---------|--------------------|
| Caelo      | Anionic hydrophi... | 153866           | 32126     | 40      | 20151211*          |
| Caelo      | Anionic hydrophi... | 160196           | 32127     | 40      | 20160127*          |
| Caelo      | Anionic hydrophi... | 160198           | 32128     | 40      | 20160127*          |
| Caelo      | Anionic hydrophi... | 161267           | 32225     | 40      | 20160504*          |
| Caelo      | Anionic hydrophi... | 162155           | 32386     | 40      | 20160728*          |
| Caelo      | Anionic hydrophi... | 162156           | 32387     | 40      | 20160728*          |
| Caelo      | Anionic hydrophi... | 191771           | 34791     | 40      | 20190705*          |
| Caelo      | Anionic hydrophi... | 21001752         | 35614     | 50      | 20210628*          |
| Caelo      | Anionic hydrophi... | 12221002         | 30880     | 50      | 20120911           |
| Caelo      | Anionic hydrophi... | 13343401         | 31231     | 40      | 1403496            |
| Caelo      | Anionic hydrophi... | 13244401         | 31241     | 30      | 20130726           |
| Caelo      | Anionic hydrophi... | 14030701         | 31470     | 40      | 20140204           |
| Caelo      | Anionic hydrophi... | 15048501         | 31741     | 60      | 9128               |
| Caelo      | Anionic hydrophi... | 160673           | 32129     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 160673           | 32130     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 160673           | 32131     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 160673           | 32132     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 160677           | 32141     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 160677           | 32142     | 40      | 20160310*          |
| Caelo      | Anionic hydrophi... | 161916           | 32620     | 40      | 20160630*          |
| Caelo      | Anionic hydrophi... | 161917           | 32621     | 40      | 20160630*          |
| Caelo      | Anionic hydrophi... | 162901           | 32882     | 40      | 20161018*          |
| Caelo      | Anionic hydrophi... | 171023           | 33354     | 40      | 20170419*          |
| Caelo      | Anionic hydrophi... | 20001978         | 35099     | 40      | 20200714*          |
| Caelo      | Anionic hydrophi... | 20003308         | 35169     | 40      | 20201109*          |
| Caelo      | Anionic hydrophi... | 20003309         | 35170     | 40      | 20201109*          |
| apomix     | Anionic hydrophi... | 11B020914        | 31537     | 60      | 1411614            |
| apomix     | Anionic hydrophi... | 05B200415        | 31661     | 70      | 20150422           |
| apomix     | Anionic hydrophi... | 08B200819        | 34681     | 40      | 20190820           |
| Caelo      | Base cream, dilu... | 14242803         | 31515     | 60      | 20140813*          |
| Caelo      | Base cream, dilu... | 181758           | 34267     | 40      | 20180716*          |
| Caelo      | Base cream, dilu... | 191056           | 34544     | 40      | 20190426*          |
| Caelo      | Base cream, dilu... | 191904           | 34822     | 40      | 20190723*          |
| Caelo      | Base cream, dilu... | 20001669         | 34850     | 40      | 20200615*          |
| Caelo      | Base cream, dilu... | 20002515         | 35092     | 40      | 20200827*          |
| Caelo      | Base cream, dilu... | 21002416         | 35640     | 50      | 20210811*          |
| Caelo      | Base cream, hydr... | 12151602         | 30758     | 40      | 20120612           |
| Caelo      | Base cream, hydr... | 12308102         | 30931     | 40      | 20121031           |
| Caelo      | Base cream, hydr... | 13085601         | 31002     | 40      | 20130404           |
| Caelo      | Base cream, hydr... | 14028101         | 31478     | 40      | AR-15-FG-009038-01 |
| Caelo      | Base cream, hydr... | 15221202         | 31799     | 60      | 1605111            |
| Caelo      | Base cream, hydr... | 154212           | 31906     | 60      | 20151211*          |
| Caelo      | Base cream, hydr... | 154213           | 31907     | 60      | 20151211*          |
| Caelo      | Base cream, hydr... | 171920           | 33595     | 40      | 20170710*          |
| Caelo      | Base cream, hydr... | 21000396         | 35367     | 40      | 20210219*          |
| Caelo      | Base cream, hydr... | 21000397         | 35368     | 40      | 20210222*          |
| Fagron     | Base cream, hydr... | 17C06-T08-042287 | 33964     | 40      | 20170425           |
| Fagron     | Base cream, hydr... | 18L18-T09-062847 | 34598     | 40      | 20190213           |
| Pharmachem | Base cream, hydr... | 150404           | 31644     | 60      | 20150306           |
| Pharmachem | Base cream, hydr... | 160825           | 32303     | 40      | 20160517           |
| apomix     | Hydrophilic crea... | 12A160419        | 34525     | 40      | 20190416           |
| Bombastus  | Hydrophilic crea... | 00273130         | 30769     | 40      | 1405255            |
| Bombastus  | Hydrophilic crea... | 288882           | 31568     | 60      | 20140722           |
| Caelo      | Hydrophilic crea... | 14127002         | 31477     | 40      | 20140512           |
| Caelo      | Hydrophilic crea... | 14304902         | 31591     | 60      | 20141013           |
| Caelo      | Hydrophilic crea... | 153656           | 31996     | 40      | 20151211*          |
| Caelo      | Hydrophilic crea... | 20002461         | 35096     | 40      | 20200811*          |
| Caelo      | Hydrophilic crea... | 21002193         | 35617     | 50      | 20210818*          |
| Fagron     | Hydrophilic crea... | 14E07-M04        | 31593     | 60      | 20140513           |
| Fagron     | Hydrophilic crea... | 15A110619        | 34508     | 40      | 20190612           |

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| Supplier   | Substance                       | Batch            | Sample ID | Spectra | Certificate |
|------------|---------------------------------|------------------|-----------|---------|-------------|
| apomix     | Hydrophilic crea...             | 21B141013        | 31188     | 40      | 1405386     |
| apomix     | Hydrophilic crea...             | 14B240614        | 31500     | 20      | 1411613     |
| apomix     | Hydrophilic crea...             | 14B240614        | 31516     | 60      | 20140624    |
| apomix     | Hydrophilic crea...             | 22B061114        | 31565     | 60      | 20141106    |
| apomix     | Hydrophilic crea...             | 01B120115        | 31599     | 60      | 20150114    |
| apomix     | Hydrophilic crea...             | 25B081215        | 31962     | 60      | 20151209    |
| apomix     | Hydrophilic crea...             | 13B090919        | 34683     | 40      | 20190909    |
| apomix     | Skin care ointme...             | 88B111212        | 31040     | 40      | 20121211    |
| apomix     | Skin care ointme...             | 10A050214        | 31503     | 60      | 1412041     |
| apomix     | Skin care ointme...             | 05A250221        | 35292     | 40      | 20210226    |
| Pharmachem | Skin care ointme...             | 170117           | 33295     | 40      | 20180131    |
| apomix     | Skin care ointme...             | 01B110113        | 31039     | 40      | 1403321     |
| apomix     | Skin care ointme...             | 31B020714        | 31600     | 60      | 20140702    |
| apomix     | Skin care ointme...             | 24B200617        | 33641     | 40      | 20170620    |
| apomix     | Skin care ointme...             | 35A040919        | 34680     | 40      | 20190904    |
| apomix     | Skin care ointme...             | 37B081220        | 35291     | 40      | 20201209    |
| Fagron     | Transdermal base...             | 12H17-T02-000281 | 31008     | 40      | 1406052     |
| Fagron     | Transdermal base...             | 12H17-T02-000281 | 31042     | 40      | 20130110    |
| Fagron     | Transdermal base...             | 15A28-T10-018922 | 32346     | 40      | 20150804    |
| Fagron     | Transdermal base...             | 1805581/1        | 34763     | 40      | 20180614    |
| Fagron     | Transdermal base...             | 20003335         | 35086     | 40      | 20200423    |
| Fagron     | Transdermal base...             | 20003334         | 35461     | 40      | 20200417    |
| Dr. Wolff  | Wolff <sup>®</sup> base half... | 230200           | 30631     | 40      | 20120210    |
| Dr. Wolff  | Wolff <sup>®</sup> base half... | 236420           | 30837     | 40      | 1410330     |
| Dr. Wolff  | Wolff <sup>®</sup> base half... | 331551           | 31086     | 40      | 20130221    |
| Dr. Wolff  | Wolff <sup>®</sup> base half... | 432611           | 31487     | 40      | 20140410    |
| Dr. Wolff  | Wolff <sup>®</sup> base half... | 810800           | 34689     | 40      | 20190103    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 5870 spectra of 129 reference samples from the substance/substance group *Hydrophilic ointments*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 117 different batches.
- 58 069 spectra from a total of 1190 batches from further 212 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 15 623 spectra of 368 reference samples from the substance/substance group *Hydrophilic ointments*.
- Among them are spectra of independent samples from 279 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                     | Batch  | Sample ID | Spectra |
|----------|-------------------------------|--------|-----------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 154321 | 32033     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153529 | 32035     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153530 | 32036     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153970 | 32037     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153972 | 32040     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153973 | 32041     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153575 | 32042     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153969 | 32043     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 154281 | 32045     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 154282 | 32046     | 45      |
| Caelo    | Anionic hydrophilic cream DAB | 153531 | 32048     | 45      |
| Caelo    | Anionic hydrophilic cream DAB | 153571 | 32049     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153572 | 32050     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153574 | 32051     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 154284 | 32055     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153194 | 32057     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 154285 | 32059     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 154283 | 32061     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 153968 | 32063     | 60      |
| Caelo    | Anionic hydrophilic cream DAB | 160578 | 32145     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161031 | 32146     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161033 | 32148     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161510 | 32218     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161507 | 32220     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161508 | 32222     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161506 | 32426     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161798 | 32431     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161529 | 32437     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161526 | 32440     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161527 | 32444     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161528 | 32447     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161560 | 32450     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161561 | 32451     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161563 | 32452     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161564 | 32453     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161589 | 32644     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161796 | 32645     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161797 | 32647     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 161800 | 32648     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162500 | 32649     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162501 | 32651     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162502 | 32653     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162589 | 32654     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162590 | 32656     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162591 | 32658     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162592 | 32661     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162593 | 32663     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162594 | 32667     | 40      |

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| Supplier | Substance                     | Batch    | Sample ID | Spectra |
|----------|-------------------------------|----------|-----------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 162596   | 32669     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162597   | 32672     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162599   | 32674     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162600   | 32676     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162645   | 32678     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162643   | 32875     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162644   | 32876     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162646   | 32877     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162647   | 32878     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 162598   | 32879     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163172   | 32880     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163226   | 32881     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 170451   | 33122     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 170452   | 33123     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163281   | 33170     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163282   | 33171     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163283   | 33172     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 163284   | 33173     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 170453   | 33174     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 170454   | 33175     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171421   | 33581     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171422   | 33582     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171423   | 33583     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171424   | 33584     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171427   | 33585     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171430   | 33586     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171431   | 33587     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171432   | 33588     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171433   | 33589     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171434   | 33590     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171435   | 33591     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171436   | 33592     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171437   | 33593     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 171438   | 33594     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 182434   | 34264     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 191613   | 34788     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 192060   | 34789     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 192723   | 34790     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 20000033 | 34975     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 20001676 | 34976     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 20004458 | 35379     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 20004459 | 35380     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 20004462 | 35381     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000287 | 35382     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000293 | 35387     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000294 | 35388     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000375 | 35391     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000376 | 35392     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000926 | 35395     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21000927 | 35396     | 40      |
| Caelo    | Anionic hydrophilic cream DAB | 21001498 | 35527     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001499 | 35528     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001500 | 35529     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001501 | 35530     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001504 | 35532     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001505 | 35533     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001810 | 35534     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001495 | 35565     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001496 | 35566     | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 21001497 | 35567     | 50      |

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| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Anionic hydrophilic cream DAB   | 21001493 | 35568     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21001812 | 35653     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21001816 | 35654     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21001813 | 35655     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21002632 | 35656     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21002633 | 35657     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21002634 | 35658     | 50      |
| Caelo    | Anionic hydrophilic cream DAB   | 21002635 | 35659     | 50      |
| Caelo    | Anionic hydrophilic cream SR... | 162157   | 32388     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 162586   | 32550     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 162587   | 32551     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 170419   | 33125     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 170418   | 33139     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 171258   | 33338     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 171442   | 33339     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 172117   | 33552     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 172118   | 33553     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 172568   | 33768     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 172569   | 33769     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 172944   | 34021     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 173195   | 34022     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 181023   | 34152     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 181475   | 34153     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 180411   | 34162     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 182181   | 34260     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 192401   | 34792     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 20001781 | 35097     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 20002423 | 35122     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 20003015 | 35223     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 20003746 | 35224     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 21000339 | 35330     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 21001436 | 35520     | 50      |
| Caelo    | Anionic hydrophilic cream SR... | 21002250 | 35613     | 50      |
| Caelo    | Anionic hydrophilic cream wi... | 12117002 | 30577     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160674   | 32133     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160675   | 32137     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160676   | 32139     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160678   | 32143     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160679   | 32144     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161918   | 32422     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161919   | 32424     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161915   | 32619     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 162902   | 32883     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 162903   | 32884     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 162904   | 32885     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 162905   | 32886     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170302   | 33128     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170303   | 33129     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170299   | 33136     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170300   | 33137     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170301   | 33138     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171021   | 33350     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171024   | 33351     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171020   | 33353     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171022   | 33355     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171565   | 33557     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171566   | 33558     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 171854   | 33559     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 172621   | 33755     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 172619   | 33756     | 40      |

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| Supplier | Substance                       | Batch     | Sample ID | Spectra |
|----------|---------------------------------|-----------|-----------|---------|
| Caelo    | Anionic hydrophilic cream wi... | 172622    | 33757     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 173353    | 34028     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 180414    | 34140     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 181808    | 34262     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 182973    | 34316     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 182483    | 34350     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20003306  | 35221     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20003307  | 35222     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 21000681  | 35400     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20004291  | 35401     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20004292  | 35402     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20004293  | 35403     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 20004294  | 35404     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 21000683  | 35405     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 21000684  | 35406     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 21000685  | 35407     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 21001941  | 35660     | 50      |
| Caelo    | Anionic hydrophilic cream wi... | 21001942  | 35661     | 50      |
| Caelo    | Anionic hydrophilic cream wi... | 21001943  | 35662     | 50      |
| apomix   | Anionic hydrophlic cream wit... | 05B310517 | 33516     | 40      |
| apomix   | Anionic hydrophlic cream wit... | 01B080118 | 33947     | 40      |
| apomix   | Anionic hydrophlic cream wit... | 03B160321 | 35264     | 40      |
| Caelo    | Base cream, diluted             | 182407    | 34268     | 40      |
| Caelo    | Base cream, diluted             | 191057    | 34543     | 40      |
| Caelo    | Base cream, diluted             | 192299    | 34821     | 40      |
| Caelo    | Base cream, diluted             | 20003510  | 35154     | 40      |
| Caelo    | Base cream, diluted             | 21001312  | 35363     | 40      |
| Caelo    | Base cream, diluted             | 21001313  | 35364     | 40      |
| Caelo    | Base cream, diluted             | 21001314  | 35365     | 40      |
| Caelo    | Base cream, diluted             | 21000785  | 35366     | 40      |
| Caelo    | Base cream, diluted             | 21001869  | 35637     | 50      |
| Caelo    | Base cream, diluted             | 21001870  | 35638     | 50      |
| Caelo    | Base cream, diluted             | 21001871  | 35639     | 50      |
| Caelo    | Base cream, diluted             | 21002417  | 35641     | 50      |
| Caelo    | Base cream, diluted             | 21002418  | 35642     | 50      |
| Caelo    | Base cream, hydrophobic DAC     | 12025003  | 30467     | 20      |
| Caelo    | Base cream, hydrophobic DAC     | 154214    | 31908     | 60      |
| Caelo    | Base cream, hydrophobic DAC     | 160748    | 32149     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160749    | 32151     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160751    | 32153     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160750    | 32155     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160752    | 32156     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161654    | 32370     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161655    | 32372     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161656    | 32374     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161657    | 32376     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161742    | 32378     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 162937    | 32855     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 162938    | 32856     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 162939    | 32857     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 170732    | 33127     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 171504    | 33373     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 171505    | 33374     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 171130    | 33375     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 171129    | 33376     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 172552    | 34023     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 180512    | 34163     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 181739    | 34164     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 182398    | 34269     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 182867    | 34306     | 40      |

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| Supplier   | Substance                       | Batch     | Sample ID | Spectra |
|------------|---------------------------------|-----------|-----------|---------|
| Caelo      | Base cream, hydrophobic DAC     | 192048    | 34818     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 191159    | 34819     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 192387    | 34820     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 20001199  | 34851     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 20001592  | 34852     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 20003445  | 35225     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 20003446  | 35226     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 21000399  | 35369     | 40      |
| Caelo      | Base cream, hydrophobic DAC     | 21001222  | 35512     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001221  | 35513     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001223  | 35514     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001947  | 35647     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001948  | 35648     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001949  | 35649     | 50      |
| Caelo      | Base cream, hydrophobic DAC     | 21001950  | 35650     | 50      |
| Caelo      | Hydrophilic cream, non-ionic... | 160175    | 31994     | 60      |
| Caelo      | Hydrophilic cream, non-ionic... | 153258    | 31995     | 60      |
| Caelo      | Hydrophilic cream, non-ionic... | 161141    | 32119     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 161142    | 32121     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 161694    | 32382     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 161695    | 32384     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 162220    | 32584     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 162221    | 32596     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 162579    | 32602     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 170097    | 33187     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 171134    | 33378     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 171140    | 33379     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 172126    | 33551     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 172610    | 33754     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 173139    | 34019     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 172940    | 34020     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 180503    | 34144     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 181752    | 34145     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 182180    | 34272     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 182595    | 34310     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 20003016  | 35158     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 21000505  | 35329     | 40      |
| Caelo      | Hydrophilic cream, non-ionic... | 21001333  | 35519     | 50      |
| apomix     | Hydrophilic cream, non-ionic... | 07B030417 | 33283     | 40      |
| apomix     | Hydrophilic cream, non-ionic... | 16B230817 | 33643     | 40      |
| apomix     | Hydrophilic cream, non-ionic... | 04B020321 | 35293     | 40      |
| apomix     | Skin care ointment W/L SR       | 31A130717 | 33627     | 40      |
| Pharmachem | Skin care ointment W/L SR       | 180117    | 33294     | 40      |
| apomix     | Skin care ointment W/L SR (w... | 14B060417 | 33264     | 40      |
| apomix     | Skin care ointment W/L SR (w... | 37A021117 | 33792     | 40      |
| Fagron     | Transdermal base cream          | 1609813   | 33479     | 40      |
| Fagron     | Transdermal base cream          | 1802650/2 | 34204     | 40      |
| Fagron     | Transdermal base cream          | 20001002  | 34847     | 40      |
| Dr. Wolff  | Wolff® base half-fat cream      | 702500    | 33484     | 40      |
| Dr. Wolff  | Wolff® base half-fat cream      | 701451    | 33485     | 40      |
| Dr. Wolff  | Wolff® base half-fat cream      | 010680    | 35456     | 40      |
| Caelo      | Anionic hydrophilic cream DAB   | 154321    | 32034     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 153969    | 32044     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 154282    | 32047     | 45      |
| Caelo      | Anionic hydrophilic cream DAB   | 153575    | 32054     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 154284    | 32056     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 154281    | 32058     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 154285    | 32060     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 154283    | 32062     | 60      |
| Caelo      | Anionic hydrophilic cream DAB   | 161031    | 32147     | 40      |

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| Supplier | Substance                       | Batch     | Sample ID | Spectra |
|----------|---------------------------------|-----------|-----------|---------|
| Caelo    | Anionic hydrophilic cream DAB   | 161510    | 32219     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161507    | 32221     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161506    | 32427     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161506    | 32428     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161510    | 32429     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161510    | 32430     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161798    | 32432     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161798    | 32433     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161798    | 32434     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161529    | 32438     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161529    | 32439     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161526    | 32441     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161526    | 32442     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161526    | 32443     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161527    | 32445     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161527    | 32446     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161528    | 32448     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161528    | 32449     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161561    | 32642     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161563    | 32643     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 161796    | 32646     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162500    | 32650     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162501    | 32652     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162589    | 32655     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162590    | 32657     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162591    | 32659     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162591    | 32660     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162592    | 32662     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162593    | 32664     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162593    | 32665     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162593    | 32666     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162594    | 32668     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162596    | 32670     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162596    | 32671     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162597    | 32673     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162599    | 32675     | 40      |
| Caelo    | Anionic hydrophilic cream DAB   | 162600    | 32677     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 162587    | 32552     | 40      |
| Caelo    | Anionic hydrophilic cream SR... | 162587    | 32553     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160674    | 32134     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160674    | 32135     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160674    | 32136     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160675    | 32138     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 160676    | 32140     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161918    | 32423     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161919    | 32425     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161918    | 32622     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 161919    | 32623     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170302    | 33352     | 40      |
| Caelo    | Anionic hydrophilic cream wi... | 170299    | 33356     | 40      |
| apomix   | Anionic hydrophic cream wit...  | 05B310517 | 33517     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160748    | 32150     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160749    | 32152     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160751    | 32154     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 160750    | 32226     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161654    | 32371     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161655    | 32373     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161656    | 32375     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161657    | 32377     | 41      |
| Caelo    | Base cream, hydrophobic DAC     | 161654    | 32491     | 40      |

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| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Base cream, hydrophobic DAC     | 161655 | 32492     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161742 | 32508     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161656 | 32509     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 161657 | 32510     | 40      |
| Caelo    | Base cream, hydrophobic DAC     | 171504 | 33377     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161141 | 32120     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161142 | 32122     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161694 | 32383     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161695 | 32385     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161694 | 32582     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 161695 | 32583     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162220 | 32585     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162220 | 32594     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162220 | 32595     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162221 | 32597     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162221 | 32598     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162221 | 32599     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162221 | 32600     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162221 | 32601     | 40      |
| Caelo    | Hydrophilic cream, non-ionic... | 162579 | 32603     | 40      |

- 75 868 spectra from a total of 1737 batches from further 334 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 27 651 spectra from 1057 *Apo-Ident* customers from 5264 batches from the substance/substance group *Hydrophilic ointments*.
- Among them are spectra of independent samples from 5129 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                    | Substance                     | Batch     | Spectra |
|-----------------------------|-------------------------------|-----------|---------|
| 17000922                    | Anionic hydrophilic cream DAB | 311128    | 1       |
| 20.12.2016 Sanacorp 6,00EUR | Anionic hydrophilic cream DAB | 16259701  | 1       |
| AEP                         | Anionic hydrophilic cream DAB | 18298401  | 1       |
| Caelo                       | Anionic hydrophilic cream DAB | 16259301  | 27      |
| AHC 28.05.13 EK2,95         | Anionic hydrophilic cream DAB | 13036301  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 15401301  | 2       |
| AHD                         | Anionic hydrophilic cream DAB | 16180101  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 16259201  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 17083801  | 5       |
| AHD                         | Anionic hydrophilic cream DAB | 16168802  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 170838601 | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 17143601  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 17143801  | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 17200701  | 2       |
| AHD                         | Anionic hydrophilic cream DAB | 17270301  | 2       |
| AHD                         | Anionic hydrophilic cream DAB | 18160301  | 3       |
| AHD                         | Anionic hydrophilic cream DAB | 1816301   | 1       |
| AHD                         | Anionic hydrophilic cream DAB | 18243401  | 1       |

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| Supplier                | Substance                     | Batch       | Spectra |
|-------------------------|-------------------------------|-------------|---------|
| AHD                     | Anionic hydrophilic cream DAB | 18297901    | 3       |
| AHD                     | Anionic hydrophilic cream DAB | 17A270520   | 1       |
| AHD                     | Anionic hydrophilic cream DAB | 20002943001 | 1       |
| AHD 05.03.15 3,33       | Anionic hydrophilic cream DAB | 14264001    | 1       |
| AHD 09.03.2017 EK: 5,94 | Anionic hydrophilic cream DAB | 16328001    | 1       |
| AHD 11.05.20            | Anionic hydrophilic cream DAB | 20000028001 | 1       |
| Caelo                   | Anionic hydrophilic cream DAB | 19206301    | 9       |
| AHD, 31.10.2013         | Anionic hydrophilic cream DAB | 13313201    | 1       |
| AHD,15.04.2013          | Anionic hydrophilic cream DAB | 12314701    | 1       |
| Bombastus               | Anionic hydrophilic cream DAB | 19003571    | 7       |
| Caelo                   | Anionic hydrophilic cream DAB | 16158802    | 4       |
| Caelo                   | Anionic hydrophilic cream DAB | 18116901    | 6       |
| Caelo                   | Anionic hydrophilic cream DAB | 19162501    | 4       |
| ahd/lamotte             | Anionic hydrophilic cream DAB | 14118401    | 1       |
| AHDE 12.09.2014         | Anionic hydrophilic cream DAB | 14144301    | 1       |
| AHDE 22.05.2015         | Anionic hydrophilic cream DAB | 14366801    | 4       |
| Caelo                   | Anionic hydrophilic cream DAB | 17298801    | 15      |
| Caelo                   | Anionic hydrophilic cream DAB | 17142201    | 8       |
| AIH                     | Anionic hydrophilic cream DAB | 16258901    | 1       |
| Allianc. Health. /bo    | Anionic hydrophilic cream DAB | 18001562    | 1       |
| Caelo                   | Anionic hydrophilic cream DAB | 2000029001  | 1       |
| Alliance health         | Anionic hydrophilic cream DAB | 14233001    | 1       |
| Alliance Health         | Anionic hydrophilic cream DAB | 18006016    | 1       |
| Alliance Healthcare     | Anionic hydrophilic cream DAB | 13363401    | 1       |
| Alliance Healthcare     | Anionic hydrophilic cream DAB | 18006025    | 1       |
| Alliance Healthcare     | Anionic hydrophilic cream DAB | 18006026    | 2       |
| Alliance Healthcare     | Anionic hydrophilic cream DAB | 19272601    | 1       |
| Alliance Healthcare     | Anionic hydrophilic cream DAB | 20000924002 | 2       |
| Caelo                   | Anionic hydrophilic cream DAB | 15357501    | 2       |
| Caelo                   | Anionic hydrophilic cream DAB | 19272601    | 20      |
| Alliance21.01.15        | Anionic hydrophilic cream DAB | 14233101    | 1       |
| Allianz                 | Anionic hydrophilic cream DAB | 17299601    | 1       |
| Allianz                 | Anionic hydrophilic cream DAB | 17299801    | 1       |
| Allianz                 | Anionic hydrophilic cream DAB | 17299401    | 1       |
| Allianz Healthcare      | Anionic hydrophilic cream DAB | 16328001    | 1       |
| Allianz Healthcare      | Anionic hydrophilic cream DAB | 16328401    | 1       |
| Alte Apotheke           | Anionic hydrophilic cream DAB | 16158501    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 12204601    | 2       |
| Anzag                   | Anionic hydrophilic cream DAB | 12218501    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 271710      | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 12314101    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 15352901    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 297911      | 2       |
| Anzag                   | Anionic hydrophilic cream DAB | 16158701    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 16259801    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 17083802    | 2       |
| Anzag                   | Anionic hydrophilic cream DAB | 17084201    | 2       |
| Anzag                   | Anionic hydrophilic cream DAB | 17142501    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 17142601    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 17142901    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 17142102    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 17298802    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 19072701    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 19206001    | 1       |
| Anzag                   | Anionic hydrophilic cream DAB | 19206401    | 1       |
| Anzag 25.01.2013        | Anionic hydrophilic cream DAB | 12266101    | 1       |
| Anzag 27.03.2015        | Anionic hydrophilic cream DAB | 14264301    | 1       |
| Anzag, 16.01.2019       | Anionic hydrophilic cream DAB | 18004836    | 1       |
| Caelo                   | Anionic hydrophilic cream DAB | 14062201    | 9       |
| Caelo                   | Anionic hydrophilic cream DAB | 12083702    | 1       |

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| <b>Supplier</b>           | <b>Substance</b>              | <b>Batch</b>  | <b>Spectra</b> |
|---------------------------|-------------------------------|---------------|----------------|
| Caelo                     | Anionic hydrophilic cream DAB | 11253501      | 1              |
| api-ident                 | Anionic hydrophilic cream DAB | 17270302      | 1              |
| apomix                    | Anionic hydrophilic cream DAB | 17001305      | 2              |
| apomix                    | Anionic hydrophilic cream DAB | 4B110319      | 4              |
| apomix                    | Anionic hydrophilic cream DAB | 1A070119      | 1              |
| apomix/ Noweda            | Anionic hydrophilic cream DAB | 12B141116     | 1              |
| apomix/Noweda             | Anionic hydrophilic cream DAB | 170841901     | 1              |
| apomix/phönix             | Anionic hydrophilic cream DAB | 3a090118      | 1              |
| apomix/Spangro            | Anionic hydrophilic cream DAB | 4B19319       | 1              |
| Bambustus/Noweda          | Anionic hydrophilic cream DAB | 297662        | 5              |
| Bären Apotheke            | Anionic hydrophilic cream DAB | 17045301      | 1              |
| Bionorica ethics/Phoenix  | Anionic hydrophilic cream DAB | 18010702      | 1              |
| Bobastus/ Phönix 21.03.19 | Anionic hydrophilic cream DAB | 18004838      | 1              |
| Bobmastus                 | Anionic hydrophilic cream DAB | 291657        | 1              |
| Bomb/Noweda               | Anionic hydrophilic cream DAB | 308399        | 1              |
| Bomb/Noweda               | Anionic hydrophilic cream DAB | 18000250      | 1              |
| Bomb/Sanacorp             | Anionic hydrophilic cream DAB | 308405        | 1              |
| Bomb/Sanacorp             | Anionic hydrophilic cream DAB | 18006014      | 1              |
| Bomb/Sanacorp             | Anionic hydrophilic cream DAB | 19000617      | 1              |
| Bomba                     | Anionic hydrophilic cream DAB | 283478        | 1              |
| Bomba/AHD                 | Anionic hydrophilic cream DAB | 280410        | 1              |
| Bomba/Phönix              | Anionic hydrophilic cream DAB | 308408        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 290144        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 14286201      | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 294545        | 4              |
| Bombastus                 | Anionic hydrophilic cream DAB | 291732        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 294549        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 295400        | 7              |
| Bombastus                 | Anionic hydrophilic cream DAB | 297672        | 3              |
| Bombastus                 | Anionic hydrophilic cream DAB | 267442        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 269513        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 271014        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 269517        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 269441        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 271011        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 271008        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 271009        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274593        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 6861306       | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 270947        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274695/273533 | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 273534        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 276315        | 3              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274697        | 3              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274594        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274592        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274595        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 276318        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 274597        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 277297        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 277462        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 277461        | 3              |
| Bombastus                 | Anionic hydrophilic cream DAB | 273532        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 278846        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 276433        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 280289        | 4              |
| Bombastus                 | Anionic hydrophilic cream DAB | 278852        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 280294        | 1              |
| Bombastus                 | Anionic hydrophilic cream DAB | 279056        | 2              |
| Bombastus                 | Anionic hydrophilic cream DAB | 277295        | 1              |

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| Supplier  | Substance                     | Batch    | Spectra |
|-----------|-------------------------------|----------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 277458   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 280416   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 278849   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 281999   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 279059   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 278853   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 273539   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282006   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 282113   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 282112   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283411   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 280418   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 283412   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283413   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 280291   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282003   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 285593   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283482   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 285589   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282109   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 285595   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 286495   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 280413   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 285597   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 287559   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287563   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 287564   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287436   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287565   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 288570   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 288720   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 288655   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 288574   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 290150   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 291657   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 290080   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 291655   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 290075   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 290145   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287433   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 291824   | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 291729   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 290078   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 288573   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 291832   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 293445   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 60080602 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 294546   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 293446   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 295514   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 296705   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 2946450  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 296786   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 296782   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 297676   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 302465   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 308407   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 295399   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 294643   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 295515   | 2       |

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| <b>Supplier</b> | <b>Substance</b>              | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------------------|--------------|----------------|
| Bombastus       | Anionic hydrophilic cream DAB | 295516       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 294644       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 296704       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 295517       | 9              |
| Bombastus       | Anionic hydrophilic cream DAB | 296785       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 297671       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 297680       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 297668       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 297673       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 297677       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 2955126      | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 300353       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 299256       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 300365       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 300360       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 300362       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 301270       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 300364       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 301356       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 301271       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 301358       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 296784       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 302463       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 301272       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 302469       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 302470       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 302457       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 304093       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 304095       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 304098       | 15             |
| Bombastus       | Anionic hydrophilic cream DAB | 302459       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 302467       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 304100       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 304099       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 302461       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 302471       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 305379       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 305371       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 305381       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 307028       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 403099       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 307032       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 307035       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 307030       | 9              |
| Bombastus       | Anionic hydrophilic cream DAB | 307037       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 60080601     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 307038       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 307330       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 310265       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 310266       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 310221       | 11             |
| Bombastus       | Anionic hydrophilic cream DAB | 308408       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 310271       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 310273       | 8              |
| Bombastus       | Anionic hydrophilic cream DAB | 311054       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 308480       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 17001305     | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 311133       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 17001306     | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 311131       | 7              |

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| Supplier  | Substance                     | Batch        | Spectra |
|-----------|-------------------------------|--------------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 17001310     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 311123       | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 18000248     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 17001304     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18000244     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18000252     | 9       |
| Bombastus | Anionic hydrophilic cream DAB | 18000255     | 9       |
| Bombastus | Anionic hydrophilic cream DAB | 18000243     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18001551     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 18000256     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18001552     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18001547     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18001553     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18001558     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 18001557     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 18002354     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002361     | 13      |
| Bombastus | Anionic hydrophilic cream DAB | 1800250      | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002355     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18003576     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18004835     | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 18006017     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 18006022     | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18004841     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 18006021     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 18006020     | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 19000890     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19000619     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 19002197     | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 19000621     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19002208     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19002188     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 19003973     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 19002192     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19003981     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 19003978     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19003969     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19005017     | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 19003968     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19003971     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 191108144652 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19003987     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19005007     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20000021     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 1905009      | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20000027     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20000034     | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 20000026     | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 20000023     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20001206     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 20000035     | 12      |
| Bombastus | Anionic hydrophilic cream DAB | 20001207     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 20001215     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 20001210     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20001536     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20002540     | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 20001538     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20002531     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 20002541     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20003255     | 2       |

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| <b>Supplier</b> | <b>Substance</b>              | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------------------|--------------|----------------|
| Bombastus       | Anionic hydrophilic cream DAB | 20004282     | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 20004271     | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 21000047     | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 21000048     | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 19002200     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 270950       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 305375       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 305386       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 310270       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 18001549     | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 18003587     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 18005153     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 18006026     | 11             |
| Bombastus       | Anionic hydrophilic cream DAB | 20000028     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 20001208     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 20004279     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 210000053    | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 21000057     | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 282001       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 296700       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 270824       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 273538       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 274698       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 274765       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 277298       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 279055       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 282110       | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 283477       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 286502       | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 287557       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 286505       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 288652       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 288575       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 308393       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 19003977     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 19004878     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 291823       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 293358       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 280288       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 305384       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 19002194     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 297679       | 7              |
| Bombastus       | Anionic hydrophilic cream DAB | 17045101     | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 191240111    | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 19000622     | 5              |
| Bombastus       | Anionic hydrophilic cream DAB | 19003982     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 19005014     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 282115       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 290146       | 4              |
| Bombastus       | Anionic hydrophilic cream DAB | 19002193     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 295518       | 8              |
| Bombastus       | Anionic hydrophilic cream DAB | 18001556     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 20000033     | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 270804       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 274596       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 20001202     | 3              |
| Bombastus       | Anionic hydrophilic cream DAB | 285592       | 1              |
| Bombastus       | Anionic hydrophilic cream DAB | 297675       | 6              |
| Bombastus       | Anionic hydrophilic cream DAB | 300357       | 2              |
| Bombastus       | Anionic hydrophilic cream DAB | 301268       | 2              |

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| Supplier  | Substance                     | Batch      | Spectra |
|-----------|-------------------------------|------------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 320461     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 302462     | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 304102     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 307029     | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 305378     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 308401     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 305385     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 17001316   | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 310272     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 17001307   | 14      |
| Bombastus | Anionic hydrophilic cream DAB | 17001315   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 19002206   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 17001312   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 277459     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 282107     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282111     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287560     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 285591     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 290149     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 294551     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 306439     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 307036     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 311130     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18001478   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18003582   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18159901   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18006018   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 180060144x | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19002204   | 18      |
| Bombastus | Anionic hydrophilic cream DAB | 19002199   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19003985   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 190050092x | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20004274   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20002224   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002205   | 15      |
| Bombastus | Anionic hydrophilic cream DAB | 19002207   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 294649     | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 301353     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 276320     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 274695     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18001560   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19000618   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002201   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 2001536    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 280417     | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002198   | 15      |
| Bombastus | Anionic hydrophilic cream DAB | 311125     | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 305377     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 286499     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 308221     | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 18004831   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 283480     | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 282005     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 303736     | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 305383     | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 311127     | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 18000254   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 180004835  | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 180006017  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 1900392    | 1       |

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| Supplier  | Substance                     | Batch    | Spectra |
|-----------|-------------------------------|----------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 19005009 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 20000031 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20001209 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20001539 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 294647   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 20001213 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 302464   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 19003979 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20001214 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20000029 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002195 | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 277292   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 281998   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283474   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 302460   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 311134   | 12      |
| Bombastus | Anionic hydrophilic cream DAB | 18001550 | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18001555 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 18001559 | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18002357 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002359 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 18003588 | 13      |
| Bombastus | Anionic hydrophilic cream DAB | 18004840 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 18004837 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19000617 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002196 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 19000615 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19003980 | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 20001537 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20003262 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20002538 | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 2004279  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 286498   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 304090   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18003584 | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18002362 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19000620 | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 293441   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 296781   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002364 | 15      |
| Bombastus | Anionic hydrophilic cream DAB | 276316   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 277457   | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 282114   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 295512   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 297666   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 301351   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 305376   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 308403   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18006025 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 19003984 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 310269   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 300356   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 308406   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18003585 | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 18004836 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 18006016 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18006023 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 19003967 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 308405   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 311132   | 8       |

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| Supplier  | Substance                     | Batch     | Spectra |
|-----------|-------------------------------|-----------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 290220    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 291825    | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 293448    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 279057    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 2000033   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 277293    | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 277455    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 283476    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283478    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 285594    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 287562    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 288656    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 290079    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 291731    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 293440    | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 294642    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 295397    | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 296699    | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 296702    | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 301266    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 302453    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 302454    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 305370    | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 305373    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 305369    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 301355    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 307025    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 308400    | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 310267    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 311118    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 17001302  | 9       |
| Bombastus | Anionic hydrophilic cream DAB | 17001300  | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18000245  | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18001554  | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 180000245 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18001546  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002352  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18006015  | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18006012  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19002189  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19003972  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20000030  | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 2001217   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20001205  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20003258  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283410    | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18004838  | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18006024  | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 20004280  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 304105    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 308402    | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 20002537  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 293437    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 300363    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 300355    | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 301357    | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 283483    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 287435    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 17000166  | 11      |
| Bombastus | Anionic hydrophilic cream DAB | 295511    | 5       |

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| Supplier  | Substance                     | Batch            | Spectra |
|-----------|-------------------------------|------------------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 297663           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 300350           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 300351           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 297667           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 300348           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 301349           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 301350           | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 300361           | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 302452           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 302456           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 301267           | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 305368           | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 305638           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 304101           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 308399           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 310217           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 17001308         | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 17001303         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18002356         | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 18001544         | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18000251         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18001548         | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18000250         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18001561         | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18002363         | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 18003578         | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 18006014         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19003974         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 1900397218004831 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19005011         | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 19005015         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20003265         | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 307024           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19000612         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 19002191         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 273407           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282002           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 283481           | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 287432           | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 288657           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 291656           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 293357           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 295403           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 296708           | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 297674           | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 301352           | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 307031           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 308398           | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 311128           | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18000253         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18001562         | 12      |
| Bombastus | Anionic hydrophilic cream DAB | 18003580         | 10      |
| Bombastus | Anionic hydrophilic cream DAB | 19003986         | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 19005010         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20000032         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 20003260         | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 20002539         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 20003264         | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 21000055         | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 21001549         | 1       |

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| Supplier  | Substance                     | Batch    | Spectra |
|-----------|-------------------------------|----------|---------|
| Bombastus | Anionic hydrophilic cream DAB | 17001309 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 295396   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 295401   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 295404   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 300349   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 16250001 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 304094   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 305380   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 311124   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 17001313 | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18004839 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18006019 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 19003966 | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 19003976 | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 19005013 | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 21000061 | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 280290   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 282004   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 285596   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 291659   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 293359   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 293447   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 293361   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 294646   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 296783   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 296707   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 296787   | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 297669   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 300358   | 6       |
| Bombastus | Anionic hydrophilic cream DAB | 301269   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 302466   | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 305067   | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 307039   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 307332   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 308404   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 18002360 | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 18003586 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19000623 | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19002202 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19005016 | 8       |
| Bombastus | Anionic hydrophilic cream DAB | 21000049 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 2004282  | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 288721   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19005012 | 3       |
| Bombastus | Anionic hydrophilic cream DAB | 294547   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 297670   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 301354   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 302468   | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 304097   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 305374   | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 30537    | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 307027   | 7       |
| Bombastus | Anionic hydrophilic cream DAB | 307033   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 310220   | 1       |
| Bombastus | Anionic hydrophilic cream DAB | 17001311 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 1800256  | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 18003581 | 5       |
| Bombastus | Anionic hydrophilic cream DAB | 19000616 | 2       |
| Bombastus | Anionic hydrophilic cream DAB | 19002203 | 4       |
| Bombastus | Anionic hydrophilic cream DAB | 19003983 | 1       |

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| Supplier          | Substance                     | Batch             | Spectra |
|-------------------|-------------------------------|-------------------|---------|
| Bombastus         | Anionic hydrophilic cream DAB | 19003975          | 13      |
| Bombastus         | Anionic hydrophilic cream DAB | 277465            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 263981            | 5       |
| Bombastus         | Anionic hydrophilic cream DAB | 266175            | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 262772            | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 267436            | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 270711            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 290218            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 294650            | 11      |
| Bombastus         | Anionic hydrophilic cream DAB | 294648            | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 294641            | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 296703            | 8       |
| Bombastus         | Anionic hydrophilic cream DAB | 17088901          | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 311129            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 18000257          | 18      |
| Bombastus         | Anionic hydrophilic cream DAB | 19003988          | 12      |
| Bombastus         | Anionic hydrophilic cream DAB | 19003989          | 12      |
| Bombastus         | Anionic hydrophilic cream DAB | Bombastus-WerkeAG | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 20001217          | 11      |
| Bombastus         | Anionic hydrophilic cream DAB | 20002530          | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 2002541           | 1       |
| Bombastus         | Anionic hydrophilic cream DAB | 20003266          | 6       |
| Bombastus         | Anionic hydrophilic cream DAB | 21000060          | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 19000624          | 12      |
| Bombastus         | Anionic hydrophilic cream DAB | 18000249          | 4       |
| Bombastus         | Anionic hydrophilic cream DAB | 288659            | 3       |
| Bombastus         | Anionic hydrophilic cream DAB | 291658            | 4       |
| Bombastus         | Anionic hydrophilic cream DAB | 288658            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 291822            | 2       |
| Bombastus         | Anionic hydrophilic cream DAB | 296706            | 3       |
| Bombastus         | Anionic hydrophilic cream DAB | 18003787          | 8       |
| Bombastus         | Anionic hydrophilic cream DAB | 20001216          | 16      |
| Bombastuts/Gehe   | Anionic hydrophilic cream DAB | 308397            | 4       |
| Bombastuts/Noweda | Anionic hydrophilic cream DAB | 307023            | 2       |
| Bombatus          | Anionic hydrophilic cream DAB | 19002187          | 1       |
| Bombstus/ Phoenix | Anionic hydrophilic cream DAB | 19003986          | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 311126            | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 17001306          | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 17001311          | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 18001560          | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 18004839          | 1       |
| Bombstus/Gehe     | Anionic hydrophilic cream DAB | 19000616          | 1       |
| Bombstus/San      | Anionic hydrophilic cream DAB | 308403            | 1       |
| Caeelo / Gehe     | Anionic hydrophilic cream DAB | 18298901          | 1       |
| Caela/ L2         | Anionic hydrophilic cream DAB | 16249902          | 1       |
| Caele             | Anionic hydrophilic cream DAB | 9002601           | 1       |
| Caeelo            | Anionic hydrophilic cream DAB | 11331601          | 1       |
| Caeelo            | Anionic hydrophilic cream DAB | 654879            | 1       |
| Caeelo            | Anionic hydrophilic cream DAB | 3321              | 1       |
| Caeelo            | Anionic hydrophilic cream DAB | 12265401          | 3       |
| Caeelo            | Anionic hydrophilic cream DAB | 13168901          | 6       |
| Caeelo            | Anionic hydrophilic cream DAB | 13277401          | 9       |
| Caeelo            | Anionic hydrophilic cream DAB | 13314101          | 9       |
| Caeelo            | Anionic hydrophilic cream DAB | 13346501          | 5       |
| Caeelo            | Anionic hydrophilic cream DAB | 14185501          | 7       |
| Caeelo            | Anionic hydrophilic cream DAB | 14341501          | 5       |
| Caeelo            | Anionic hydrophilic cream DAB | 15200101          | 8       |
| Caeelo            | Anionic hydrophilic cream DAB | 15200301          | 8       |
| Caeelo            | Anionic hydrophilic cream DAB | 15258901          | 5       |
| Caeelo            | Anionic hydrophilic cream DAB | 15428102          | 5       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 18298801    | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 11120201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11229001    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 11258201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11331501    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 11311501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11332001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12010201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2704212540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11332101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11332401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2405212540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12010901    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12012201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12099001    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12099201    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12100201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12100101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12100701    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12187901    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12100901    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 12010601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 22091202    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12100601    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 12101201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12100501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12218401    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 1119387     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12187801    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12128502    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12204601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12195401    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12010501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12264401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12218701    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12217901    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 112212540   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12218501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12264502    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12188001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12265201    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12245503    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2112212540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12266101    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 12265101    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12265801    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20301012-3  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12265701    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15011301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12264701    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 1601312540  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12265001    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12265901    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 413I-02540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12245401    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12265601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12313601    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12313901    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 20021311    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 4131I-02540 | 1       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 12313202    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 12314101    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 1303312540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314301    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 2103312540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 28031319    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 204312540   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314501    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12204301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314701    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 12264601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12188101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1218501     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1913Q-02540 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 8051301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1913R-02540 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314901    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13036001    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13038301    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 1061302     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13128701    | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 3061302     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | U-030513-1  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | U-310513-1  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13036302    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2413Q02540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13154202    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13154301    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 13164901    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13165001    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 13165701    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 13154101    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13168501    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 13168301    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13166001    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13169001    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 131168901   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13168401    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 12081301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13168201    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13154401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 277461      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 30081303    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13168601    | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 10092013A   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13271001    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13265401    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 27091305    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13167701    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13265501    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 13265701    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13280101    | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 19101301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13313201    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 13313001    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13167901    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13265602    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13280001    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 8111301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13313301    | 4       |

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| Supplier | Substance                     | Batch      | Spectra |
|----------|-------------------------------|------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 13275601   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13280201   | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 13313401   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 1331401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13277501   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13313701   | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 6121304    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | CH13314001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13346001   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13314601   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13346601   | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 6021405    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 6021406    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13315001   | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 13363401   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13068504   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13364001   | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 24021401   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13364301   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13275501   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1119720    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14042501   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14062101   | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 14016701   | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 133312901  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14062601   | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 14062401   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 14016801   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 1418101    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14118201   | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 14016601   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14138801   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14070801   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14146301   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 14062801   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14144601   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14144501   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12081405   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14186702   | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 14024901   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14144301   | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 14185601   | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 141460201  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 30091403   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14185801   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14233101   | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 14068601   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14185702   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14232901   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14233601   | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 14233301   | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 14185901   | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 14186001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17112014B  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2111401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 142144301  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14233501   | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 14264201   | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 14186101   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14286001   | 4       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 14286201    | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 14285501    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1423301     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14233201    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 14146601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14295201    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 14294701    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 5031508     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14341701    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 14232801    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14294601    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 9041505     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1416401     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14367001    | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 14367401    | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 14342301    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 27041512    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15001201    | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 293437      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 4051506     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14341901    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 6061501     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15001401    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 15027201    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14285701    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15034301    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15200001    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 16071506    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15034501    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15200501    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15039001    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15267201    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 15267001    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15266901    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15397201    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15353201    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15357301    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15397301    | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 15400701    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15432001    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 16150601    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16180101    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15319201    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 15315701    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 8696        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | Testmessung | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14341801    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 8709        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15352901    | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 2729        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15400501    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15401001    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15400601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15353101    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15400401    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 15396901    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15357101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 297680      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16046201    | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 2775        | 1       |

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| Supplier | Substance                     | Batch              | Spectra |
|----------|-------------------------------|--------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 16046601           | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 16046901           | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 16047001           | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 16057501           | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 16058001           | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 15431801           | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 16103501           | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 16103101           | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 57601              | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 297669             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12345              | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14285902           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12886              | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16047101           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16057801           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1259487            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16057901           | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16057201           | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 2807               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16150801           | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 16150901           | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 16152501           | 5       |
| Caelo    | Anionic hydrophilic cream DAB | Mh090716Lo1        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 106057201          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 8816-250-345       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16158701           | 28      |
| Caelo    | Anionic hydrophilic cream DAB | 16158803           | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 160914UEA          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1679601            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15401601           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16152901           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 161101UEA/16156401 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2879               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16156301           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16114102           | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 16259302           | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 16258601           | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 16264301           | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 16259001           | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 16158601           | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 6259601            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17045101           | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 16264501           | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 16317201           | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 16322701           | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 16322801           | 28      |
| Caelo    | Anionic hydrophilic cream DAB | 1625901            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16259101           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16259201           | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 16328001           | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 16328201           | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 163170001          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16317001           | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 1234               | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 305378             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 6051701            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16322501           | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 17045301/5268      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16265401           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 3061702            | 1       |

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| Supplier | Substance                     | Batch        | Spectra |
|----------|-------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 17045401     | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 1625991      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 170453015285 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 163322601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17061703     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17088701     | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 10071706     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11170717     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17084001     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 170838025326 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17142601     | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 17143101     | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 171426015334 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17030301     | 56      |
| Caelo    | Anionic hydrophilic cream DAB | 17143802     | 30      |
| Caelo    | Anionic hydrophilic cream DAB | 17143701     | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 171426015363 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16328301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1742701      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17143201     | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 17125802     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 17143301     | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 17142301     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 311134       | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 171443501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 171428015414 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201701     | 26      |
| Caelo    | Anionic hydrophilic cream DAB | 13121718     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17200703     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 17200801     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 17201501     | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 17201001     | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 1721401      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201201     | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 305374       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172003703    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 171419901    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201801     | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 17001310     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19021812     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1720801      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172015015495 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17202101     | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 18000257     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 17202301     | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 172016015530 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18066701     | 47      |
| Caelo    | Anionic hydrophilic cream DAB | 17270102     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18066803     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 17269601     | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 17298901     | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 23051808     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 23051810     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17299201     | 32      |
| Caelo    | Anionic hydrophilic cream DAB | 6061805      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17299301     | 24      |
| Caelo    | Anionic hydrophilic cream DAB | 23061814     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17299501     | 28      |
| Caelo    | Anionic hydrophilic cream DAB | 17299401     | 8       |
| Caelo    | Anionic hydrophilic cream DAB | P2018/107    | 1       |

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| Supplier | Substance                     | Batch            | Spectra |
|----------|-------------------------------|------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 17299701         | 33      |
| Caelo    | Anionic hydrophilic cream DAB | 18129301         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17299801         | 29      |
| Caelo    | Anionic hydrophilic cream DAB | 18010401         | 55      |
| Caelo    | Anionic hydrophilic cream DAB | 17001315         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18010501         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 180418MM         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18010302         | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 1800401          | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18002356         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18010901         | 38      |
| Caelo    | Anionic hydrophilic cream DAB | 18066601         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18010701         | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 18116801         | 34      |
| Caelo    | Anionic hydrophilic cream DAB | 18066902         | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 18139401         | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 18139501         | 25      |
| Caelo    | Anionic hydrophilic cream DAB | 180110001        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18160302         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 18168801         | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 18160301         | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 18003588         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 18169101         | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 18169201         | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 18139701         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18168901         | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 18169501         | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 181669301        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18139001         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18003784         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18004835         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298601         | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 18160201         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18160001         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18298301         | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 18006025         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298401         | 27      |
| Caelo    | Anionic hydrophilic cream DAB | 18243001         | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 18299001         | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 8243101          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18004842         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298001         | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 18298701         | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 19002502         | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 18298502         | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 19002601         | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 18298601int2205C | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19071501         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 19072001         | 53      |
| Caelo    | Anionic hydrophilic cream DAB | 19003001         | 25      |
| Caelo    | Anionic hydrophilic cream DAB | 19071903         | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 19071701         | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 1897901          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19071904         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 109071801        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19161901         | 33      |
| Caelo    | Anionic hydrophilic cream DAB | 19072801         | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 19002194         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 19162401         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 19161401         | 6       |

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| Supplier | Substance                     | Batch        | Spectra |
|----------|-------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 19162001     | 25      |
| Caelo    | Anionic hydrophilic cream DAB | 19161701     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 19162601     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 19206201     | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 1119162101   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19206701     | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 19206901     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 19206401     | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 19272701     | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 19207101     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 19273003     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 19207001     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 1927300      | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 19272401     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 19000532003  | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 20000038001  | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 20000046003  | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 20000929001  | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 20000402001  | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 10000311001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000002801   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000037001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 200000029001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 200000318001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000927001  | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 2000040101   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000401001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000924002  | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 20000312001  | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 20000027002  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000092801   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20001675002  | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 20000400001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20000315001  | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 200000314001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20001454001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 200003216001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000095001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20001469001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 2000319001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20002943001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20004460001  | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 21000373001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 21000375001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000374001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000925001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000287001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 302461       | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18010601     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | CHB18243201  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11180201     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000030001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1234569      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 153552901    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15401302     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 19161301     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 20000931001  | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 15432101     | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 17201401     | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 19071601     | 12      |

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| Supplier | Substance                     | Batch                | Spectra |
|----------|-------------------------------|----------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 19206001             | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 302456               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17001312             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18041402             | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 19072501             | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 20000316001          | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20004457002          | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16322401             | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 2000032001           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13167801             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14042201             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 290145               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15200401             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15401201             | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 165057801            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16250001             | 34      |
| Caelo    | Anionic hydrophilic cream DAB | 200000929001         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000319001          | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 17141901-20180112Ma5 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17200701-20180404Ma7 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15428501             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 16322402             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 153532010            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000930001          | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 21000377001          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1234301              | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13070601             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 13035902             | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14233401             | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 15267801             | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 15267601             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 15428401             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 16057601             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 170612UEA/16264501   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 170817UEA/17088801   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 171107UEA/17143001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 304017200702         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19161501             | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 20001474001          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15315601             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15428201             | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 300365               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17248501             | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 3960/V07/15          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 3965/V07/15          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14295101             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 294645               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 161431               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16259801             | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 304096               | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18109901             | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 18180802             | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 18297401             | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 18297301             | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 11332501             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12245601             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13154201             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13167601             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 9/AKD13              | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 304098               | 2       |

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| Supplier | Substance                     | Batch                | Spectra |
|----------|-------------------------------|----------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 17202001             | 25      |
| Caelo    | Anionic hydrophilic cream DAB | 19273002             | 35      |
| Caelo    | Anionic hydrophilic cream DAB | 19003988             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17269901             | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 18159901             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 17143801             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 1336301              | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 19273001             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15267401             | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 171420101            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17270001             | 64      |
| Caelo    | Anionic hydrophilic cream DAB | 108/AKD16            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000032001          | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 17142501             | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 12245701             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13169301             | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 14233001             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13167501             | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 17200701             | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 18000252             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 307028               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13165901             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 170411AHC/16264501   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12313301             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13071304             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13165101             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13169201             | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13270701             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13312901             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13346101             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 14062301             | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 1824340202           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13036301             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 20000028001          | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 20000311001          | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 14062901             | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 160470001            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17248601             | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 14341601             | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 15199901             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 13363301             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12217801             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12218801             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12265301             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12264801             | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13070502             | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 16259301-20170704Ma2 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13165801             | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 14139001             | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 19003989             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19259301             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17084201             | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 18243301             | 34      |
| Caelo    | Anionic hydrophilic cream DAB | 20000318001          | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 16156101             | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 53(01119683)         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 54(18298401)         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20002945002          | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 1632401              | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17084101             | 48      |

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| Supplier | Substance                     | Batch        | Spectra |
|----------|-------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 16103201     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 17088501     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 19071801     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 20000399001  | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15199801     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14342601     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 15027101     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 13168101     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14016901     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12195301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1313314401   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14264302     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14366801     | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 15034201     | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 1423201      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15319501     | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 15401701     | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 152000201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17142401     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 19072102     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19272505     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 20000928001  | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 21000924001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13271101     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 18010702     | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 18066802     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 3255         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 3261         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 3290         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18296301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19072601     | 29      |
| Caelo    | Anionic hydrophilic cream DAB | 1971501      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15315901     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 12264901     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16220201     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 304105       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17269801     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 19072201     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 19272301     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14263901     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 15319301     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 17045301     | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 17299101     | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 172999101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 304118298701 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 182443402    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000029001  | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 113313001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18169301     | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 19002582     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15401401     | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 15431702     | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 16046801     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 162500001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 308406       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 180107020    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18006018     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 19167901     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000003201   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20004458001  | 2       |

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| Supplier | Substance                     | Batch        | Spectra |
|----------|-------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 17088801     | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 17248801     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 160312A      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18117001     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 18006019     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 196161001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19161001     | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 20004457001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14146201     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 282005       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19272901     | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 12245801     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13070301     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13169101     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13168701     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13313101     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 14016602     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14144401     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 1315Q-02540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16103401     | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 16179801     | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 123test      | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1720001      | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 19072301     | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 19072101     | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 19161601     | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 192036301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000904002  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20002942001  | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 200002946001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12099301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14186501     | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 19162301     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14342701     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 294649       | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15259001     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 16249902     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 16150701     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 17270501     | 24      |
| Caelo    | Anionic hydrophilic cream DAB | 18116802     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18111701     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 181169301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11311101     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | pzn01119720  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14138701     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 20000027001  | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 12218201     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12266201     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13072501     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 278848       | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 3313U-02540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13165601     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13265301     | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 314Q2540     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13363601     | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 13363201     | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 13314801     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13409501     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14062501     | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 2414E2540    | 1       |

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| Supplier | Substance                     | Batch            | Spectra |
|----------|-------------------------------|------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 14118501         | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 14185301         | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 1485401          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14185401         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 287562           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1418601          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14285601         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 14285801         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14295001         | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 14286101         | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 14366802         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15001101         | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15026901         | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 15267101         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15319101         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1260216          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16156401         | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 16180001         | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 16359901         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1270417          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17083801         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 1200717/17084201 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17088601         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 17141901         | 50      |
| Caelo    | Anionic hydrophilic cream DAB | 17201601         | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 1727001          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18109702         | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 180109001        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18117201         | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 18002361         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1801072          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18160101         | 43      |
| Caelo    | Anionic hydrophilic cream DAB | 1219A-02540      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19002901         | 29      |
| Caelo    | Anionic hydrophilic cream DAB | 19072701         | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 19161002         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 20000924001      | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18001            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18029102         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000031001       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20001480001      | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 20001676002      | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 200002082001     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20002948001      | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12098801         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12100401         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12218001         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12313701         | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 4513E2540        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 4513U2540        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13313601         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 714M2540         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1114U2540        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1814E2540        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14138902         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 17143001         | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 200000924001     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15200601         | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13128601         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 21000289001      | 2       |

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| Supplier | Substance                     | Batch        | Spectra |
|----------|-------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 200000402001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14017001     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14925101     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14342002     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1535101      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16259601     | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 162259601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17248701     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 215697       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16152801     | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 200000033001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15431701     | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 13313901     | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 14118301     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14186601     | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 15027301     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 51(17143601) | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 52(17299201) | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 52(17299101) | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18117102     | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 18297902     | 34      |
| Caelo    | Anionic hydrophilic cream DAB | 55(19002802) | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 56(19072901) | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2002082001   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201301     | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 16169401     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20002080001  | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 20002947001  | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 20004459001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000288001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000921003  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 11253201     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1659801      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201909     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17223103     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298101     | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 12195601     | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 276319       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314404     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 270943       | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 276409       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17153001     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19002802     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 20002949001  | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 11326701     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12195201     | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 13167401     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 13310001     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13363701     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14118101     | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 14185201     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 14264101     | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14264001     | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 14294301     | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 14294501     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14342801     | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 295400       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15315801     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15401501     | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16057301     | 22      |

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| Supplier | Substance                     | Batch              | Spectra |
|----------|-------------------------------|--------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 16179302           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1542801            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1615640            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16158501           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16259401           | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 16260001           | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 16264701           | 17      |
| Caelo    | Anionic hydrophilic cream DAB | 16249901           | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 170503AHC/16264501 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1624701            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17083802           | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 170729182          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 305372             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 170919UEA/17143001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17143401           | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 171229UEA/17123001 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17200702           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 123456             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 180220UEA/17200801 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172031301          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172001801          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201101           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1724601            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 311128             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18040401           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18011201           | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18210702           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18011011           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18169401           | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 18243501           | 26      |
| Caelo    | Anionic hydrophilic cream DAB | 18002360           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 181600010          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18297903           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1824501            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19002702           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 190003001          | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19072901           | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 200000311001       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 200000927001       | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20000925001        | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 200000925001       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000092501         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000926001        | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 20000320001        | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 20001480002        | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20001471001        | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 20001675001        | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 2000147001         | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20002081001        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21000294001        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21001496002        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 21001497001        | 1       |
| Fagron   | Anionic hydrophilic cream DAB | 18160201           | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15400901           | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12187701           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 12265501           | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13314001           | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 14061801           | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 12314601           | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 3436               | 1       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 3447        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 3713A02540  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1231401     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 4313I-02540 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14233202    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 291732      | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 15034401    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 15027001    | 31      |
| Caelo    | Anionic hydrophilic cream DAB | 15200202    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15396801    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 15397101    | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 297672      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16057701    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 16156201    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16259701    | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 17143501    | 22      |
| Caelo    | Anionic hydrophilic cream DAB | 17143510    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201102    | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 171435021   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17270302    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18011001    | 28      |
| Caelo    | Anionic hydrophilic cream DAB | 18168501    | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 18117101    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18140001    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 18469301    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18006024    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19000622    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19162201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19206101    | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 20001452001 | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20002082001 | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 21000921002 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14144701    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16151002    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17200901    | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13346201    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16328401    | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 12195501    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314401    | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 278851      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14042401    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14042601    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1423901     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14294801    | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14342101    | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 1434301     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 14374801    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 15034601    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 1500141     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16046501    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 18168701    | 25      |
| Caelo    | Anionic hydrophilic cream DAB | 18243201    | 14      |
| Caelo    | Anionic hydrophilic cream DAB | 15267301    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 15200201    | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 15357201    | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 16046301    | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 1119683     | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16046701    | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 300353      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16103301    | 15      |

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| Supplier | Substance                     | Batch         | Spectra |
|----------|-------------------------------|---------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 16179601      | 20      |
| Caelo    | Anionic hydrophilic cream DAB | 16259901      | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 16200201      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 302453        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 163228801     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17045201      | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 17030001      | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 16322601      | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 297674        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17101501      | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 17142101      | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 17142901      | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 17142801      | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 17142102      | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 17201901      | 23      |
| Caelo    | Anionic hydrophilic cream DAB | 17270301      | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 18010402      | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 17298802      | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 17269701      | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 308397        | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18066703      | 15      |
| Caelo    | Anionic hydrophilic cream DAB | 18010801      | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 18007201      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18160402      | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 18168601      | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 183139501     | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298901      | 31      |
| Caelo    | Anionic hydrophilic cream DAB | 60080604      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19072401      | 29      |
| Caelo    | Anionic hydrophilic cream DAB | 19161101      | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 19072907      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19161801      | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 18045903      | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 1916108       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 19207102      | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 19206801      | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 2000038001    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 2000093201    | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000932001   | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 200009206001  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20000313001   | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 18330004      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20001475001   | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 20002949002   | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 20004461001   | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 21000291001   | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 17294101      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13314401      | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 13346401      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1404251       | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1234test      | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17201701/5578 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172991015608  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 172993015638  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 180107025721  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 180107025746  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 180111015761  | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18298201      | 19      |
| Caelo    | Anionic hydrophilic cream DAB | 19240103      | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 200000037001  | 1       |

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| Supplier | Substance                     | Batch               | Spectra |
|----------|-------------------------------|---------------------|---------|
| Caelo    | Anionic hydrophilic cream DAB | 12204501            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 12316001            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12314001            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 12313501            | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12314801            | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 12245501            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13168801            | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13167501-3423310192 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13167501-3439311151 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1331402             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13313501            | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13312801            | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13314302            | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 13280201-3452311172 | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13346701            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13346301            | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 13244402            | 9       |
| Caelo    | Anionic hydrophilic cream DAB | 13314901            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 13364101            | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 13364201            | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 13314701            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14118401            | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 14062701            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14146501            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 14366301            | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14342901            | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 14342201            | 5       |
| Caelo    | Anionic hydrophilic cream DAB | 14294201            | 18      |
| Caelo    | Anionic hydrophilic cream DAB | 14342501            | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 15001301            | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 15259301            | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15267701            | 3       |
| Caelo    | Anionic hydrophilic cream DAB | AKD10               | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 15428301            | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 15431901            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 1541702             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 1610341             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16058101            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 16156001            | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 9/AKD15             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 16264401            | 8       |
| Caelo    | Anionic hydrophilic cream DAB | 16250102            | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 16258901            | 4       |
| Caelo    | Anionic hydrophilic cream DAB | 1626441             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 17142701            | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 17143601            | 16      |
| Caelo    | Anionic hydrophilic cream DAB | 17248401            | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 18001562            | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 18011101            | 13      |
| Caelo    | Anionic hydrophilic cream DAB | 1811101             | 1       |
| Caelo    | Anionic hydrophilic cream DAB | 18242901            | 10      |
| Caelo    | Anionic hydrophilic cream DAB | 18243401            | 7       |
| Caelo    | Anionic hydrophilic cream DAB | 19002801            | 21      |
| Caelo    | Anionic hydrophilic cream DAB | 19161201            | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 20000494001         | 12      |
| Caelo    | Anionic hydrophilic cream DAB | 20000314001         | 6       |
| Caelo    | Anionic hydrophilic cream DAB | 20000317001         | 11      |
| Caelo    | Anionic hydrophilic cream DAB | 20000033001         | 2       |
| Caelo    | Anionic hydrophilic cream DAB | 20004456001         | 3       |
| Caelo    | Anionic hydrophilic cream DAB | 21000920001         | 2       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Caelo                      | Anionic hydrophilic cream DAB | 19002703    | 5       |
| Caelo                      | Anionic hydrophilic cream DAB | 1018E-03327 | 2       |
| Caelo                      | Anionic hydrophilic cream DAB | 15027002    | 2       |
| Caelo                      | Anionic hydrophilic cream DAB | 15401101    | 7       |
| Caelo                      | Anionic hydrophilic cream DAB | 16179702    | 12      |
| Caelo                      | Anionic hydrophilic cream DAB | 16264601    | 11      |
| Caelo                      | Anionic hydrophilic cream DAB | 16328101    | 16      |
| Caelo                      | Anionic hydrophilic cream DAB | 17088901    | 14      |
| Caelo                      | Anionic hydrophilic cream DAB | 13168001    | 5       |
| Caelo                      | Anionic hydrophilic cream DAB | 18139901    | 7       |
| Caelo                      | Anionic hydrophilic cream DAB | 20000403001 | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 3413M-02540 | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 16250201    | 15      |
| Caelo                      | Anionic hydrophilic cream DAB | 15401301    | 6       |
| Caelo                      | Anionic hydrophilic cream DAB | 13070401    | 2       |
| Caelo/ Phoenix             | Anionic hydrophilic cream DAB | 19072401    | 1       |
| Caecolo/Krieger            | Anionic hydrophilic cream DAB | 17143501    | 1       |
| Caecolo/Noweda             | Anionic hydrophilic cream DAB | 17201901    | 1       |
| Caecolo/Noweda             | Anionic hydrophilic cream DAB | 17299501    | 1       |
| Caesa / Alliance Health... | Anionic hydrophilic cream DAB | 18168701    | 1       |
| Caesar & Lorenz GmbH       | Anionic hydrophilic cream DAB | 19161601    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 13313301    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 16322801    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 16328201    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17088801    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17142601    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17142801    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17143501    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17202101    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 17299201    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 172992017   | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 18010901    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 18139401    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 18169001    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 18242901    | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream DAB | 19071501    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 12101101    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 12313501    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 14016901    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 13409401    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 14062401    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 14185801    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 14232801    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 14294201    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 15027301    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 15400601    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17202001    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17270501    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17299101    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17299301    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17299701    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 17299601    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18010801    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18066901    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18010401    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18169101    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18168601    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18160101    | 4       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18168801    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 18169201    | 2       |

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| <b>Supplier</b>      | <b>Substance</b>              | <b>Batch</b> | <b>Spectra</b> |
|----------------------|-------------------------------|--------------|----------------|
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298301     | 8              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18243501     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18243402     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18169401     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18169301     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18242901     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18243101     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298401     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298901     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18139701     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18243201     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 1828301      | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18299101     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18299001     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18243301     | 5              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18116801     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18297902     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298502     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298101     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298201     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18004840     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002801     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298701     | 5              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 18298801     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002502     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002901     | 5              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002802     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19071501     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19021401     | 10             |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19071601     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19003001     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19071801     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072101     | 6              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072201     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072301     | 6              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072401     | 7              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072501     | 8              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072601     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072701     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072001     | 6              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002703     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072801     | 13             |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19162201     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161301     | 5              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161101     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19072901     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161901     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19093701     | 16             |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19071701     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161201     | 4              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19002601     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19162001     | 6              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161601     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19162301     | 1              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161401     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161701     | 5              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206001     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161001     | 3              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206201     | 2              |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19162401     | 1              |

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| Supplier             | Substance                     | Batch        | Spectra |
|----------------------|-------------------------------|--------------|---------|
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206101     | 11      |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206701     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 17327510     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161501     | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206401     | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206301     | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206901     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19161801     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272701     | 4       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19207001     | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19273002     | 7       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272505     | 5       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19206801     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272901     | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19273001     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000031     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000494001  | 5       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000318001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272301     | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000402001  | 4       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000037001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 1927260      | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272401     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000028001  | 6       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000032001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 2000002801   | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000027001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000929001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 19272601     | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000311001  | 5       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000403001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000931001  | 5       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000038001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000312001  | 4       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000928001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000029001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000925001  | 6       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000401001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000029100  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001675002  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000399001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000314001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000932001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000924002  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 200001675002 | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000317001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000315001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000313001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000319001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000924001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001480001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001454001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000320001  | 3       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000930001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001676001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001475001  | 4       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001474001  | 4       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20000926001  | 2       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001471001  | 1       |
| Caesar & Loretz GmbH | Anionic hydrophilic cream DAB | 20001676002  | 4       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20001455001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20001480002 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002942001 | 4       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002082001 | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002080001 | 4       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 2000094002  | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20001675001 | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20000316001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20001469001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20000400001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002949002 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002948001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20004457001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20004457000 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20004457002 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 21000290001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20004458001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002949001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 20002943001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 21000924001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream DAB | 21000920001 | 3       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18243301    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 20000029001 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18297902    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18299101    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072101    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072901    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072601    | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072001    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19161901    | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072001    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 20000028001 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 20002942001 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 20002946001 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19002901    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072501    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19161601    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19161801    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18298301    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18298901    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18243301    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18298701    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 18299101    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19072301    | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19161101    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19161201    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19272901    | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream DAB | 19272505    | 2       |
| Caesar & Loretz GmbH 40... | Anionic hydrophilic cream DAB | 11253201    | 1       |
| Caesar & Loretz GmbH D-... | Anionic hydrophilic cream DAB | 11326701    | 1       |
| Caesar & Loretz GmbH Hi... | Anionic hydrophilic cream DAB | 13346401    | 1       |
| Caesar & Loretz GmbH Hi... | Anionic hydrophilic cream DAB | 280291      | 1       |
| Caesar & Loretz GmbH Hi... | Anionic hydrophilic cream DAB | 15432001    | 2       |
| Caesar & Loretz GmbH Je... | Anionic hydrophilic cream DAB | 20002081001 | 2       |
| Caesar & Loretz GmbH Je... | Anionic hydrophilic cream DAB | 20002942001 | 2       |
| Caesar & Loretz GmbH Sa... | Anionic hydrophilic cream DAB | 20000930001 | 2       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream DAB | 11311101    | 3       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream DAB | 12100601    | 1       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream DAB | 12195201    | 2       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream DAB | 12264501    | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream DAB | 12313202    | 2       |
| Caesar & Loretz GmbH/ A... | Anionic hydrophilic cream DAB | 19162601    | 1       |
| Caesar & Loretz GmbH/ K... | Anionic hydrophilic cream DAB | 19072501    | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream DAB | 20002945002 | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream DAB | 21000372001 | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream DAB | 18298101    | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream DAB | 18299101    | 1       |
| Caesar & Loretz GmbH/ S... | Anionic hydrophilic cream DAB | 20001480001 | 1       |
| Caesar & Loretz GmbH/AHD   | Anionic hydrophilic cream DAB | 19272701    | 1       |
| Caesar & Loretz GmbH/AHD   | Anionic hydrophilic cream DAB | 20000932001 | 1       |
| Caesar & Loretz GmbH/AHD   | Anionic hydrophilic cream DAB | 20002949002 | 2       |
| Caesar & Loretz GmbH/Al... | Anionic hydrophilic cream DAB | 19206301    | 1       |
| Caesar & Loretz GmbH/An... | Anionic hydrophilic cream DAB | 19162001    | 2       |
| Caesar & Loretz GmbH/Fi... | Anionic hydrophilic cream DAB | 18298101    | 1       |
| Caesar & Loretz GmbH/Fi... | Anionic hydrophilic cream DAB | 19002802    | 1       |
| Caesar & Loretz GmbH/Fi... | Anionic hydrophilic cream DAB | 19072701    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 19002802    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 19162001    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 19161901    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 20000028001 | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 19272504    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 20000399001 | 2       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 20000320001 | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream DAB | 20002942001 | 1       |
| Caesar & Loretz GmbH/GEHE  | Anionic hydrophilic cream DAB | 20000928001 | 2       |
| Caesar & Loretz GmbH/GEHE  | Anionic hydrophilic cream DAB | 20001470001 | 2       |
| Caesar & Loretz GmbH/Ge... | Anionic hydrophilic cream DAB | 19206801    | 1       |
| Caesar & Loretz GmbH/je... | Anionic hydrophilic cream DAB | 20002082001 | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19003001    | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19072701    | 2       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19072101    | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19161701    | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19206001    | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19206801    | 3       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 19272901    | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000494001 | 2       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000038001 | 2       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000028001 | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000312001 | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000313001 | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000320001 | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream DAB | 20000930001 | 1       |
| Caesar & Loretz GmbH/Mi... | Anionic hydrophilic cream DAB | 19072001    | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 18298701    | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 19161901    | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 19161401    | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 19161501    | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 19273001    | 2       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20000318001 | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20000929001 | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20000928001 | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20000319001 | 1       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20002082001 | 2       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream DAB | 20002949002 | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 18299101    | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 19072701    | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 19272601    | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 19072501    | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 19161901    | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 19206101    | 2       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 20000932001 | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 20001480001 | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream DAB | 20002948001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 19072801    | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 19072701    | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 19161101    | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 20000038001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 1920611     | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 20000929001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 20000312001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 20004462001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 21000921001 | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream DAB | 21000924001 | 1       |
| Caesar & Loretz Hilden     | Anionic hydrophilic cream DAB | 18011001    | 1       |
| Caesar & Loretz Hilden     | Anionic hydrophilic cream DAB | 19072301    | 1       |
| Caesar & Loretz/ Noweda    | Anionic hydrophilic cream DAB | 17299201    | 1       |
| Caesar & Loretz/AHD        | Anionic hydrophilic cream DAB | 15319101    | 1       |
| Caesar & Loretz/AHD        | Anionic hydrophilic cream DAB | 17202001    | 1       |
| Caesar & Loretz/Gehe       | Anionic hydrophilic cream DAB | 19206201    | 1       |
| Caesar & Loretz/Noweda     | Anionic hydrophilic cream DAB | 16158901    | 1       |
| Caesar & Loretz/Noweda     | Anionic hydrophilic cream DAB | 17088901    | 1       |
| Caesar & Loretz/Phönix     | Anionic hydrophilic cream DAB | 19161101    | 1       |
| Caesar & Loretz7pHÖNIX     | Anionic hydrophilic cream DAB | 18243301    | 1       |
| Caesar und Loretz GmbH     | Anionic hydrophilic cream DAB | 19000618    | 1       |
| Caesar&Loretz GmbH         | Anionic hydrophilic cream DAB | 15357401    | 1       |
| Caesar&lorenz,Anzag        | Anionic hydrophilic cream DAB | 15258901    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 11320801    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 12010501    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 12314201    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 13128701    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 13363601    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 13364301    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 14118201    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 14139001    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 14285601    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 14294801    | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream DAB | 14233601    | 1       |
| caesar&lorenz,Phönix       | Anionic hydrophilic cream DAB | 15034301    | 1       |
| Caesar&lorenz,phönix       | Anionic hydrophilic cream DAB | 14186702    | 1       |
| Caeser und Loretz GmbH     | Anionic hydrophilic cream DAB | 19161201    | 1       |
| caleo                      | Anionic hydrophilic cream DAB | 17141901    | 2       |
| Caleo                      | Anionic hydrophilic cream DAB | 17088701    | 1       |
| Caleo/ Ebert               | Anionic hydrophilic cream DAB | 18066701    | 1       |
| Caleo/gehe                 | Anionic hydrophilic cream DAB | 17248601    | 1       |
| calo                       | Anionic hydrophilic cream DAB | 17269701    | 1       |
| Calo/Sanacorp              | Anionic hydrophilic cream DAB | 16259302    | 1       |
| cealo                      | Anionic hydrophilic cream DAB | 18298401    | 1       |
| Cealo                      | Anionic hydrophilic cream DAB | 16250001    | 1       |
| Cealo                      | Anionic hydrophilic cream DAB | 19161001    | 1       |
| Cealo                      | Anionic hydrophilic cream DAB | 20000402001 | 1       |
| Cealo/AHD                  | Anionic hydrophilic cream DAB | 19072401    | 1       |
| Cealo/Anzag                | Anionic hydrophilic cream DAB | 15200401    | 1       |
| Cealo/Sanacorp             | Anionic hydrophilic cream DAB | 13275501    | 1       |
| Cealo/Sanacorp             | Anionic hydrophilic cream DAB | 13364201    | 1       |
| Cealo/Sanacorp             | Anionic hydrophilic cream DAB | 17248401    | 1       |
| Celo                       | Anionic hydrophilic cream DAB | 16250001    | 4       |
| COM/Phoenix                | Anionic hydrophilic cream DAB | 20000927001 | 1       |
| DAB                        | Anionic hydrophilic cream DAB | 270951      | 1       |
| DAB 2008                   | Anionic hydrophilic cream DAB | 12099901    | 1       |
| DAB 2008                   | Anionic hydrophilic cream DAB | 14264001    | 1       |

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| Supplier           | Substance                     | Batch            | Spectra |
|--------------------|-------------------------------|------------------|---------|
| Ebert & Jacobi     | Anionic hydrophilic cream DAB | 18001562         | 1       |
| Ebert und Jacobi   | Anionic hydrophilic cream DAB | 18243402         | 1       |
| Ebert-Jacobi       | Anionic hydrophilic cream DAB | 16259201         | 1       |
| eigene Herstellung | Anionic hydrophilic cream DAB | 2/270114         | 1       |
| eigene Herstellung | Anionic hydrophilic cream DAB | 100214-4         | 1       |
| Eimermacher        | Anionic hydrophilic cream DAB | 308406           | 1       |
| EuRho              | Anionic hydrophilic cream DAB | 18116801         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 15401302         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 260416v2         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16046701         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16158901         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16103401         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17142101         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17000489         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17143301         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 310266           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 311124           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17001307         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 135464           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 18168501         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 18066901         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17202301         | 2       |
| Euro OTC           | Anionic hydrophilic cream DAB | 14233201         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16057401         | 3       |
| Euro OTC           | Anionic hydrophilic cream DAB | 237563           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17142002         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17299101         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 305372           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17001311         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17202101         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16046901         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17143201         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17270001         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 17270401         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16156201         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 300352           | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 16322701         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 18000257         | 1       |
| Euro OTC           | Anionic hydrophilic cream DAB | 288658           | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 18B06-B03-345419 | 2       |
| Fagron             | Anionic hydrophilic cream DAB | 12265501         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 14016602         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 17142501         | 3       |
| Fagron             | Anionic hydrophilic cream DAB | 17185401         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 17270001         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 18001549         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 17299201         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 20001209         | 2       |
| Fagron             | Anionic hydrophilic cream DAB | 14186601         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 16158803         | 2       |
| Fagron             | Anionic hydrophilic cream DAB | 19003984         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 17270401         | 3       |
| Fagron             | Anionic hydrophilic cream DAB | 17269801         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 15267401         | 2       |
| Fagron             | Anionic hydrophilic cream DAB | 16103501         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 18001559         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 12313202         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 18000250         | 2       |
| Fagron             | Anionic hydrophilic cream DAB | 18160402         | 1       |
| Fagron             | Anionic hydrophilic cream DAB | 14232801         | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Fagron                     | Anionic hydrophilic cream DAB | 300353      | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 307033      | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 17045401    | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 16046701    | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 17335701    | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 18002357    | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 18010401    | 1       |
| Fagron                     | Anionic hydrophilic cream DAB | 16047301    | 1       |
| Fargon                     | Anionic hydrophilic cream DAB | 15319201    | 1       |
| Fargon/Gehe                | Anionic hydrophilic cream DAB | 17270102    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 269445      | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 15200201    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 15400701    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 17045401    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 17201801    | 2       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18066701    | 2       |
| Fiebig                     | Anionic hydrophilic cream DAB | 17248401    | 2       |
| Fiebig                     | Anionic hydrophilic cream DAB | 17298901    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18116802    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18116901    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 1801101     | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18169001    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18169501    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18140001    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18298601    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18243402    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 18298801    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 19072301    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 19272301    | 1       |
| Fiebig                     | Anionic hydrophilic cream DAB | 20001452001 | 1       |
| Fiebig/ Caesar & Loretz... | Anionic hydrophilic cream DAB | 19072601    | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 15315501    | 4       |
| Finteler Apotheke          | Anionic hydrophilic cream DAB | 16322402    | 1       |
| Finteler Apotheke          | Anionic hydrophilic cream DAB | 17088901    | 1       |
| Fischar/ Krieger           | Anionic hydrophilic cream DAB | 17299201    | 1       |
| Fischer/Gehe               | Anionic hydrophilic cream DAB | 15315601    | 1       |
| Fishar                     | Anionic hydrophilic cream DAB | 16057201    | 1       |
| gehe                       | Anionic hydrophilic cream DAB | 19002206    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 262935      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 11311202    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 12026001    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 11219901    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 270949      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 274765      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 12265001    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 12313401    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 13038201    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 279057      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 13154201    | 2       |
| Gehe                       | Anionic hydrophilic cream DAB | 13165701    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 282001      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 280418      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 13280201    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 282111      | 2       |
| Gehe                       | Anionic hydrophilic cream DAB | 14042201    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 14062501    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 14232901    | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 288653      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 290080      | 1       |
| Gehe                       | Anionic hydrophilic cream DAB | 291732      | 1       |

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| Supplier | Substance                     | Batch     | Spectra |
|----------|-------------------------------|-----------|---------|
| Gehe     | Anionic hydrophilic cream DAB | 14341901  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 14294301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 15027301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 14342201  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 15431801  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 291658    | 2       |
| Gehe     | Anionic hydrophilic cream DAB | 15034601  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 296786    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 15428201  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 300363    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 302470    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16179601  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16150702  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 304100    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 15431702  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16158601  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16250001  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16250201  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 16249902  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 307040    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 308404    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 310267    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 17143301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 17142301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 310273    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 311129    | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 17202001  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18000250  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 17248601  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18000255  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 17270401  | 2       |
| Gehe     | Anionic hydrophilic cream DAB | 18001555  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18003575  | 3       |
| Gehe     | Anionic hydrophilic cream DAB | 18003576  | 4       |
| Gehe     | Anionic hydrophilic cream DAB | 18117001  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18004835  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18004837  | 2       |
| Gehe     | Anionic hydrophilic cream DAB | 18003586  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18160101  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18243501  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 182990001 | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18006019  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18243301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19002703  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18299001  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18028021  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 18298701  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19002198  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19072501  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19003571  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19003001  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19003982  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19003980  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19272505  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19003967  | 2       |
| Gehe     | Anionic hydrophilic cream DAB | 19206801  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 20000720  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 20001211  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 19272301  | 1       |
| Gehe     | Anionic hydrophilic cream DAB | 20002541  | 1       |

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| Supplier                 | Substance                     | Batch              | Spectra |
|--------------------------|-------------------------------|--------------------|---------|
| Gehe                     | Anionic hydrophilic cream DAB | 20001217           | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 12314101           | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 311134             | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 17270001           | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 18066901           | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 19002198           | 1       |
| GEHE                     | Anionic hydrophilic cream DAB | 19000619           | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 1331501            | 1       |
| Gehe 01.08.14            | Anionic hydrophilic cream DAB | 14062501           | 1       |
| Gehe 07.12.18            | Anionic hydrophilic cream DAB | 18169001           | 1       |
| GEHE 22.03.2014          | Anionic hydrophilic cream DAB | 14062301           | 1       |
| Gehe am 21.02.14         | Anionic hydrophilic cream DAB | 13364401           | 1       |
| Gehe/ 28.12.12 Bambastus | Anionic hydrophilic cream DAB | 274594             | 1       |
| Bombastus                | Anionic hydrophilic cream DAB | 307034             | 1       |
| Bombastus                | Anionic hydrophilic cream DAB | 308392             | 1       |
| Bombastus                | Anionic hydrophilic cream DAB | 308396             | 3       |
| Bombastus                | Anionic hydrophilic cream DAB | 311121             | 5       |
| Bombastus                | Anionic hydrophilic cream DAB | 311122             | 7       |
| Bombastus                | Anionic hydrophilic cream DAB | 310218             | 1       |
| Bombastus                | Anionic hydrophilic cream DAB | 19000614           | 1       |
| Bombastus                | Anionic hydrophilic cream DAB | 19002187           | 5       |
| Bombastus                | Anionic hydrophilic cream DAB | 20001535           | 1       |
| Gehe/Bombasus            | Anionic hydrophilic cream DAB | 18002364           | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 12264501           | 5       |
| Caelo                    | Anionic hydrophilic cream DAB | 16057401           | 8       |
| Caelo                    | Anionic hydrophilic cream DAB | 16150702           | 12      |
| Caelo                    | Anionic hydrophilic cream DAB | 1211116            | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 15250201           | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 16259901/1200117   | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 106102017/17142701 | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 17143301/1271117   | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 18066901           | 15      |
| Euro OTC                 | Anionic hydrophilic cream DAB | 16150801           | 1       |
| Fagron                   | Anionic hydrophilic cream DAB | 17142701           | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 1810402            | 1       |
| Caelo                    | Anionic hydrophilic cream DAB | 15357401           | 9       |
| Caelo                    | Anionic hydrophilic cream DAB | 16152701           | 18      |
| Caelo                    | Anionic hydrophilic cream DAB | 19072002           | 2       |
| GEpepharm GmbH           | Anionic hydrophilic cream DAB | 17045101           | 1       |
| gepepharm/ Gehe          | Anionic hydrophilic cream DAB | 1134496            | 1       |
| gepepharm/Gehe           | Anionic hydrophilic cream DAB | 16250001           | 1       |
| Th. Geyer                | Anionic hydrophilic cream DAB | 18243402           | 1       |
| Hedinger                 | Anionic hydrophilic cream DAB | 12264501           | 1       |
| Hedinger / Noweda        | Anionic hydrophilic cream DAB | 16264701           | 3       |
| Hedinger/ Sanacorp       | Anionic hydrophilic cream DAB | 17299201           | 1       |
| Henry Lamotte            | Anionic hydrophilic cream DAB | 16150702           | 1       |
| Henry Lamotte            | Anionic hydrophilic cream DAB | 16259701           | 1       |
| Henry Lamotte Oils GmbH  | Anionic hydrophilic cream DAB | 14341901           | 1       |
| Henry Lamotte/Noweda     | Anionic hydrophilic cream DAB | 17299501           | 1       |
| Hirsch                   | Anionic hydrophilic cream DAB | 12314701           | 1       |
| Hochhaus-Apotheke        | Anionic hydrophilic cream DAB | 16250001           | 2       |
| Ichthyol/Phönix          | Anionic hydrophilic cream DAB | 16150702           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 17248401           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 17299601           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 18010401           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 17299701           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 18010901           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 17299201           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 18168601           | 1       |
| Jenne                    | Anionic hydrophilic cream DAB | 18160302           | 1       |

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| Supplier              | Substance                     | Batch        | Spectra |
|-----------------------|-------------------------------|--------------|---------|
| Jenne                 | Anionic hydrophilic cream DAB | 18242901     | 1       |
| Jenne                 | Anionic hydrophilic cream DAB | 20001216     | 2       |
| Jenne/Maros           | Anionic hydrophilic cream DAB | 18298201     | 1       |
| Kapferer              | Anionic hydrophilic cream DAB | 17270301     | 1       |
| kehr                  | Anionic hydrophilic cream DAB | 19003980     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 17045101     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 17045501     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 17084201     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 17088801     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 311121       | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 18001559     | 1       |
| Kehr                  | Anionic hydrophilic cream DAB | 18003576     | 1       |
| Kehr.22.06.20         | Anionic hydrophilic cream DAB | 20000029001  | 1       |
| Kehr.24.03.2020       | Anionic hydrophilic cream DAB | 19273002     | 1       |
| Kehr/ Celo 24.01.2020 | Anionic hydrophilic cream DAB | 19162001     | 1       |
| Bombastus             | Anionic hydrophilic cream DAB | 18004842     | 14      |
| Caelo                 | Anionic hydrophilic cream DAB | 16158901     | 20      |
| Caelo                 | Anionic hydrophilic cream DAB | 18297901     | 7       |
| Klenk                 | Anionic hydrophilic cream DAB | 16103301     | 2       |
| Klenk                 | Anionic hydrophilic cream DAB | 17299601     | 1       |
| Klenk                 | Anionic hydrophilic cream DAB | 311124       | 1       |
| Krieger               | Anionic hydrophilic cream DAB | 17270401     | 1       |
| Krieger am 28.05.19   | Anionic hydrophilic cream DAB | 18003585     | 1       |
| Kurpark Apo Defektur  | Anionic hydrophilic cream DAB | 17045301     | 1       |
| L10                   | Anionic hydrophilic cream DAB | 17143401     | 1       |
| Lamotte               | Anionic hydrophilic cream DAB | 17299101     | 1       |
| lamotte/gehe          | Anionic hydrophilic cream DAB | 15200001     | 1       |
| Lamotte/Phoenix       | Anionic hydrophilic cream DAB | 19206801     | 1       |
| Leyh Pharma           | Anionic hydrophilic cream DAB | 165231       | 1       |
| Maros Arznei          | Anionic hydrophilic cream DAB | 18010302     | 1       |
| Midas                 | Anionic hydrophilic cream DAB | 16259601     | 1       |
| Midas                 | Anionic hydrophilic cream DAB | 18010401     | 1       |
| Midas                 | Anionic hydrophilic cream DAB | 17298801     | 1       |
| Midas                 | Anionic hydrophilic cream DAB | 18116801     | 3       |
| Caelo                 | Anionic hydrophilic cream DAB | 16179901     | 9       |
| Noveda                | Anionic hydrophilic cream DAB | 19002802     | 1       |
| noweda                | Anionic hydrophilic cream DAB | 200006927001 | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 12217801     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 1218701      | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 12265701     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 12314801     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 12313202     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13002705     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13035902     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13070301     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13154301     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13168401     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13168601     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13167401     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13280101     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13270801     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 13364001     | 2       |
| Noweda                | Anionic hydrophilic cream DAB | 14062701     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 290147       | 2       |
| Noweda                | Anionic hydrophilic cream DAB | 15400501     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 15428401     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 16156401     | 2       |
| Noweda                | Anionic hydrophilic cream DAB | 16260001     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 16328201     | 1       |
| Noweda                | Anionic hydrophilic cream DAB | 16259001     | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Noweda                     | Anionic hydrophilic cream DAB | 17088901    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17084101    | 2       |
| Noweda                     | Anionic hydrophilic cream DAB | 17143101    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 16317201    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17143001    | 3       |
| Noweda                     | Anionic hydrophilic cream DAB | 17143401    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17201501    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17270302    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17202101    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17201801    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17269801    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17270401    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 17248601    | 3       |
| Noweda                     | Anionic hydrophilic cream DAB | 17299501    | 2       |
| Noweda                     | Anionic hydrophilic cream DAB | 17248501    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18010302    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18011101    | 12      |
| Noweda                     | Anionic hydrophilic cream DAB | 18011001    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18160301    | 3       |
| Noweda                     | Anionic hydrophilic cream DAB | 18169401    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18003583    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18160101    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18243501    | 3       |
| Noweda                     | Anionic hydrophilic cream DAB | 18298101    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18298601    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18298201    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 18298701    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19003001    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19072101    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19072301    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19071601    | 2       |
| Noweda                     | Anionic hydrophilic cream DAB | 19002194    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19072901    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 4208092     | 2       |
| Noweda                     | Anionic hydrophilic cream DAB | 19161601    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19206201    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19272601    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 19005017    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20000035    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20001217    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20000928001 | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20000313001 | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20002541    | 1       |
| Noweda                     | Anionic hydrophilic cream DAB | 20001471001 | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 14267401    | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 18002358    | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 310222      | 4       |
| Noweda/ Caesar&Lorenz G... | Anionic hydrophilic cream DAB | 19162401    | 1       |
| Noweda/ Infecto Pharm      | Anionic hydrophilic cream DAB | 16264701    | 1       |
| Noweda/ Pharmachem         | Anionic hydrophilic cream DAB | 200000011   | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 291650      | 2       |
| Bombastus                  | Anionic hydrophilic cream DAB | 304089      | 6       |
| Bombastus                  | Anionic hydrophilic cream DAB | 18000246    | 3       |
| Bombastus                  | Anionic hydrophilic cream DAB | 19002185    | 2       |
| Bombastus                  | Anionic hydrophilic cream DAB | 18006009    | 3       |
| Bombastus                  | Anionic hydrophilic cream DAB | 20000025    | 6       |
| Caelo                      | Anionic hydrophilic cream DAB | 13314201    | 12      |
| Caelo                      | Anionic hydrophilic cream DAB | 17330401    | 3       |
| Caelo                      | Anionic hydrophilic cream DAB | 19192301    | 18      |
| Caelo                      | Anionic hydrophilic cream DAB | 20002946001 | 4       |

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| Supplier          | Substance                     | Batch        | Spectra |
|-------------------|-------------------------------|--------------|---------|
| Caelo             | Anionic hydrophilic cream DAB | 14342001     | 2       |
| Noweda/Hedinger   | Anionic hydrophilic cream DAB | 17202001     | 1       |
| Noweda/pharmachem | Anionic hydrophilic cream DAB | 18066802     | 1       |
| Caelo             | Anionic hydrophilic cream DAB | 200000924002 | 1       |
| Euro OTC          | Anionic hydrophilic cream DAB | 18298201     | 1       |
| Otto Fischar GmbH | Anionic hydrophilic cream DAB | 17201601     | 2       |
| Caelo             | Anionic hydrophilic cream DAB | 14186801     | 7       |
| Caelo             | Anionic hydrophilic cream DAB | 14185701     | 1       |
| Pala              | Anionic hydrophilic cream DAB | 19272601     | 1       |
| Caelo             | Anionic hydrophilic cream DAB | 18292401     | 1       |
| Pharmachem        | Anionic hydrophilic cream DAB | 304104       | 1       |
| phoenix           | Anionic hydrophilic cream DAB | 19072301     | 1       |
| phoenix           | Anionic hydrophilic cream DAB | 19072801     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 270705       | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 12011001     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 12313301     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 13038201     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 13314901     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 13364201     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 14016602     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 286498       | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 14118201     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 14139001     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 16322801     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17054201     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17045401     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17143701     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3043         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3054         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 310270       | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3065         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17143301     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3096         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3102         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 311132       | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17201102     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17202301     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18000252     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18001562     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17299101     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18001556     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3191         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3192         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3223         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18010901     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 17298901     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18004835     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18006023     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18297902     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 18297901     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3358         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19000624     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19002801     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3375         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19002197     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3383         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 3384         | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19072001     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19002550     | 1       |
| Phoenix           | Anionic hydrophilic cream DAB | 19003975     | 1       |

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| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| Phoenix                    | Anionic hydrophilic cream DAB | 19072701     | 1       |
| Phoenix                    | Anionic hydrophilic cream DAB | 3420         | 1       |
| Phoenix                    | Anionic hydrophilic cream DAB | 19161801     | 2       |
| Phoenix                    | Anionic hydrophilic cream DAB | 19003980     | 1       |
| Phoenix                    | Anionic hydrophilic cream DAB | 20000031     | 1       |
| Phoenix                    | Anionic hydrophilic cream DAB | 200400505    | 1       |
| Phoenix 20.2.2014          | Anionic hydrophilic cream DAB | 13313501     | 1       |
| Phoenix 01.09.2017         | Anionic hydrophilic cream DAB | 17142601     | 1       |
| Phoenix 07.01.2019 6,01EUR | Anionic hydrophilic cream DAB | 18169001     | 1       |
| Phoenix 09.01.2014         | Anionic hydrophilic cream DAB | 13313501     | 1       |
| Phoenix 11.07.2014         | Anionic hydrophilic cream DAB | 14139001     | 2       |
| Phoenix 14.01.2015 Ek: ... | Anionic hydrophilic cream DAB | 14295101     | 1       |
| PHOENIX 22.05.2014         | Anionic hydrophilic cream DAB | 14061801     | 1       |
| Phoenix 24.01.2014         | Anionic hydrophilic cream DAB | 13346101     | 1       |
| Phoenix 26.11.13           | Anionic hydrophilic cream DAB | 13265501     | 1       |
| Phoenix 27.02.18 6,09EUR   | Anionic hydrophilic cream DAB | 17200703     | 1       |
| Phoenix 29.08.2014 5,78    | Anionic hydrophilic cream DAB | 14186601     | 1       |
| Phoenix Goettin            | Anionic hydrophilic cream DAB | 293439       | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 274696       | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 12314201     | 5       |
| Phoenix/Beiersdorf         | Anionic hydrophilic cream DAB | 17143201     | 2       |
| Bombastus                  | Anionic hydrophilic cream DAB | 277463       | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 281999       | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 1415034401   | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 17208001     | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 18169001     | 15      |
| Caelo                      | Anionic hydrophilic cream DAB | 304118299101 | 1       |
| phoenix/noveda             | Anionic hydrophilic cream DAB | 15267501     | 1       |
| Phonix                     | Anionic hydrophilic cream DAB | 18168501     | 1       |
| phönix                     | Anionic hydrophilic cream DAB | 15267401     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 270703       | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 12314101     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 1231451      | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 276433       | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 13164901     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 279056       | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 13036001     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 13265602     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 282005       | 2       |
| Phönix                     | Anionic hydrophilic cream DAB | 13346301     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 288572       | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 14233401     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 14264301     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 16103301     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 305379       | 2       |
| Phönix                     | Anionic hydrophilic cream DAB | 16328001     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17143601     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17200701     | 2       |
| Phönix                     | Anionic hydrophilic cream DAB | 3135         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17001305     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17270001     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 3176         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17299401     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18001475     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 17299801     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18001560     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18116801     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18117201     | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18243402     | 2       |
| Phönix                     | Anionic hydrophilic cream DAB | 19000620     | 1       |

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| Supplier                   | Substance                     | Batch            | Spectra |
|----------------------------|-------------------------------|------------------|---------|
| Phönix                     | Anionic hydrophilic cream DAB | 18297902         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18298701         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 19072001         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 19072701         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 19161701         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 18006025         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 20001216         | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 20000401001      | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 20000315001      | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 20003309001      | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 20002947001      | 1       |
| Phönix                     | Anionic hydrophilic cream DAB | 21000373001      | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 6080602          | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB | 18003583         | 3       |
| Phönix, Caesar&Loretz G... | Anionic hydrophilic cream DAB | 19162201         | 1       |
| Phönix, Caesar&Loretz G... | Anionic hydrophilic cream DAB | 20000403001      | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 18243101         | 5       |
| Bombastus                  | Anionic hydrophilic cream DAB | 200000031        | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 12218301         | 2       |
| Caelo                      | Anionic hydrophilic cream DAB | 12218601         | 2       |
| Caelo                      | Anionic hydrophilic cream DAB | 13364401         | 5       |
| Caelo                      | Anionic hydrophilic cream DAB | 14255401         | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 17142002         | 4       |
| Caelo                      | Anionic hydrophilic cream DAB | 17143802/2220917 | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 172007001        | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 2220218/17319502 | 1       |
| Caelo                      | Anionic hydrophilic cream DAB | 17270401         | 15      |
| Caelo                      | Anionic hydrophilic cream DAB | 18243402         | 51      |
| Fagron                     | Anionic hydrophilic cream DAB | 300358           | 1       |
| Rabenapotheke              | Anionic hydrophilic cream DAB | 290146           | 1       |
| Raben-Apotheke Mildenau    | Anionic hydrophilic cream DAB | 283410           | 1       |
| Sana                       | Anionic hydrophilic cream DAB | 18298901         | 1       |
| Sana                       | Anionic hydrophilic cream DAB | 18298101         | 1       |
| Sana 08.10.14 EK 5,76      | Anionic hydrophilic cream DAB | 14232901         | 1       |
| Sana 11.02.15 EK 5,75      | Anionic hydrophilic cream DAB | 14294902         | 1       |
| Sana 20.11.14 EK 5,76      | Anionic hydrophilic cream DAB | 14233101         | 1       |
| Sana 23.03.16 Ek 5,73      | Anionic hydrophilic cream DAB | 15428401         | 1       |
| Sanac.                     | Anionic hydrophilic cream DAB | 1916201          | 1       |
| sanacorp                   | Anionic hydrophilic cream DAB | 286501           | 1       |
| sanacorp                   | Anionic hydrophilic cream DAB | 288655           | 1       |
| sanacorp                   | Anionic hydrophilic cream DAB | 14233101         | 1       |
| sanacorp                   | Anionic hydrophilic cream DAB | 14341601         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12187901         | 4       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12245701         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12264401         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12218501         | 2       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12265301         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12314301         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 12314401         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13154301         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13154101         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13168701         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13168001         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13313201         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13313101         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13167501         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 13280201         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 142/AKD52        | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 14186702         | 1       |
| Sanacorp                   | Anionic hydrophilic cream DAB | 14285601         | 1       |

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| Supplier                  | Substance                     | Batch       | Spectra |
|---------------------------|-------------------------------|-------------|---------|
| Sanacorp                  | Anionic hydrophilic cream DAB | 104/AKD3    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 104/AKD4    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 288573      | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 15034401    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 15199901    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 15401201    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | AKD11       | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 106/AKD12   | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 16152701    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 16264501    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 16258901    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17084201    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17143101    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17143501    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17143201    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17143601    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17201102    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17201401    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17200703    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17201801    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17202101    | 5       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17270001    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17270102    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 17201301    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18116801    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18117201    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18011101    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18010801    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18117001    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18168501    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18169501    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18242901    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 18298502    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19000621    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19072001    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19161201    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19161901    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19206201    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19206301    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19162001    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19002203    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19272505    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19272901    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 19003980    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20001214    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20000027    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20000035    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20002538    | 2       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20003265    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20002531    | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 20002081001 | 1       |
| Sanacorp                  | Anionic hydrophilic cream DAB | 2004277     | 1       |
| Caelo                     | Anionic hydrophilic cream DAB | 14146401    | 3       |
| Caelo                     | Anionic hydrophilic cream DAB | 14294902    | 2       |
| Caelo                     | Anionic hydrophilic cream DAB | 15259101    | 7       |
| Caelo                     | Anionic hydrophilic cream DAB | 13035901    | 1       |
| Caelo                     | Anionic hydrophilic cream DAB | 18160202    | 4       |
| Sanacorp 06.01.20 9,95EUR | Anionic hydrophilic cream DAB | 19161002    | 1       |
| Sanacorp 11.07.14 EK 5,76 | Anionic hydrophilic cream DAB | 141118401   | 1       |
| Sanacorp 19.12.14 EK 5,76 | Anionic hydrophilic cream DAB | 14285601    | 1       |

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| Supplier                    | Substance                       | Batch      | Spectra |
|-----------------------------|---------------------------------|------------|---------|
| Sanacorp 21.01.16           | Anionic hydrophilic cream DAB   | 15400901   | 1       |
| Sanacorp 25.02.2014 Ek ...  | Anionic hydrophilic cream DAB   | 13364201   | 2       |
| Sanacorp 28.11 Ek.5,85      | Anionic hydrophilic cream DAB   | 16180001   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 18299101   | 18      |
| Sanacorp, 16.03.17, 6,00EUR | Anionic hydrophilic cream DAB   | 16264501   | 1       |
| Bombastus                   | Anionic hydrophilic cream DAB   | 270704     | 1       |
| Bombastus                   | Anionic hydrophilic cream DAB   | 274600     | 2       |
| Caelo                       | Anionic hydrophilic cream DAB   | 11321101   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 12010801   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 12011302   | 2       |
| Caelo                       | Anionic hydrophilic cream DAB   | 12083802   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 12099101   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 12084101   | 3       |
| Caelo                       | Anionic hydrophilic cream DAB   | 142/AKD51  | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 104/AKD2   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 16150703   | 2       |
| Caelo                       | Anionic hydrophilic cream DAB   | 17200709   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 17299601   | 33      |
| Fagron                      | Anionic hydrophilic cream DAB   | 17045501   | 1       |
| Spangro                     | Anionic hydrophilic cream DAB   | 18066701   | 2       |
| Spangro 09.05.2014          | Anionic hydrophilic cream DAB   | 285599     | 1       |
| Spangro 16.4.19             | Anionic hydrophilic cream DAB   | 18004839   | 1       |
| Spangro 22.01.2019          | Anionic hydrophilic cream DAB   | 18003586   | 1       |
| Spangro 26.04.2013          | Anionic hydrophilic cream DAB   | 12314701   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 17045501   | 18      |
| Spangropharm                | Anionic hydrophilic cream DAB   | 19162001   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 283478     | 1       |
| Spangropharm                | Anionic hydrophilic cream DAB   | 14138902   | 1       |
| Caelo                       | Anionic hydrophilic cream DAB   | 14264301   | 5       |
| THC Rezeptur-Set            | Anionic hydrophilic cream DAB   | 17084101   | 2       |
| VDL;2.7.14                  | Anionic hydrophilic cream DAB   | 14118401   | 1       |
| WE:16.04.2016 Sanacor...    | Anionic hydrophilic cream DAB   | 14342901   | 1       |
| wepa/Sanaco                 | Anionic hydrophilic cream DAB   | 16103301   | 1       |
| Wolff/AHD                   | Anionic hydrophilic cream DAB   | 282107     | 1       |
| Wolff/Phönix                | Anionic hydrophilic cream DAB   | 16328101   | 1       |
| Bombastus                   | Anionic hydrophilic cream SR... | 19003564s  | 1       |
| Bombastus                   | Anionic hydrophilic cream SR... | 229346     | 1       |
| 20.05.19/Gehe/apomix        | Anionic hydrophilic cream SR... | 6A260219   | 1       |
| Bombastus                   | Anionic hydrophilic cream SR... | 20002219   | 1       |
| Aallianc. Healthc. / Ap...  | Anionic hydrophilic cream SR... | 12A030517  | 1       |
| Aallianc. Healthc. / Ap...  | Anionic hydrophilic cream SR... | 7A200318   | 1       |
| Aallianc. Healthc. / Ap...  | Anionic hydrophilic cream SR... | 28A070818  | 1       |
| Aallianc. Healthc. / Ap...  | Anionic hydrophilic cream SR... | 34A191118  | 1       |
| Aallianc. Healthc. / Ap...  | Anionic hydrophilic cream SR... | 14A180619  | 3       |
| Aallianc. Healthc. / Be...  | Anionic hydrophilic cream SR... | 24A100718  | 1       |
| Bombastus                   | Anionic hydrophilic cream SR... | 306440     | 8       |
| AH/Apomix                   | Anionic hydrophilic cream SR... | 36A051217  | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 281866     | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 14244702   | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 14301501   | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 292976     | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 292977     | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 296409     | 1       |
| AHD                         | Anionic hydrophilic cream SR... | 19021401   | 2       |
| Bombastus                   | Anionic hydrophilic cream SR... | 295167     | 5       |
| Bombastus                   | Anionic hydrophilic cream SR... | 300957     | 10      |
| Euro OTC                    | Anionic hydrophilic cream SR... | 16332001   | 2       |
| Caelo                       | Anionic hydrophilic cream SR... | 162115501  | 1       |
| Caelo                       | Anionic hydrophilic cream SR... | 15329501   | 12      |
| Caelo                       | Anionic hydrophilic cream SR... | 2001781004 | 1       |

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| Supplier                   | Substance                       | Batch        | Spectra |
|----------------------------|---------------------------------|--------------|---------|
| AHD/Lamotte                | Anionic hydrophilic cream SR... | 18147501     | 1       |
| All. Healthc. / Apomix     | Anionic hydrophilic cream SR... | 6050215      | 1       |
| All..Healthc./Apomix       | Anionic hydrophilic cream SR... | 30A020713    | 1       |
| All..Healthc./Apomix       | Anionic hydrophilic cream SR... | 18A260514    | 1       |
| All.Healthc. /Apomix       | Anionic hydrophilic cream SR... | 6A050215     | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18001479     | 5       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 41A151215a   | 1       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 34A130916    | 1       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 5A200217     | 3       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 11A110418    | 1       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 23A030919    | 2       |
| Allianc. Health. / Apomix  | Anionic hydrophilic cream SR... | 4A280120     | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18001481     | 8       |
| Allianc. Health. /Apomix   | Anionic hydrophilic cream SR... | 39A231115    | 1       |
| Allianc. Health. /Apomix   | Anionic hydrophilic cream SR... | 41A151215    | 1       |
| Allianc. Health. /Apomix   | Anionic hydrophilic cream SR... | 23A130616    | 2       |
| Allianc. Health. /Apomix   | Anionic hydrophilic cream SR... | 22A090616    | 2       |
| Allianc. Health. /Apomix   | Anionic hydrophilic cream SR... | 38A111016    | 2       |
| Allianc. Healthc. / Apo... | Anionic hydrophilic cream SR... | 9A190319     | 3       |
| Allianc. Healthc. /Apomix  | Anionic hydrophilic cream SR... | 34A131015    | 2       |
| Allianc. Healthc. /Apomix  | Anionic hydrophilic cream SR... | 18A040516    | 2       |
| Allianc. Healthc. /Apomix  | Anionic hydrophilic cream SR... | 26A041119    | 1       |
| alliance healthcare        | Anionic hydrophilic cream SR... | 2A020119     | 1       |
| Alliance Healthcare        | Anionic hydrophilic cream SR... | 302199       | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 307334       | 7       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 28A250613    | 2       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 19A030614    | 1       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 31A230914    | 1       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 35A031114    | 1       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 41A101214    | 1       |
| Alliance Healthcare/Apo... | Anionic hydrophilic cream SR... | 5A110219     | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 19003575     | 7       |
| Caelo                      | Anionic hydrophilic cream SR... | 34A060813    | 2       |
| Caelo                      | Anionic hydrophilic cream SR... | 200010034001 | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 21000806004  | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18001482     | 14      |
| Allianz                    | Anionic hydrophilic cream SR... | 18001478     | 1       |
| Alte Apotheke              | Anionic hydrophilic cream SR... | 303735       | 1       |
| AMH Niemann                | Anionic hydrophilic cream SR... | 1A080113     | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 4A030214     | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 20A020615    | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 16A050515    | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 1A050116     | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 6A270218     | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 14A29058     | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 17A190618    | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 22A040718    | 1       |
| AMH Niemann / E            | Anionic hydrophilic cream SR... | 12A070519    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 2A130114     | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 11A010414    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 31A230914    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 29A020914    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 41A101214    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 3A200115     | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 10A050315    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 12A310315    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 33A230915    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 14A300316    | 3       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 13A111016    | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 9A210317     | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 12A030517  | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 21A220617  | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 11A110418  | 1       |
| AMH Niemann / G            | Anionic hydrophilic cream SR... | 13A191118  | 1       |
| AMH Niemann / K            | Anionic hydrophilic cream SR... | 13A220316  | 1       |
| AMH Niemann / K            | Anionic hydrophilic cream SR... | 22A090616  | 1       |
| AMH Niemann / K            | Anionic hydrophilic cream SR... | 3A310117   | 1       |
| AMH Niemann / K            | Anionic hydrophilic cream SR... | 36A041218  | 1       |
| AMH Niemann / K            | Anionic hydrophilic cream SR... | 5A110219   | 1       |
| AMH Niemann GmbH & Co K... | Anionic hydrophilic cream SR... | 7A270213   | 2       |
| AMH Niemann GmbH & Co. KG  | Anionic hydrophilic cream SR... | 30A0207123 | 1       |
| AMH Niemann GmbH&Co.KG     | Anionic hydrophilic cream SR... | 15A040413  | 1       |
| AMH Niemann Kehr           | Anionic hydrophilic cream SR... | 30A160816  | 2       |
| AMH Niemann/E              | Anionic hydrophilic cream SR... | 1A080113   | 3       |
| AMH Niemann/E              | Anionic hydrophilic cream SR... | 42A141013  | 1       |
| AMH Niemann/E              | Anionic hydrophilic cream SR... | 45A141113  | 1       |
| AMH Niemann/E              | Anionic hydrophilic cream SR... | 31A091012  | 1       |
| AMH Niemann/G              | Anionic hydrophilic cream SR... | 38A271112  | 1       |
| AMH Niemann/G              | Anionic hydrophilic cream SR... | 44A051113  | 1       |
| AMH Niemann/G              | Anionic hydrophilic cream SR... | 18A180612  | 1       |
| AMH Niemann/G              | Anionic hydrophilic cream SR... | 24A070812  | 1       |
| AMH Niemann/G              | Anionic hydrophilic cream SR... | 36A031115  | 1       |
| AMH Niemann/K              | Anionic hydrophilic cream SR... | 36A270813  | 1       |
| AMH/Phönix                 | Anionic hydrophilic cream SR... | 35A211117  | 1       |
| AMH/Phönix                 | Anionic hydrophilic cream SR... | 10A260318  | 1       |
| AMH/Phönix                 | Anionic hydrophilic cream SR... | 31A021018  | 1       |
| AMH/Phönix                 | Anionic hydrophilic cream SR... | 1A070119   | 1       |
| AMH/Phönix                 | Anionic hydrophilic cream SR... | 6A020320   | 1       |
| anzag                      | Anionic hydrophilic cream SR... | 285899     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 286979     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 295232     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 6A260116   | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 300563     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 305067     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 308217     | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 17000164   | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 19206201   | 1       |
| Anzag                      | Anionic hydrophilic cream SR... | 19240002   | 1       |
| Anzag ek: 5,17EUR 08.04.13 | Anionic hydrophilic cream SR... | 277636     | 3       |
| Anzag/apomix/07.01.15      | Anionic hydrophilic cream SR... | 35A031114  | 1       |
| Anzag/apomix/31.01.2014    | Anionic hydrophilic cream SR... | 51A171213  | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 281745     | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 290526     | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 18002226   | 2       |
| Apo Holzapfel              | Anionic hydrophilic cream SR... | 2018       | 1       |
| apomi                      | Anionic hydrophilic cream SR... | 24A100718  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 35A081112  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 5A300113   | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 16A240413  | 3       |
| apomix                     | Anionic hydrophilic cream SR... | 31A030713  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 28A190814  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 8A290311   | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 18A180612  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 30A160914  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 29A020914  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 34A061015  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 30A250815  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 40A011215  | 1       |
| apomix                     | Anionic hydrophilic cream SR... | 12A080316  | 2       |
| apomix                     | Anionic hydrophilic cream SR... | 2A050116   | 1       |

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| Supplier | Substance                       | Batch     | Spectra |
|----------|---------------------------------|-----------|---------|
| apomix   | Anionic hydrophilic cream SR... | 16A060416 | 2       |
| apomix   | Anionic hydrophilic cream SR... | 36A031115 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 27A130716 | 3       |
| apomix   | Anionic hydrophilic cream SR... | 23A130616 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 36A140916 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 24A280616 | 2       |
| apomix   | Anionic hydrophilic cream SR... | 30A160816 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 33A060916 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 36A140616 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 3A310117  | 2       |
| apomix   | Anionic hydrophilic cream SR... | 19A200617 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 31A041017 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 30A190917 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 3A090118  | 2       |
| apomix   | Anionic hydrophilic cream SR... | 33A171017 | 2       |
| apomix   | Anionic hydrophilic cream SR... | 21A030718 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 25A110718 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 28A07018  | 1       |
| apomix   | Anionic hydrophilic cream SR... | 17A190618 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 34A191118 | 2       |
| apomix   | Anionic hydrophilic cream SR... | 26A110718 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 20A130819 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 4A280120  | 2       |
| apomix   | Anionic hydrophilic cream SR... | 17A090719 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 8A030320  | 1       |
| apomix   | Anionic hydrophilic cream SR... | 9A160320  | 1       |
| apomix   | Anionic hydrophilic cream SR... | 17A270520 | 1       |
| apomix   | Anionic hydrophilic cream SR... | 5A110321  | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 29A240912 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 3A150113  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 26A220812 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 17A240413 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 15A040413 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 19A070513 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 32A160713 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 25A050613 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 31A030713 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 34A060813 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 33A220713 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 41A021013 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 44A051113 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 48A031213 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 12A080414 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 10A010414 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 14A070514 | 3       |
| Apomix   | Anionic hydrophilic cream SR... | 28A190814 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 29A020914 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 39A011214 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 16A060611 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 27A210911 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 5A200212  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 18A180612 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 4546279   | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 42A171214 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 33A230915 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 5A200116  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 8A090216  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 11A010316 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 1A050116  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 18A040516 | 1       |

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| Supplier | Substance                       | Batch     | Spectra |
|----------|---------------------------------|-----------|---------|
| Apomix   | Anionic hydrophilic cream SR... | 13A220316 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 23A130616 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 21a80616  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 28A260716 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 22A090616 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 21A080616 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 35A140916 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 33A060916 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 41A281116 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 40A151116 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 1A020117  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 26A130716 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 29A160816 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 7A140317  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 2A030117  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 11A190417 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 14A150517 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 42A291116 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 13A030517 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 19A200617 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 18A140617 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 22A040717 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 17A130617 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 21A220617 | 4       |
| Apomix   | Anionic hydrophilic cream SR... | 30A190917 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 34A201117 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 35A211117 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 3A090118  | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 5A050218  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 33A171017 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 36A051217 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 37A061217 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 17001699  | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 7A280218  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 9A210318  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 19A200618 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 11A110418 | 3       |
| Apomix   | Anionic hydrophilic cream SR... | 23A040718 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 16A300518 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 16A110718 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 30A140818 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 29A140818 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 33A051118 | 3       |
| Apomix   | Anionic hydrophilic cream SR... | 26A110718 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 14A290518 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 34A191118 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 6A260219  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 8A120319  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 11A020419 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 14a180616 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 14A180619 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 23A030919 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 19A300719 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 24A170919 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 26A041119 | 2       |
| Apomix   | Anionic hydrophilic cream SR... | 25A141019 | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 1A070120  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 5A040220  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 6A110320  | 1       |
| Apomix   | Anionic hydrophilic cream SR... | 9A160320  | 3       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix                     | Anionic hydrophilic cream SR... | 8A030320  | 1       |
| Apomix                     | Anionic hydrophilic cream SR... | 7A030320  | 1       |
| Apomix                     | Anionic hydrophilic cream SR... | 12A150420 | 1       |
| Apomix                     | Anionic hydrophilic cream SR... | 19A030820 | 2       |
| Apomix                     | Anionic hydrophilic cream SR... | 4A100321  | 1       |
| ApoMix                     | Anionic hydrophilic cream SR... | 25A210812 | 1       |
| Apomix / Alliance Healt... | Anionic hydrophilic cream SR... | 25A240717 | 1       |
| Apomix / Alliance Healt... | Anionic hydrophilic cream SR... | 37A061217 | 1       |
| Apomix / Alliance Healt... | Anionic hydrophilic cream SR... | 4A160118  | 1       |
| Apomix / Alliance Healt... | Anionic hydrophilic cream SR... | 36A041218 | 1       |
| apomix / Noweda            | Anionic hydrophilic cream SR... | 36A051217 | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 34A201117 | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 5A050218  | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 7A200318  | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 22A040718 | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 31A021018 | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 6A260219  | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 15A180619 | 1       |
| Apomix / Noweda            | Anionic hydrophilic cream SR... | 20A130819 | 1       |
| apomix / Phoenix / 14.0... | Anionic hydrophilic cream SR... | 19a180516 | 1       |
| apomix / Phoenix / 29.0... | Anionic hydrophilic cream SR... | 15A050416 | 1       |
| apomix / Phoenix 13.04.18  | Anionic hydrophilic cream SR... | 36a051217 | 1       |
| apomix / Phoenix 19.02...  | Anionic hydrophilic cream SR... | 32a101017 | 1       |
| apomix / Phoenix 20.08...  | Anionic hydrophilic cream SR... | 23A040718 | 4       |
| apomix / Phoenix Leipzig   | Anionic hydrophilic cream SR... | 15A300518 | 1       |
| apomix / Phoenix Leipzi... | Anionic hydrophilic cream SR... | 30A250815 | 1       |
| apomix / Phoenix Leipzi... | Anionic hydrophilic cream SR... | 34a061015 | 1       |
| apomix / Phönix            | Anionic hydrophilic cream SR... | 35A041218 | 1       |
| apomix / Phönix            | Anionic hydrophilic cream SR... | 32A021018 | 1       |
| Apomix / Phönix            | Anionic hydrophilic cream SR... | 3A280114  | 1       |
| Apomix / Phönix            | Anionic hydrophilic cream SR... | 15A300518 | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 29a160816 | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 4A130217  | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 18A160719 | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 24A170919 | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 28A161219 | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 3A270120  | 1       |
| Apomix /Noweda             | Anionic hydrophilic cream SR... | 20A180820 | 2       |
| Apomix GEHE                | Anionic hydrophilic cream SR... | 35A211117 | 1       |
| Apomix GEHE                | Anionic hydrophilic cream SR... | 11A110418 | 1       |
| Apomix GEHE                | Anionic hydrophilic cream SR... | 34A191118 | 1       |
| Apomix Sanacorp 12.8.19... | Anionic hydrophilic cream SR... | 15a180619 | 1       |
| Apomix, Phoenix 20.10.2... | Anionic hydrophilic cream SR... | 26A020817 | 1       |
| apomix, Phoenix 26.10.2... | Anionic hydrophilic cream SR... | 26a020817 | 1       |
| apomix, phoenix 28.05.2... | Anionic hydrophilic cream SR... | 8a200318  | 1       |
| apomix, Phönix, 09.01.2... | Anionic hydrophilic cream SR... | 29a070917 | 1       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 13A030619 | 3       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 15A240919 | 1       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 2A070120  | 1       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 20A180820 | 2       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 6A100321  | 1       |
| Apomix, PKH Halle          | Anionic hydrophilic cream SR... | 10A100521 | 1       |
| apomix,Phönix, 23.11..2... | Anionic hydrophilic cream SR... | 17a10617  | 1       |
| apomix.de                  | Anionic hydrophilic cream SR... | 8A270213  | 1       |
| apomix/ AHD 04.08.17       | Anionic hydrophilic cream SR... | 16A310517 | 1       |
| apomix/ AHD 06.06.17       | Anionic hydrophilic cream SR... | 4A130217  | 1       |
| apomix/ AHD 09.03.17       | Anionic hydrophilic cream SR... | 2A030117  | 1       |
| apomix/ AHD 17.11.2018     | Anionic hydrophilic cream SR... | 27A310718 | 1       |
| apomix/ AHD 25.06.2018     | Anionic hydrophilic cream SR... | 7A280218  | 1       |
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 6A260219  | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 6A26019   | 1       |
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 11A020419 | 1       |
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 14A180619 | 1       |
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 1A070120  | 1       |
| apomix/ Gehe               | Anionic hydrophilic cream SR... | 12A150420 | 1       |
| Apomix/ Gehe               | Anionic hydrophilic cream SR... | 2A030118  | 1       |
| Apomix/ Gehe               | Anionic hydrophilic cream SR... | 21A030718 | 2       |
| Apomix/ Gehe               | Anionic hydrophilic cream SR... | 28A070818 | 1       |
| Apomix/ Gehe               | Anionic hydrophilic cream SR... | 25A110718 | 1       |
| apomix/ GEHE 29.01.2019    | Anionic hydrophilic cream SR... | 21A030718 | 1       |
| apomix/ Noweda             | Anionic hydrophilic cream SR... | 5A200116  | 1       |
| apomix/ Noweda             | Anionic hydrophilic cream SR... | 16A060416 | 1       |
| Apomix/ Noweda             | Anionic hydrophilic cream SR... | 26A110718 | 1       |
| Apomix/ Noweda             | Anionic hydrophilic cream SR... | 29A140818 | 1       |
| Apomix/ Noweda             | Anionic hydrophilic cream SR... | 25A240919 | 1       |
| Apomix/ NOWEDA             | Anionic hydrophilic cream SR... | 9A160320  | 1       |
| apomix/ Phoenix            | Anionic hydrophilic cream SR... | 20A200618 | 3       |
| apomix/ Phoenix / 02.11... | Anionic hydrophilic cream SR... | 12a080316 | 2       |
| apomix/ Phoenix / 15.09... | Anionic hydrophilic cream SR... | 11a010316 | 1       |
| apomix/ Phoenix Leipzig... | Anionic hydrophilic cream SR... | 2a030117  | 1       |
| Apomix/ Phönix             | Anionic hydrophilic cream SR... | 14A180619 | 1       |
| Apomix/ Phönix             | Anionic hydrophilic cream SR... | 6A020320  | 1       |
| apomix/AHD                 | Anionic hydrophilic cream SR... | 32A150915 | 1       |
| apomix/AHD                 | Anionic hydrophilic cream SR... | 24A280616 | 1       |
| apomix/AHD                 | Anionic hydrophilic cream SR... | 23A040718 | 1       |
| Apomix/AHD                 | Anionic hydrophilic cream SR... | 17A030516 | 1       |
| Apomix/AHD                 | Anionic hydrophilic cream SR... | 13A030619 | 1       |
| Apomix/AHD                 | Anionic hydrophilic cream SR... | 28A161219 | 4       |
| Apomix/Alliance            | Anionic hydrophilic cream SR... | 36A051217 | 1       |
| Apomix/Alliance Healthc... | Anionic hydrophilic cream SR... | 15A040413 | 1       |
| Apomix/Alliance Healthc... | Anionic hydrophilic cream SR... | 19A200618 | 4       |
| Apomix/Alliance Healthc... | Anionic hydrophilic cream SR... | 26A110718 | 2       |
| Apomix/Alliance Healthc... | Anionic hydrophilic cream SR... | 5A040220  | 1       |
| Apomix/Anzag               | Anionic hydrophilic cream SR... | 7A280218  | 1       |
| Apomix/Anzag               | Anionic hydrophilic cream SR... | 24A061020 | 1       |
| apomix/E                   | Anionic hydrophilic cream SR... | 13A190313 | 1       |
| Apomix/E&J                 | Anionic hydrophilic cream SR... | 30A140818 | 1       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 18A260514 | 2       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 19A030614 | 1       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 31A230914 | 2       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 41A101214 | 1       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 15A06046  | 1       |
| apomix/Gehe                | Anionic hydrophilic cream SR... | 29A140818 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 19A260515 | 2       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 28A040815 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 33A060916 | 2       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 2A030117  | 3       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 2A280217  | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 4A130217  | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 16A310517 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 36A051217 | 2       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 33A171017 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 11A110418 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 9A210318  | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 23A040718 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 29A140818 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 28A070818 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 17A090719 | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 8A120319  | 1       |
| Apomix/Gehe                | Anionic hydrophilic cream SR... | 20a130819 | 1       |

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| <b>Supplier</b>        | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|------------------------|---------------------------------|--------------|----------------|
| Apomix/Gehe            | Anionic hydrophilic cream SR... | 22A190819    | 1              |
| Apomix/Gehe            | Anionic hydrophilic cream SR... | 8A030320     | 2              |
| Apomix/Gehe            | Anionic hydrophilic cream SR... | 9A160320     | 1              |
| Apomix/Gehe            | Anionic hydrophilic cream SR... | 13A200420    | 1              |
| Apomix/GEHE            | Anionic hydrophilic cream SR... | 22A190819    | 1              |
| Apomix/Gehe/03.07.19   | Anionic hydrophilic cream SR... | 11A020419    | 2              |
| apomix/Gehe/07.04.21   | Anionic hydrophilic cream SR... | 29A191120    | 1              |
| apomix/GEHE/10.07.2013 | Anionic hydrophilic cream SR... | 15A040413    | 1              |
| apomix/Gehe/16.03.2020 | Anionic hydrophilic cream SR... | 29A161219    | 1              |
| Apomix/Gehe/16.10.19   | Anionic hydrophilic cream SR... | 19A300719    | 1              |
| apomix/GEHE/17.04.2013 | Anionic hydrophilic cream SR... | 8A270213     | 1              |
| apomix/GEHE/28.05.14   | Anionic hydrophilic cream SR... | 11A010414    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 26A130716    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 10A280317    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 24A100718    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 31A021018    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 5A110219     | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 9A190319     | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 17A090719    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 19A300719    | 1              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 26A041119    | 4              |
| apomix/Holdermann      | Anionic hydrophilic cream SR... | 6A020320     | 1              |
| apomix/Jenne           | Anionic hydrophilic cream SR... | 32A021018    | 2              |
| apomix/Jenne           | Anionic hydrophilic cream SR... | 13A030619    | 1              |
| Apomix/Kehr            | Anionic hydrophilic cream SR... | 5A050215     | 1              |
| Apomix/Kehr            | Anionic hydrophilic cream SR... | 19A180516    | 1              |
| Apomix/Kehr            | Anionic hydrophilic cream SR... | 6A280217     | 1              |
| Apomix/Kehr            | Anionic hydrophilic cream SR... | 34A191118    | 1              |
| apomix/noweda          | Anionic hydrophilic cream SR... | 2A070120     | 1              |
| apomix/Noweda          | Anionic hydrophilic cream SR... | 29A070917    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 8A260314     | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 13A080414    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 15A120514    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 18A260514    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 21A180614    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 33A141014    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 42A171214    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 4A270115     | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 12A310315    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 20A020615    | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 37A17115     | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 3A120116     | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 15A060416    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 18A040516    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 35A140916    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 8A140317     | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 11A190417    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 13A030517    | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 14A150517    | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 19A200617    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 27A220817    | 3              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 29A070917    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 33A171017    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 36A051217    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 7A280218     | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 10A260318    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 8A200318     | 2              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 15A300518    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 18A190618    | 1              |
| Apomix/Noweda          | Anionic hydrophilic cream SR... | 34A191118    | 2              |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Apomix/Noweda              | Anionic hydrophilic cream SR... | 25A110718  | 1       |
| Apomix/Noweda              | Anionic hydrophilic cream SR... | 35A041218  | 1       |
| Apomix/Noweda              | Anionic hydrophilic cream SR... | 12A070519  | 1       |
| Apomix/NOWEDA              | Anionic hydrophilic cream SR... | 18001479   | 1       |
| APOMIX/Noweda              | Anionic hydrophilic cream SR... | 7a090216   | 1       |
| apomix/Noweda /801632      | Anionic hydrophilic cream SR... | 7a280218   | 1       |
| apomix/Noweda Stapel 64. . | Anionic hydrophilic cream SR... | 13A030609  | 1       |
| apomix/PH                  | Anionic hydrophilic cream SR... | 28A271020  | 1       |
| apomix/Phoenix             | Anionic hydrophilic cream SR... | 11A020419  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 33A220713  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 17A030516  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 36A140916  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 2A030117   | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 23A050717  | 2       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 32A101017  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 7A200318   | 7       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 11A110418  | 4       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 22A040718  | 5       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 28A070818  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 31A021018  | 17      |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 12A070519  | 1       |
| Apomix/Phoenix             | Anionic hydrophilic cream SR... | 11A020419  | 3       |
| Apomix/Phoenix Leipzig ... | Anionic hydrophilic cream SR... | 11A190417  | 1       |
| apomix/Phoenix Leipzig ... | Anionic hydrophilic cream SR... | 19a200617  | 1       |
| Apomix/Phoenix WE: 30.0. . | Anionic hydrophilic cream SR... | 24A120717  | 1       |
| apomix/Phoenix/12.01.2017  | Anionic hydrophilic cream SR... | 33a060916  | 1       |
| apomix/Phoenix/27.01.2017  | Anionic hydrophilic cream SR... | 37a270916  | 2       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 12A3103215 | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 12A310315  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 28A040815  | 2       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 37A171115  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 11A010316  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 25A290616  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 34A130916  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 40A151116  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 3A310117   | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 9A210317   | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 14A290518  | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 8A120319   | 1       |
| apomix/Phönix              | Anionic hydrophilic cream SR... | 8A030320   | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 21A180614  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 28A040815  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 38A171115  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 26A130716  | 2       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 10A280317  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 22A040717  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 22A020817  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 28A230817  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 7A200318   | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 23A040718  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 17A190618  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 11A020419  | 2       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 26A041119  | 1       |
| Apomix/Phönix              | Anionic hydrophilic cream SR... | 15A140520  | 1       |
| APOMIX/Phönix              | Anionic hydrophilic cream SR... | 22A040718  | 1       |
| APOMIX/Phönix              | Anionic hydrophilic cream SR... | 1A070119   | 1       |
| Apomix/Phönix 25.10.2017   | Anionic hydrophilic cream SR... | 25A240717  | 1       |
| Apomix/Sana                | Anionic hydrophilic cream SR... | 24A061020  | 1       |
| apomix/Sanacorp            | Anionic hydrophilic cream SR... | 33A171017  | 1       |
| Apomix/Sanacorp            | Anionic hydrophilic cream SR... | 17A030516  | 1       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 41A281116    | 1              |
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 11A190417    | 1              |
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 19A200617    | 1              |
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 14A290518    | 1              |
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 34A191118    | 1              |
| Apomix/Sanacorp | Anionic hydrophilic cream SR... | 12A070519    | 1              |
| Aponix          | Anionic hydrophilic cream SR... | 3A310117     | 1              |
| Beyavers        | Anionic hydrophilic cream SR... | 20A200618    | 1              |
| Bionorica/Kehr  | Anionic hydrophilic cream SR... | 18006628     | 1              |
| bomastus        | Anionic hydrophilic cream SR... | 20001775     | 1              |
| Bomastus        | Anionic hydrophilic cream SR... | 288308       | 1              |
| bomb/phönix     | Anionic hydrophilic cream SR... | 18001482     | 2              |
| Bombast/Nowed   | Anionic hydrophilic cream SR... | 288308       | 1              |
| Bombast/Phoenix | Anionic hydrophilic cream SR... | 293104       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 18006276     | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 19000642     | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 19000645     | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 264643       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 271702       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 272513       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 5012E-03327  | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 273694       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 274378       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 276075       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 276074       | 7              |
| Bombastus       | Anionic hydrophilic cream SR... | 275927       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 276073       | 5              |
| Bombastus       | Anionic hydrophilic cream SR... | 274504       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 274505       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 276077       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 274379       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 277566       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 274373       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 279199       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 279198       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 277567       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 279202       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 279201       | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 279324       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 280570       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 281738       | 7              |
| Bombastus       | Anionic hydrophilic cream SR... | 12121201     | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 283282       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 283281       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 15121201     | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 283286       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 284082       | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 285895       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 285897       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 286976       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 286978       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 288230       | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 286980       | 8              |
| Bombastus       | Anionic hydrophilic cream SR... | 286974       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 288227       | 1              |
| Bombastus       | Anionic hydrophilic cream SR... | 288233       | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 289327       | 4              |
| Bombastus       | Anionic hydrophilic cream SR... | 288234       | 2              |
| Bombastus       | Anionic hydrophilic cream SR... | 289330       | 3              |
| Bombastus       | Anionic hydrophilic cream SR... | 290528       | 2              |

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| Supplier  | Substance                       | Batch    | Spectra |
|-----------|---------------------------------|----------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 290522   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289328   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 295232   | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 80616-09 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 308218   | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 263823   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 261013   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 267645   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 269230   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 269235   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 271699   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 271837   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 272510   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 271701   | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 272515   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 272516   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289332   | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 290527   | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 288228   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289331   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 289329   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289324   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 291522   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 290523   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 291527   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 291525   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 292971   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 292979   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 293133   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 293102   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 293104   | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 292973   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 293103   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 295171   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 296409   | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 98245    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 297823   | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 296415   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 295165   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 297913   | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 297821   | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 297910   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 300561   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 300950   | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 300562   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 300953   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 300951   | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 300955   | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 302196   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 303729   | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 302200   | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 303731   | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 302198   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 303734   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 303726   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 307324   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 306436   | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 307329   | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 307323   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 306438   | 3       |

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| Supplier  | Substance                       | Batch       | Spectra |
|-----------|---------------------------------|-------------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 308217      | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 307331      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 307328      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 309912      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 307327      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 307326      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 17000164    | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 17001699    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 311051      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 17001702    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 17001698    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17001703    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 17001696    | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 18001475    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18002224    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 60089212    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18003782    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003784    | 13      |
| Bombastus | Anionic hydrophilic cream SR... | 18005154    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18006626    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19000643    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19000649    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 19002550    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 19003567    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19002548    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20000724    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 20001779    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 90064651    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20000718    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20003994    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 21001807    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 292980      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 18006283    | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 264644      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 273693      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 269234      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18006630    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 308210      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 308220      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 310012      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18001474    | 12      |
| Bombastus | Anionic hydrophilic cream SR... | 18002222    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003780    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19004879    | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 277565      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 292976      | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18001480    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 1017Q-03327 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003788    | 19      |
| Bombastus | Anionic hydrophilic cream SR... | 18006287    | 22      |
| Bombastus | Anionic hydrophilic cream SR... | 281809      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 283283      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 82440       | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 285893      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 288308      | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 3073333     | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17000163    | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 17001706    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18001484    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19000647    | 4       |

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| Supplier  | Substance                       | Batch            | Spectra |
|-----------|---------------------------------|------------------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 1900252          | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19003573         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 20002226         | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 291528           | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 290525           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 302191           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003779         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19000646         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19002547         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19002549         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 191152210        | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 283279           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 296406           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 300560           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 307322           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17101502         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20000719         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 20003996         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 21000522         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19003750         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18006282         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 302199           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 307333           | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 296414           | 9       |
| Bombastus | Anionic hydrophilic cream SR... | 300564           | 18      |
| Bombastus | Anionic hydrophilic cream SR... | 277568           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 279326           | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 281767           | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 283285           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 285894           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 300956           | 15      |
| Bombastus | Anionic hydrophilic cream SR... | 311055           | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 10002224         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 311052           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 281742           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 285896           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 286973           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 288235           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 290524           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 292978           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 150820UEA        | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 170103CAH/303735 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 170313CAH/303736 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 306434           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 308214           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 21001800         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 21001808         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 292975           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 297909           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 300947           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 302192           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 302193           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 308213           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 5B020419         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 281740           | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 269231           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 273695           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 17001704         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 19006462         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 295169           | 5       |

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| Supplier  | Substance                       | Batch            | Spectra |
|-----------|---------------------------------|------------------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 299253           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 190000651        | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20003997         | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 293135           | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 295170           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 281744           | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 17000162         | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 286971           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289323           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18001477         | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 18002255         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18006631         | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 19002551         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18004877         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19004881         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 20000721         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 20001774         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 275926           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 277560           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 279195           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 280571           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 284077           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 285892           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 289322           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 272511           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 307332/2(intern) | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 307332/1(intern) | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003781         | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 18005157         | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 19003568         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 229317           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18002226         | 16      |
| Bombastus | Anionic hydrophilic cream SR... | 280576           | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 19002553         | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 279325           | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 284080           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 299255           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 19003570         | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 20001776         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 2000224          | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 269227           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19003566         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19006459         | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003785         | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 286975           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 295172           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 296410           | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 300954           | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 303732           | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 18003786         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 19000648         | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 2000722          | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20002225         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19006464         | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 309911           | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18002223         | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 280575           | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 3213I-03327      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 295166           | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 297820           | 2       |

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| Supplier  | Substance                       | Batch       | Spectra |
|-----------|---------------------------------|-------------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 2215M-03327 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 1616Q-03327 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 3018E-03327 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 2019U-03327 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 2x297819    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 305065      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 17000165    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18005158    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 288307      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 274381      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 277569      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 284081      | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 2858899     | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 291523      | 9       |
| Bombastus | Anionic hydrophilic cream SR... | 295233      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 297908      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 300946      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 306437      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 310873      | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 17001700    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 18006280    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 1a070119    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 19002552    | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 19003569    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 19003572    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19006465    | 12      |
| Bombastus | Anionic hydrophilic cream SR... | 19006463    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20000722    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 20002222    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 18001471    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 17001695    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18001472    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 20000716    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18006629    | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 302190      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20003990    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20003993    | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 20005508    | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 21000525    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18001483    | 8       |
| Bombastus | Anionic hydrophilic cream SR... | 180014783   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18003783    | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 19001550    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20001778    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 285898      | 11      |
| Bombastus | Anionic hydrophilic cream SR... | 293134      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 296413      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 297817      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 297819      | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 303733      | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 305064      | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 305066      | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 311053      | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18001681    | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17001697    | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19000651    | 17      |
| Bombastus | Anionic hydrophilic cream SR... | 19004875    | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 190064631   | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20002227    | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 2000222     | 1       |

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| Supplier  | Substance                       | Batch                | Spectra |
|-----------|---------------------------------|----------------------|---------|
| Bombastus | Anionic hydrophilic cream SR... | 20002223             | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 20005505             | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 20005507             | 3       |
| Caelo     | Anionic hydrophilic cream SR... | 21000525/20003746004 | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 280568               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 300952               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 18002227             | 10      |
| Bombastus | Anionic hydrophilic cream SR... | 190532705            | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 20001775             | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 60089211             | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 18A070513            | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 285899               | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 291526               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 290530               | 7       |
| Bombastus | Anionic hydrophilic cream SR... | 29926                | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 305063               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 305062               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17001701             | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 20000720             | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 20003992             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 279323               | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 281739               | 6       |
| Bombastus | Anionic hydrophilic cream SR... | 281743               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 284083               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 286979               | 12      |
| Bombastus | Anionic hydrophilic cream SR... | 286977               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 288231               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 291524               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 91770                | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 292977               | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 296412               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 303728               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 308215               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 17001705             | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 17000160             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18001473             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18005156             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 19003565             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 20003995             | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 274377               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 279200               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 302194               | 5       |
| Bombastus | Anionic hydrophilic cream SR... | 305068               | 12      |
| Bombastus | Anionic hydrophilic cream SR... | 19003576             | 19      |
| Bombastus | Anionic hydrophilic cream SR... | 19004874             | 9       |
| Bombastus | Anionic hydrophilic cream SR... | 19004876             | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 18001476             | 9       |
| Bombastus | Anionic hydrophilic cream SR... | 18002225             | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 272514               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 285890               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 258517               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 266051               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 261009               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 264751               | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 267642               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 269225               | 1       |
| Bombastus | Anionic hydrophilic cream SR... | 269236               | 2       |
| Bombastus | Anionic hydrophilic cream SR... | 296411               | 3       |
| Bombastus | Anionic hydrophilic cream SR... | 297912               | 4       |
| Bombastus | Anionic hydrophilic cream SR... | 297822               | 4       |

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| Supplier               | Substance                       | Batch      | Spectra |
|------------------------|---------------------------------|------------|---------|
| Bombastus              | Anionic hydrophilic cream SR... | 299254     | 3       |
| Bombastus              | Anionic hydrophilic cream SR... | 300563     | 3       |
| Bombastus              | Anionic hydrophilic cream SR... | 302195     | 4       |
| Bombastus              | Anionic hydrophilic cream SR... | 305069     | 9       |
| Bombastus              | Anionic hydrophilic cream SR... | 20002221   | 1       |
| Bombastus              | Anionic hydrophilic cream SR... | 20002220   | 1       |
| Bombastus              | Anionic hydrophilic cream SR... | 306435     | 10      |
| Bombastus              | Anionic hydrophilic cream SR... | 18005159   | 16      |
| Bombastus              | Anionic hydrophilic cream SR... | 19002554   | 9       |
| Bombastus              | Anionic hydrophilic cream SR... | 284078     | 1       |
| Bombastus              | Anionic hydrophilic cream SR... | 284079     | 1       |
| Bombastus              | Anionic hydrophilic cream SR... | 286972     | 1       |
| Bombastus              | Anionic hydrophilic cream SR... | 289325     | 2       |
| Bombastu-Werke AG/Gehe | Anionic hydrophilic cream SR... | 281866     | 2       |
| Bombastu-Werke AG/Gehe | Anionic hydrophilic cream SR... | 283286     | 1       |
| Bombastu-Werke AG/Gehe | Anionic hydrophilic cream SR... | 286979     | 1       |
| BOMBATUS               | Anionic hydrophilic cream SR... | 18001457   | 1       |
| Bombstus               | Anionic hydrophilic cream SR... | 300957     | 1       |
| Bombstus               | Anionic hydrophilic cream SR... | 311055     | 1       |
| cae                    | Anionic hydrophilic cream SR... | 14182101   | 1       |
| Caeanto                | Anionic hydrophilic cream SR... | 16215501   | 2       |
| Caeleo/ Krieger        | Anionic hydrophilic cream SR... | 19240002   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 20061205   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 1101212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 3101212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 1603212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 2906212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 13071202   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 21081201   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 1109212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 9101202    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 1310212540 | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 18121202   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 9011304    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 23041307   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 31071301   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 11101301   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 15111306   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 15011413   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 25021413   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 14041403   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 13270103   | 2       |
| Caelo                  | Anionic hydrophilic cream SR... | 4061406    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 2091403    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 14244701   | 6       |
| Caelo                  | Anionic hydrophilic cream SR... | 286979     | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 14182104   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 23121411   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 30011503   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 15069404   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 8061203    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 22061205   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 21111202   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 274377     | 2       |
| Caelo                  | Anionic hydrophilic cream SR... | 14336201   | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 15014801   | 4       |
| Caelo                  | Anionic hydrophilic cream SR... | 6061502    | 1       |
| Caelo                  | Anionic hydrophilic cream SR... | 15172901   | 5       |
| Caelo                  | Anionic hydrophilic cream SR... | 15205502   | 2       |
| Caelo                  | Anionic hydrophilic cream SR... | 15205501   | 3       |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream SR... | 297912       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 2770         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16107502     | 11      |
| Caelo    | Anionic hydrophilic cream SR... | 16107503     | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 16107501     | 17      |
| Caelo    | Anionic hydrophilic cream SR... | 16126701     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18A040516    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 299255       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16215501     | 12      |
| Caelo    | Anionic hydrophilic cream SR... | 16047301     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16245001     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16215701     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 302199       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16215601     | 9       |
| Caelo    | Anionic hydrophilic cream SR... | 16188903     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 30A160816    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 303734       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16289402     | 6       |
| Caelo    | Anionic hydrophilic cream SR... | 23021706     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17041902     | 10      |
| Caelo    | Anionic hydrophilic cream SR... | 17041901     | 6       |
| Caelo    | Anionic hydrophilic cream SR... | 306439       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 307328       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17008901     | 11      |
| Caelo    | Anionic hydrophilic cream SR... | 21041720     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 170419015272 | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17101504     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 308211       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17153802     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 305066       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 311055       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17000164     | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 17000489     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 171015015466 | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17294401     | 6       |
| Caelo    | Anionic hydrophilic cream SR... | 17319502     | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 17294501     | 7       |
| Caelo    | Anionic hydrophilic cream SR... | 17294402     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17319503     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18041105     | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 18041104     | 44      |
| Caelo    | Anionic hydrophilic cream SR... | 172944015562 | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18001482     | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 14051805     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18001473     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18002223     | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 18001483     | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 18003778     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18001472     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18003783     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 26A270618    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18218101     | 14      |
| Caelo    | Anionic hydrophilic cream SR... | 18274102     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19021404     | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 19021401     | 25      |
| Caelo    | Anionic hydrophilic cream SR... | 19021402     | 14      |
| Caelo    | Anionic hydrophilic cream SR... | 19123702     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19240002     | 26      |
| Caelo    | Anionic hydrophilic cream SR... | 190240002    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 1924001      | 1       |

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| Supplier | Substance                       | Batch           | Spectra |
|----------|---------------------------------|-----------------|---------|
| Caelo    | Anionic hydrophilic cream SR... | 2000522002      | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20000916005     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 2000178004      | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 200017810014    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20000522002     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20003015001     | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 20003015003     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18041104        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17000162        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | CH-B18302501    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | CH-B19177102    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | CHB19240002     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | CHB19177102     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | CHB-20001034001 | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 296408          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20001034001     | 7       |
| Caelo    | Anionic hydrophilic cream SR... | 18005158        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 14182101        | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 24A100718       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19093002        | 5       |
| Caelo    | Anionic hydrophilic cream SR... | 293135          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17101502        | 15      |
| Caelo    | Anionic hydrophilic cream SR... | 33A171017       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 277565          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 295232          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18001474        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19177103        | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 20001781004     | 5       |
| Caelo    | Anionic hydrophilic cream SR... | 26A211020       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17001705        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 300956          | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 307327          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 276077          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 15069403        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 288310          | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 17169301        | 13      |
| Caelo    | Anionic hydrophilic cream SR... | 17184201        | 7       |
| Caelo    | Anionic hydrophilic cream SR... | 18006283        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18004840        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18218103        | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 19240001        | 8       |
| Caelo    | Anionic hydrophilic cream SR... | 17256901        | 18      |
| Caelo    | Anionic hydrophilic cream SR... | 285894          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18218102        | 16      |
| Caelo    | Anionic hydrophilic cream SR... | 20002423004     | 6       |
| Caelo    | Anionic hydrophilic cream SR... | 15386602        | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 4617M-03327     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18001475        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 180678015614    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 180678015671    | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20000916003     | 7       |
| Caelo    | Anionic hydrophilic cream SR... | 18302501        | 18      |
| Caelo    | Anionic hydrophilic cream SR... | 18302503        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 170211701       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 281739          | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 160107502       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 302196          | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 308217          | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 1847502         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19177102        | 5       |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Caelo    | Anionic hydrophilic cream SR... | 200001781004     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 293104           | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 20A080513        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 22A160615        | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 288307           | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 15268001         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 1291015          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 1070717/17101501 | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17211702         | 10      |
| Caelo    | Anionic hydrophilic cream SR... | 10102865         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18176103         | 20      |
| Caelo    | Anionic hydrophilic cream SR... | 19123802         | 5       |
| Caelo    | Anionic hydrophilic cream SR... | 20000522001      | 16      |
| Caelo    | Anionic hydrophilic cream SR... | 20000522003      | 18      |
| Caelo    | Anionic hydrophilic cream SR... | 20001781003      | 5       |
| Caelo    | Anionic hydrophilic cream SR... | 31A230914        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 2002423005       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 286980           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20003746003      | 2       |
| Caelo    | Anionic hydrophilic cream SR... | 212000806003     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 286976           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 300957           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 15134602         | 3       |
| Caelo    | Anionic hydrophilic cream SR... | 15329601         | 11      |
| Caelo    | Anionic hydrophilic cream SR... | 1586503          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 15386502         | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 16019601         | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 16258701         | 16      |
| Caelo    | Anionic hydrophilic cream SR... | 309912           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17211701         | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 18003781         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17A190618        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 190240103        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 200000522001     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 20000916004      | 7       |
| Caelo    | Anionic hydrophilic cream SR... | 21000339003      | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 28072014A        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 19093001         | 20      |
| Caelo    | Anionic hydrophilic cream SR... | 20003746004      | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 289331           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 288235           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 305069           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 3A310117         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 21A220617        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 26A020817        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 17000166         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 518E-03327       | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18147502         | 29      |
| Caelo    | Anionic hydrophilic cream SR... | 22A040718        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 23A030919        | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 21000339001      | 4       |
| Caelo    | Anionic hydrophilic cream SR... | 307334           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 190000532003     | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 289332           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 293103           | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 15386503         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 16332101         | 8       |
| Caelo    | Anionic hydrophilic cream SR... | 8A140317         | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 1867801          | 1       |
| Caelo    | Anionic hydrophilic cream SR... | 18147501         | 25      |

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| Supplier                    | Substance                       | Batch        | Spectra |
|-----------------------------|---------------------------------|--------------|---------|
| Caelo                       | Anionic hydrophilic cream SR... | 17218102     | 2       |
| Caelo                       | Anionic hydrophilic cream SR... | 20004462001  | 1       |
| Caelo                       | Anionic hydrophilic cream SR... | 618E-03327   | 1       |
| Caelo                       | Anionic hydrophilic cream SR... | 2000522001   | 1       |
| Caelo                       | Anionic hydrophilic cream SR... | 200000916003 | 1       |
| Caelo                       | Anionic hydrophilic cream SR... | 291529       | 1       |
| Caecolo                     | Anionic hydrophilic cream SR... | 16046301     | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 289329       | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 18218102     | 4       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19021404     | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19021402     | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 1862282      | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 18147501     | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19093001     | 8       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19123802     | 5       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19177102     | 2       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 19177103     | 3       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20000522003  | 5       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20002226     | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20000916003  | 2       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20000916004  | 4       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20001781004  | 2       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20001781003  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20003016003  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 20003746003  | 3       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 21000339002  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 21000339001  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 21000339003  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | AP210701-01  | 1       |
| Caesar & Loretz GmbH        | Anionic hydrophilic cream SR... | 21001808     | 1       |
| Caesar & Loretz GmbH, A...  | Anionic hydrophilic cream SR... | 18066902     | 1       |
| Caesar & Loretz GmbH, A...  | Anionic hydrophilic cream SR... | 18168501     | 1       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 17202101     | 1       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 19003001     | 1       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 18298801     | 1       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 19072701     | 2       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 18243201     | 1       |
| Caesar & Loretz GmbH, P...  | Anionic hydrophilic cream SR... | 17142801     | 1       |
| Caesar & Loretz GmbH, Ph... | Anionic hydrophilic cream SR... | 18010901     | 1       |
| Caesar & Loretz GmbH/ G...  | Anionic hydrophilic cream SR... | 20000522003  | 1       |
| Caesar & Loretz GmbH/ S...  | Anionic hydrophilic cream SR... | 19240001     | 1       |
| Caesar & Loretz GmbH/An...  | Anionic hydrophilic cream SR... | 20003746004  | 1       |
| Caesar & Loretz GmbH/Fi...  | Anionic hydrophilic cream SR... | 20000522001  | 2       |
| Caesar & Loretz GmbH/Gehe   | Anionic hydrophilic cream SR... | 19240002     | 1       |
| Caesar & Loretz GmbH/Gehe   | Anionic hydrophilic cream SR... | 20000916004  | 1       |
| Caesar & Loretz GmbH/GEHE   | Anionic hydrophilic cream SR... | 19240103     | 1       |
| Caesar & Loretz GmbH/Je...  | Anionic hydrophilic cream SR... | 19240002     | 1       |
| Caesar & Loretz GmbH/Je...  | Anionic hydrophilic cream SR... | 20000522001  | 1       |
| Caesar & Loretz GmbH/Ph...  | Anionic hydrophilic cream SR... | 20003746003  | 1       |
| Caesar & Loretz GmbH/Ph...  | Anionic hydrophilic cream SR... | 19206001     | 3       |
| Caesar & Loretz GmbH/S      | Anionic hydrophilic cream SR... | 20000522003  | 1       |
| Caesar & Loretz GmbH/Sa...  | Anionic hydrophilic cream SR... | AP210205-01  | 1       |
| Caesar & Loretz GmbH/Sp...  | Anionic hydrophilic cream SR... | 18302501     | 1       |
| Caesar & Loretz GmbH/Sp...  | Anionic hydrophilic cream SR... | 19093001     | 1       |
| Caesar & Loretz/ Gehe       | Anionic hydrophilic cream SR... | 19240001     | 1       |
| Caesar&Loretz GmbH          | Anionic hydrophilic cream SR... | 15386602     | 1       |
| Caesar&Loretz GmbH          | Anionic hydrophilic cream SR... | 16019601     | 1       |
| Caesar&Loretz GmbH          | Anionic hydrophilic cream SR... | 16107502     | 1       |
| Caesar&Loretz GmbH          | Anionic hydrophilic cream SR... | 18176103     | 1       |
| Caesar&Loretz GmbH,26.0...  | Anionic hydrophilic cream SR... | 17045401     | 1       |

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| <b>Supplier</b>            | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------------------|--------------|----------------|
| Caesar&Loretz GmbH,Phön... | Anionic hydrophilic cream SR... | 16046501     | 1              |
| Caesar&Loretz GmbH,PHön... | Anionic hydrophilic cream SR... | 17088801     | 1              |
| Caesar&loretz,phönix,11... | Anionic hydrophilic cream SR... | 16103101     | 3              |
| Caesar&LoretzGmbH,11,03... | Anionic hydrophilic cream SR... | 16322701     | 1              |
| Cealo                      | Anionic hydrophilic cream SR... | 285899       | 1              |
| Cealo                      | Anionic hydrophilic cream SR... | 10A280317    | 1              |
| Cealo                      | Anionic hydrophilic cream SR... | 10A150517    | 1              |
| Cealo/ AHD                 | Anionic hydrophilic cream SR... | 16258601     | 1              |
| Cealo/AHD                  | Anionic hydrophilic cream SR... | 16107501     | 1              |
| Defektur                   | Anionic hydrophilic cream SR... | 271711       | 1              |
| Dr. Wolff                  | Anionic hydrophilic cream SR... | 290528       | 1              |
| Caelo                      | Anionic hydrophilic cream SR... | 302200       | 2              |
| Caelo                      | Anionic hydrophilic cream SR... | 17041701     | 1              |
| Eigene Herstellung         | Anionic hydrophilic cream SR... | 2014030214   | 1              |
| Eigenherstellung           | Anionic hydrophilic cream SR... | 4012Q-07664  | 1              |
| Eigenherstellung           | Anionic hydrophilic cream SR... | 3812E-07664  | 1              |
| EuRho                      | Anionic hydrophilic cream SR... | 29A100815    | 1              |
| EuRho/Noweda               | Anionic hydrophilic cream SR... | 18001681     | 1              |
| EURO OGT / Anzag           | Anionic hydrophilic cream SR... | 292977       | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 300563       | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 308212       | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 17000161     | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 17000166     | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 17001695     | 2              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 1A070119     | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 306433       | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 286838       | 1              |
| EuRoh/ Gehe                | Anionic hydrophilic cream SR... | 1A0700119    | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 296410       | 2              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 276074       | 1              |
| Euro OTC                   | Anionic hydrophilic cream SR... | 286975       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 291529       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 302382       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 9A130416     | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 305069       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 307334       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 17000162     | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 17001698     | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 308220       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 2A030118     | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 18041104     | 2              |
| Fagron                     | Anionic hydrophilic cream SR... | 32A150915    | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 307330       | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 2617E-03327  | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 6A280217     | 1              |
| Fagron                     | Anionic hydrophilic cream SR... | 15172901     | 1              |
| Fargon/Gehe                | Anionic hydrophilic cream SR... | 295171       | 1              |
| Fiebi 23.11.12 ek:4,70     | Anionic hydrophilic cream SR... | 274504       | 2              |
| Fiebig                     | Anionic hydrophilic cream SR... | 295167       | 1              |
| Fiebig                     | Anionic hydrophilic cream SR... | 300563       | 1              |
| Fiebig                     | Anionic hydrophilic cream SR... | 308218       | 1              |
| Fiebig                     | Anionic hydrophilic cream SR... | 17001700     | 1              |
| Fiebig                     | Anionic hydrophilic cream SR... | 21001807     | 2              |
| Bombastus                  | Anionic hydrophilic cream SR... | 190053576    | 1              |
| Galderma/Gehe              | Anionic hydrophilic cream SR... | 18006282     | 1              |
| Gehe                       | Anionic hydrophilic cream SR... | 267647       | 1              |
| Gehe                       | Anionic hydrophilic cream SR... | 271701       | 1              |
| Gehe                       | Anionic hydrophilic cream SR... | 269235       | 1              |
| Gehe                       | Anionic hydrophilic cream SR... | 273694       | 1              |
| Gehe                       | Anionic hydrophilic cream SR... | 277565       | 1              |

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| Supplier                  | Substance                       | Batch              | Spectra |
|---------------------------|---------------------------------|--------------------|---------|
| Gehe                      | Anionic hydrophilic cream SR... | 280575             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 280574             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 288231             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 290528             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 292978             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 271838             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 15014804           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 293132             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 3A120116           | 2       |
| Gehe                      | Anionic hydrophilic cream SR... | 303725             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 306440             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 303736             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 307334             | 3       |
| Gehe                      | Anionic hydrophilic cream SR... | 307324             | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 17000163           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18041104           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18001474           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18067801           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18002224           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18176103           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18006629           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18218102           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 18006630           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 19000650           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 12A070519          | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 19002550           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 19003573           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 19240002           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 19005192           | 1       |
| Gehe                      | Anionic hydrophilic cream SR... | 9A160320           | 1       |
| GEHE                      | Anionic hydrophilic cream SR... | 18041104           | 1       |
| GEHE                      | Anionic hydrophilic cream SR... | 18067803           | 1       |
| GEHE                      | Anionic hydrophilic cream SR... | 18147502           | 3       |
| GEHE                      | Anionic hydrophilic cream SR... | 18302501           | 1       |
| Gehe / Apomix             | Anionic hydrophilic cream SR... | 22A150920          | 1       |
| Caelo                     | Anionic hydrophilic cream SR... | 19003572           | 1       |
| Gehe 10.03.15             | Anionic hydrophilic cream SR... | 42A171214          | 1       |
| Bombastus                 | Anionic hydrophilic cream SR... | 300956-20160615Ma4 | 1       |
| Caelo                     | Anionic hydrophilic cream SR... | 307332             | 1       |
| Gehe, 9,99EUR, 29.08.2016 | Anionic hydrophilic cream SR... | 299255             | 1       |
| Gehe/ Apomix              | Anionic hydrophilic cream SR... | 20A200618          | 1       |
| Caelo                     | Anionic hydrophilic cream SR... | 190093001          | 1       |
| Gehe/02.09.14/apomix      | Anionic hydrophilic cream SR... | 23A240614          | 1       |
| GEHE/AMH/22.05.2012       | Anionic hydrophilic cream SR... | 5A200212           | 1       |
| Gehe/apomix               | Anionic hydrophilic cream SR... | 12A080414          | 1       |
| Gehe/apomix               | Anionic hydrophilic cream SR... | 13A220316          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 48A031213          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 4A030214           | 2       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 16A130514          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 38A111016          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 42A291116          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 4A160118           | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 11A110418          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 14A290518          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 33A051118          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 17A090719          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 27A051119          | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 9A160320           | 1       |
| Gehe/Apomix               | Anionic hydrophilic cream SR... | 15A140520          | 1       |
| GEHE/apomix/01.03.2012    | Anionic hydrophilic cream SR... | 33A291111          | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| GEHE/apomix/05.07.2012     | Anionic hydrophilic cream SR... | 16A050612   | 1       |
| Gehe/apomix/17.12.2014     | Anionic hydrophilic cream SR... | 26A060814   | 1       |
| Gehe/apomix/18.09.13       | Anionic hydrophilic cream SR... | 30A020713   | 2       |
| Gehe/apomix/23.09.14       | Anionic hydrophilic cream SR... | 19A030614   | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 308219      | 4       |
| Bombastus                  | Anionic hydrophilic cream SR... | 17001707    | 8       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18006628    | 7       |
| Caelo                      | Anionic hydrophilic cream SR... | 11A010414   | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 1290916     | 1       |
| Euro OTC                   | Anionic hydrophilic cream SR... | 302199      | 1       |
| Gehe/Pharmachem            | Anionic hydrophilic cream SR... | 240118      | 1       |
| Gutenberg-Apotheke         | Anionic hydrophilic cream SR... | 285890      | 1       |
| Henry Lamotte / Noweda     | Anionic hydrophilic cream SR... | 303735      | 2       |
| Henry Lamotte Oils GmbH... | Anionic hydrophilic cream SR... | 18041104    | 1       |
| hochhaus-Apotheke          | Anionic hydrophilic cream SR... | 3016E-03195 | 1       |
| Ichthyol Gesellschaft      | Anionic hydrophilic cream SR... | 17294501    | 1       |
| Infectopharm               | Anionic hydrophilic cream SR... | 14A150517   | 1       |
| Jenne                      | Anionic hydrophilic cream SR... | 17201801    | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 308218      | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 311053      | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 17000165    | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 18002223    | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 18003785    | 1       |
| Kehr                       | Anionic hydrophilic cream SR... | 18005157    | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18006632    | 15      |
| Krieger                    | Anionic hydrophilic cream SR... | 17299701    | 1       |
| L12                        | Anionic hydrophilic cream SR... | 17101501    | 1       |
| L12                        | Anionic hydrophilic cream SR... | 18147501    | 1       |
| Neidhardt                  | Anionic hydrophilic cream SR... | 25A140714   | 1       |
| noweda                     | Anionic hydrophilic cream SR... | 20001774    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 279326      | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 280572      | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 280741      | 2       |
| Noweda                     | Anionic hydrophilic cream SR... | 17A120515   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 273695      | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 276074      | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 15329601    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 15386502    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 38A171115   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 22A040717   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 17319502    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 18002226    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 18041104    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 18218102    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 1A070119    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 18218101    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 19240002    | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 14A180619   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 27A051119   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 22A150920   | 1       |
| Noweda                     | Anionic hydrophilic cream SR... | 20003015003 | 1       |
| Noweda / apomix            | Anionic hydrophilic cream SR... | 8A120319    | 1       |
| Noweda 6892383 /apomix     | Anionic hydrophilic cream SR... | 18A160719   | 1       |
| Noweda 8.7.2019            | Anionic hydrophilic cream SR... | 19000619    | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 277637      | 3       |
| Bombastus                  | Anionic hydrophilic cream SR... | 244379      | 1       |
| Noweda/AMH Niemann GmbH    | Anionic hydrophilic cream SR... | 5A050218    | 1       |
| Noweda/AMH Niemann GmbH    | Anionic hydrophilic cream SR... | 36A041218   | 1       |
| Noweda/AMH Niemann GmbH    | Anionic hydrophilic cream SR... | 25A141019   | 1       |
| Noweda/AMX Niemann GmbH    | Anionic hydrophilic cream SR... | 24A100718   | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Noweda/apomix              | Anionic hydrophilic cream SR... | 21A090615   | 1       |
| Noweda/apomix              | Anionic hydrophilic cream SR... | 23A040718   | 1       |
| Noweda/Apomix              | Anionic hydrophilic cream SR... | 31A14014    | 1       |
| Noweda/Apomix              | Anionic hydrophilic cream SR... | 25A290616   | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 277563      | 2       |
| Bombastus                  | Anionic hydrophilic cream SR... | 280741      | 7       |
| Bombastus                  | Anionic hydrophilic cream SR... | 280572      | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 311050      | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 14301501    | 5       |
| Caelo                      | Anionic hydrophilic cream SR... | 18041106    | 1       |
| Noweda/Caesar & Loretz ... | Anionic hydrophilic cream SR... | 20000522003 | 1       |
| Fagron                     | Anionic hydrophilic cream SR... | 291528      | 1       |
| Nowedea 15.7.17            | Anionic hydrophilic cream SR... | 17101501    | 1       |
| Pharmachem                 | Anionic hydrophilic cream SR... | 240915      | 1       |
| Pharmachem                 | Anionic hydrophilic cream SR... | 150716      | 2       |
| Pharmachem                 | Anionic hydrophilic cream SR... | 300317      | 3       |
| Pharmachem                 | Anionic hydrophilic cream SR... | 240118      | 5       |
| Pharmachem                 | Anionic hydrophilic cream SR... | 220219      | 2       |
| Pharmachem / Alliance HC   | Anionic hydrophilic cream SR... | 240118      | 1       |
| Pharmachem GmbH/Phönix     | Anionic hydrophilic cream SR... | 260712      | 3       |
| Pharmachem Pöšneck GmbH... | Anionic hydrophilic cream SR... | 240915      | 5       |
| Pharmachem Pöšneck GmbH... | Anionic hydrophilic cream SR... | 300317      | 2       |
| Pharmachem/ Noweda         | Anionic hydrophilic cream SR... | 240118      | 1       |
| Pharmachem/ Noweda         | Anionic hydrophilic cream SR... | 220219      | 1       |
| Pharmachem/ Noweda         | Anionic hydrophilic cream SR... | 200000012   | 1       |
| Pharmachem/AHD             | Anionic hydrophilic cream SR... | 220219      | 3       |
| Pharmachem/Noweda          | Anionic hydrophilic cream SR... | 150716      | 1       |
| Pharmachem/Phoenix         | Anionic hydrophilic cream SR... | 300317      | 3       |
| Pharmachem/Phoenix         | Anionic hydrophilic cream SR... | 240118      | 2       |
| Pharmachem/Phoenix         | Anionic hydrophilic cream SR... | 220219      | 1       |
| Pharmachem/Phönix          | Anionic hydrophilic cream SR... | 290413      | 1       |
| Pharmachem/Phönix          | Anionic hydrophilic cream SR... | 110913      | 1       |
| Pharmachem/Phönix          | Anionic hydrophilic cream SR... | 130814      | 1       |
| Pharmachemie               | Anionic hydrophilic cream SR... | 240915      | 1       |
| Pharmachemie Pöšneck       | Anionic hydrophilic cream SR... | 150716      | 2       |
| Pharmachemie Pöšneck       | Anionic hydrophilic cream SR... | 303017      | 1       |
| Pharmachemie Pöšneck       | Anionic hydrophilic cream SR... | 300317      | 1       |
| PHK/Phönix                 | Anionic hydrophilic cream SR... | 6A260219    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 18A260514   | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 16188903    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 17001708    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 17001702    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 18001475    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 17270401    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 18006283    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 18006628    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 19000647    | 1       |
| Phoenix                    | Anionic hydrophilic cream SR... | 200351604   | 1       |
| Phoenix (PKH Halle)        | Anionic hydrophilic cream SR... | 30A021012   | 1       |
| Phoenix (PKH Halle)        | Anionic hydrophilic cream SR... | 33A151012   | 1       |
| Phoenix 04.02.2020 5,08EUR | Anionic hydrophilic cream SR... | 19003575    | 1       |
| Phoenix Leipzig 14.08.17   | Anionic hydrophilic cream SR... | 19A200617   | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 277636      | 3       |
| Bombastus                  | Anionic hydrophilic cream SR... | 288310      | 4       |
| Bombastus                  | Anionic hydrophilic cream SR... | 291529      | 9       |
| Bombastus                  | Anionic hydrophilic cream SR... | 19000006465 | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 18107001    | 3       |
| phönix                     | Anionic hydrophilic cream SR... | 7a090216    | 1       |
| phönix                     | Anionic hydrophilic cream SR... | 16158802    | 1       |
| phönix                     | Anionic hydrophilic cream SR... | 3a310117    | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| phönix                     | Anionic hydrophilic cream SR... | 4a130217  | 1       |
| phönix                     | Anionic hydrophilic cream SR... | 10a280317 | 1       |
| phönix                     | Anionic hydrophilic cream SR... | 14a150517 | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 272515    | 3       |
| Phönix                     | Anionic hydrophilic cream SR... | 284083    | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 36a140916 | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 38a111016 | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 305066    | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 305064    | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 305069    | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 18A140617 | 2       |
| Phönix                     | Anionic hydrophilic cream SR... | 17202301  | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | Fiebig    | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 18003782  | 1       |
| Phönix                     | Anionic hydrophilic cream SR... | 18006632  | 1       |
| Phönix Gotha               | Anionic hydrophilic cream SR... | 241111    | 1       |
| Phönix/apomix              | Anionic hydrophilic cream SR... | 14A150517 | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 17001708  | 5       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18006279  | 6       |
| PKH / Phoenix              | Anionic hydrophilic cream SR... | 15A210415 | 1       |
| PKH Apomix/Anzag           | Anionic hydrophilic cream SR... | 38A171115 | 1       |
| pkh Gehe 28:06:18          | Anionic hydrophilic cream SR... | 16A300518 | 1       |
| PKH GmbH                   | Anionic hydrophilic cream SR... | 17A030516 | 1       |
| PKH GmbH                   | Anionic hydrophilic cream SR... | 2A030117  | 1       |
| PKH GmbH                   | Anionic hydrophilic cream SR... | 7A280218  | 1       |
| PKH GmbH Halle / Gehe      | Anionic hydrophilic cream SR... | 30A140818 | 1       |
| PKH GmbH/ Phönix           | Anionic hydrophilic cream SR... | 14A030413 | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 13A010415 | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 4A160118  | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 25A110718 | 2       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 7A110319  | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 25A240919 | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 2A070120  | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 14A130520 | 1       |
| PKH Halle                  | Anionic hydrophilic cream SR... | 21A150920 | 2       |
| PKH Halle (apomix) / AH... | Anionic hydrophilic cream SR... | 32A101017 | 1       |
| PKH Halle / Phoenix        | Anionic hydrophilic cream SR... | 16A240413 | 2       |
| PKH Halle / Phoenix        | Anionic hydrophilic cream SR... | 5A170214  | 1       |
| PKH Halle / Phoenix        | Anionic hydrophilic cream SR... | 17A200514 | 1       |
| PKH Halle / Phoenix        | Anionic hydrophilic cream SR... | 40A091214 | 1       |
| PKH Halle / Gehe           | Anionic hydrophilic cream SR... | 30A140818 | 1       |
| PKH Halle/Kehr             | Anionic hydrophilic cream SR... | 9A170216  | 1       |
| PKH Halle/Kehr             | Anionic hydrophilic cream SR... | 24A280616 | 1       |
| PKH/Gehe                   | Anionic hydrophilic cream SR... | 16A060416 | 1       |
| Pönix/AMH                  | Anionic hydrophilic cream SR... | 11A070313 | 1       |
| Rabenapotheke              | Anionic hydrophilic cream SR... | 39A011214 | 1       |
| Raben-Apotheke Mildenau    | Anionic hydrophilic cream SR... | 11A010414 | 1       |
| Raben-Apotheke Mildenau    | Anionic hydrophilic cream SR... | 19A030614 | 1       |
| sanacorp                   | Anionic hydrophilic cream SR... | 15319101  | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 273693    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 274505    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 277566    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 277569    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 277637    | 2       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 279202    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 281742    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 281809    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 283283    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 283284    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 290413    | 2       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Sanacorp                   | Anionic hydrophilic cream SR... | 274376      | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 295232      | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 290530      | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 300564      | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 306440      | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 17001708    | 6       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 18001483    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 18002227    | 2       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 18005159    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 19021402    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 19177103    | 1       |
| Sanacorp                   | Anionic hydrophilic cream SR... | 19003576    | 1       |
| SANACORP                   | Anionic hydrophilic cream SR... | 19093001    | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 7A2702213   | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 2013111213  | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 17006166    | 1       |
| Sanacorp apomix 28.03.2... | Anionic hydrophilic cream SR... | 7A030320    | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 18006281    | 4       |
| Bombastus                  | Anionic hydrophilic cream SR... | 281866      | 9       |
| Caelo                      | Anionic hydrophilic cream SR... | 277636      | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 16019801    | 5       |
| Sanacorp;21.04.15;9,31EUR  | Anionic hydrophilic cream SR... | 292977      | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 14336203    | 3       |
| Caelo                      | Anionic hydrophilic cream SR... | 15069501    | 3       |
| Caelo                      | Anionic hydrophilic cream SR... | 15014804    | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 15268002    | 2       |
| Taoasis/Sanacorp           | Anionic hydrophilic cream SR... | 311127      | 2       |
| THC Noweda                 | Anionic hydrophilic cream SR... | 18005159    | 1       |
| VDL;02.12.14;5,32EUR       | Anionic hydrophilic cream SR... | 288310      | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 19268204    | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 1249001     | 2       |
| aelo                       | Anionic hydrophilic cream wi... | 14214101    | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 1324401     | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 13344301    | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 17030310    | 1       |
| Ahde 27.11.17              | Anionic hydrophilic cream wi... | 310273      | 1       |
| Alliance H.                | Anionic hydrophilic cream wi... | 19093901    | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 17335501    | 20      |
| Allianz Healthcare         | Anionic hydrophilic cream wi... | 17030301    | 1       |
| Anzag 19.04.18             | Anionic hydrophilic cream wi... | 17262101    | 1       |
| Apo Ident/ Noweda          | Anionic hydrophilic cream wi... | 18109801    | 3       |
| Bionorica/ Phönix Lab      | Anionic hydrophilic cream wi... | 132615      | 1       |
| Bombastus                  | Anionic hydrophilic cream wi... | 14030701    | 1       |
| Bombastus                  | Anionic hydrophilic cream wi... | 17335501    | 1       |
| Caeanlo                    | Anionic hydrophilic cream wi... | 16067601    | 1       |
| Caello / Gehe              | Anionic hydrophilic cream wi... | 18180901    | 1       |
| cael                       | Anionic hydrophilic cream wi... | 17262201    | 1       |
| Cael / GEHE                | Anionic hydrophilic cream wi... | 20000193002 | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 3125902     | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 18181001    | 20      |
| Caelo                      | Anionic hydrophilic cream wi... | 18248301    | 16      |
| Caelo                      | Anionic hydrophilic cream wi... | 1213M-07009 | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 112210016   | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 1222102     | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 12352702    | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 12352703    | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 12301302    | 5       |
| Caelo                      | Anionic hydrophilic cream wi... | 13072302    | 8       |
| Caelo                      | Anionic hydrophilic cream wi... | 13125903    | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 13125901    | 10      |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Anionic hydrophilic cream wi... | 13125902     | 3       |
| Caelo    | Anionic hydrophilic cream wi... | 2913M25401   | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 13172201     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 13172203     | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 9771644      | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 13244302     | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 7011403      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 13343301     | 11      |
| Caelo    | Anionic hydrophilic cream wi... | CHB13343401  | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 14030501     | 10      |
| Caelo    | Anionic hydrophilic cream wi... | 14146101     | 13      |
| Caelo    | Anionic hydrophilic cream wi... | 14146002     | 15      |
| Caelo    | Anionic hydrophilic cream wi... | 14214201     | 36      |
| Caelo    | Anionic hydrophilic cream wi... | 14214202     | 6       |
| Caelo    | Anionic hydrophilic cream wi... | 14334301     | 25      |
| Caelo    | Anionic hydrophilic cream wi... | 15132801     | 10      |
| Caelo    | Anionic hydrophilic cream wi... | 15272902     | 6       |
| Caelo    | Anionic hydrophilic cream wi... | 27031504     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 20071504     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 15132901     | 3       |
| Caelo    | Anionic hydrophilic cream wi... | 1527301      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 1545401      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 15405302     | 8       |
| Caelo    | Anionic hydrophilic cream wi... | 1540521      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 2788         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 6067401      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 16067901     | 8       |
| Caelo    | Anionic hydrophilic cream wi... | 16191501     | 7       |
| Caelo    | Anionic hydrophilic cream wi... | 16191601     | 45      |
| Caelo    | Anionic hydrophilic cream wi... | 16191801     | 10      |
| Caelo    | Anionic hydrophilic cream wi... | 16290401     | 16      |
| Caelo    | Anionic hydrophilic cream wi... | 16290302     | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 1629051      | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 162906301    | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 16332001     | 12      |
| Caelo    | Anionic hydrophilic cream wi... | 17102401     | 18      |
| Caelo    | Anionic hydrophilic cream wi... | 170299015309 | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 15071702     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17102201     | 22      |
| Caelo    | Anionic hydrophilic cream wi... | 17156601     | 15      |
| Caelo    | Anionic hydrophilic cream wi... | 17262002     | 11      |
| Caelo    | Anionic hydrophilic cream wi... | 17262101     | 55      |
| Caelo    | Anionic hydrophilic cream wi... | 17262102     | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 19021814     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17335402     | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 17335401     | 33      |
| Caelo    | Anionic hydrophilic cream wi... | 23051807     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17335701     | 25      |
| Caelo    | Anionic hydrophilic cream wi... | 13101803     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 18108901     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 26011908     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 18320901     | 25      |
| Caelo    | Anionic hydrophilic cream wi... | 19027601     | 14      |
| Caelo    | Anionic hydrophilic cream wi... | 2x19027601   | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 19093901     | 19      |
| Caelo    | Anionic hydrophilic cream wi... | 19093701     | 42      |
| Caelo    | Anionic hydrophilic cream wi... | 19093702     | 6       |
| Caelo    | Anionic hydrophilic cream wi... | 19192101     | 12      |
| Caelo    | Anionic hydrophilic cream wi... | 19192201     | 20      |
| Caelo    | Anionic hydrophilic cream wi... | 19268401     | 9       |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Caelo    | Anionic hydrophilic cream wi... | 2x19268401       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 191923012x       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 20000193002      | 19      |
| Caelo    | Anionic hydrophilic cream wi... | 20000192001      | 15      |
| Caelo    | Anionic hydrophilic cream wi... | 2000190001       | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 20001246001      | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 2001250001       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 2000193002       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 200125001        | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 1247001          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 20003308001      | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 20004291001      | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 13172202         | 7       |
| Caelo    | Anionic hydrophilic cream wi... | 1703031          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 18297501         | 44      |
| Caelo    | Anionic hydrophilic cream wi... | 12344401         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17185401         | 12      |
| Caelo    | Anionic hydrophilic cream wi... | 1819801          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17030202         | 9       |
| Caelo    | Anionic hydrophilic cream wi... | 14030601         | 5       |
| Caelo    | Anionic hydrophilic cream wi... | 15048502         | 12      |
| Caelo    | Anionic hydrophilic cream wi... | 54/AKD12         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 20001978001      | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 2x18297401       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 15273001         | 32      |
| Caelo    | Anionic hydrophilic cream wi... | 15045301         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 64/AKD16         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 13244301         | 4       |
| Caelo    | Anionic hydrophilic cream wi... | 172622101        | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 17339401         | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 19093602         | 11      |
| Caelo    | Anionic hydrophilic cream wi... | 1733601          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 1416101          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 16067701         | 17      |
| Caelo    | Anionic hydrophilic cream wi... | 19268203         | 18      |
| Caelo    | Anionic hydrophilic cream wi... | 15273201         | 17      |
| Caelo    | Anionic hydrophilic cream wi... | 18109801         | 79      |
| Caelo    | Anionic hydrophilic cream wi... | 3288             | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 13072303         | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 16290101         | 12      |
| Caelo    | Anionic hydrophilic cream wi... | 190275022        | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 2000018901       | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 18041401         | 39      |
| Caelo    | Anionic hydrophilic cream wi... | 18320802         | 22      |
| Caelo    | Anionic hydrophilic cream wi... | 14030401         | 10      |
| Caelo    | Anionic hydrophilic cream wi... | 200001979001     | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 20004292001      | 3       |
| Caelo    | Anionic hydrophilic cream wi... | 20004293001      | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 16067801         | 9       |
| Caelo    | Anionic hydrophilic cream wi... | 18180901         | 33      |
| Caelo    | Anionic hydrophilic cream wi... | 20002257001      | 2       |
| Caelo    | Anionic hydrophilic cream wi... | 16067501         | 13      |
| Caelo    | Anionic hydrophilic cream wi... | 17102101         | 9       |
| Caelo    | Anionic hydrophilic cream wi... | 14334501         | 18      |
| Caelo    | Anionic hydrophilic cream wi... | 1180216          | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 16290201         | 10      |
| Caelo    | Anionic hydrophilic cream wi... | 1120617/17102101 | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 173335401        | 1       |
| Caelo    | Anionic hydrophilic cream wi... | 19027502         | 17      |
| Caelo    | Anionic hydrophilic cream wi... | 18297502         | 2       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Caelo           | Anionic hydrophilic cream wi... | 19027501     | 22             |
| Caelo           | Anionic hydrophilic cream wi... | 19182001     | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 19027401     | 2              |
| Caelo           | Anionic hydrophilic cream wi... | 2114M25401   | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 2514U25401   | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 19093601     | 4              |
| Caelo           | Anionic hydrophilic cream wi... | 19268502     | 3              |
| Caelo           | Anionic hydrophilic cream wi... | 2000124600   | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 16067601     | 49             |
| Caelo           | Anionic hydrophilic cream wi... | 17262001     | 6              |
| Caelo           | Anionic hydrophilic cream wi... | 20001251001  | 27             |
| Caelo           | Anionic hydrophilic cream wi... | 15132902     | 15             |
| Caelo           | Anionic hydrophilic cream wi... | 16191701     | 15             |
| Caelo           | Anionic hydrophilic cream wi... | 17030101     | 23             |
| Caelo           | Anionic hydrophilic cream wi... | 20001248001  | 3              |
| Caelo           | Anionic hydrophilic cream wi... | 20001979002  | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 1512901      | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 16290501     | 10             |
| Caelo           | Anionic hydrophilic cream wi... | 13343402     | 7              |
| Caelo           | Anionic hydrophilic cream wi... | 141146101    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 14214101     | 8              |
| Caelo           | Anionic hydrophilic cream wi... | 14334502     | 7              |
| Caelo           | Anionic hydrophilic cream wi... | 15405201     | 6              |
| Caelo           | Anionic hydrophilic cream wi... | 15405401     | 22             |
| Caelo           | Anionic hydrophilic cream wi... | 16067401     | 12             |
| Caelo           | Anionic hydrophilic cream wi... | 13067601     | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 1625961      | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 170612187    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 17102001     | 6              |
| Caelo           | Anionic hydrophilic cream wi... | 17156501     | 6              |
| Caelo           | Anionic hydrophilic cream wi... | 170318182    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 17156602     | 11             |
| Caelo           | Anionic hydrophilic cream wi... | 1756501      | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 17262201     | 16             |
| Caelo           | Anionic hydrophilic cream wi... | 181102184    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 17261901     | 11             |
| Caelo           | Anionic hydrophilic cream wi... | 17335301     | 6              |
| Caelo           | Anionic hydrophilic cream wi... | 18109802     | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 18109601     | 7              |
| Caelo           | Anionic hydrophilic cream wi... | 18109701     | 2              |
| Caelo           | Anionic hydrophilic cream wi... | 18248201     | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 3446         | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 20000190001  | 17             |
| Caelo           | Anionic hydrophilic cream wi... | 20000191001  | 9              |
| Caelo           | Anionic hydrophilic cream wi... | 2000191001   | 2              |
| Caelo           | Anionic hydrophilic cream wi... | 20001249001  | 4              |
| Caelo           | Anionic hydrophilic cream wi... | 3448         | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 15048301     | 15             |
| Caelo           | Anionic hydrophilic cream wi... | 184248101    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 18248101     | 47             |
| Caelo           | Anionic hydrophilic cream wi... | 2x18297301   | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 19093801     | 16             |
| Caelo           | Anionic hydrophilic cream wi... | 190950409    | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 21000682001  | 1              |
| Caelo           | Anionic hydrophilic cream wi... | 13244201     | 9              |
| Caelo           | Anionic hydrophilic cream wi... | 14334201     | 12             |
| Caelo           | Anionic hydrophilic cream wi... | 1548301      | 2              |
| Caelo           | Anionic hydrophilic cream wi... | 1513301      | 3              |
| Caelo           | Anionic hydrophilic cream wi... | 16191901     | 13             |
| Caelo           | Anionic hydrophilic cream wi... | 17029902     | 11             |

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| Supplier                   | Substance                       | Batch               | Spectra |
|----------------------------|---------------------------------|---------------------|---------|
| Caelo                      | Anionic hydrophilic cream wi... | 17102301            | 18      |
| Caelo                      | Anionic hydrophilic cream wi... | 1227-11-629         | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 17335601            | 16      |
| Caelo                      | Anionic hydrophilic cream wi... | 17355701            | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 18041601            | 26      |
| Caelo                      | Anionic hydrophilic cream wi... | 18248202            | 10      |
| Caelo                      | Anionic hydrophilic cream wi... | 18320801            | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 190702806           | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 19192001            | 38      |
| Caelo                      | Anionic hydrophilic cream wi... | 20000189001         | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 20001250001         | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 20003309001         | 7       |
| Caelo                      | Anionic hydrophilic cream wi... | 18180902            | 18      |
| Caelo                      | Anionic hydrophilic cream wi... | 20000193001         | 3       |
| Caelo                      | Anionic hydrophilic cream wi... | 13072401            | 5       |
| Caelo                      | Anionic hydrophilic cream wi... | 13244401-3471312131 | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 14146003            | 6       |
| Caelo                      | Anionic hydrophilic cream wi... | 14030702            | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 14214001            | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 15048401            | 6       |
| Caelo                      | Anionic hydrophilic cream wi... | 15133001            | 19      |
| Caelo                      | Anionic hydrophilic cream wi... | 15273301            | 13      |
| Caelo                      | Anionic hydrophilic cream wi... | 15273101            | 17      |
| Caelo                      | Anionic hydrophilic cream wi... | 15272901            | 3       |
| Caelo                      | Anionic hydrophilic cream wi... | 45/AKD7             | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 16067301            | 5       |
| Caelo                      | Anionic hydrophilic cream wi... | 56/AKD15            | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 17232101            | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 17362201            | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 18041501            | 8       |
| Caelo                      | Anionic hydrophilic cream wi... | 1968204             | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 9192001             | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 200001250001        | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 20001979001         | 3       |
| Caelo                      | Anionic hydrophilic cream wi... | 200011979001        | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 20003307001         | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 20004293002         | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 19192002            | 2       |
| Caelo                      | Anionic hydrophilic cream wi... | 200000190001        | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 200000193001        | 2       |
| Caerol/AHD                 | Anionic hydrophilic cream wi... | 15405301            | 1       |
| Caerol/Phoenix             | Anionic hydrophilic cream wi... | 16067601            | 1       |
| Caerolo/Sanacorp           | Anionic hydrophilic cream wi... | 18041401            | 1       |
| Caesa / Alliance Health... | Anionic hydrophilic cream wi... | 18248102            | 1       |
| Caesar & Loretz            | Anionic hydrophilic cream wi... | 18180901            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18041601            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18109701            | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18248101            | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18109901            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18297301            | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18297501            | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18248301            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18248202            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18320901            | 6       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18297401            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18248201            | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18320802            | 12      |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18180801            | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 2018018109701       | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18109601            | 2       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18180901    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18320803    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18297502    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19027502    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19027501    | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19027601    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19093901    | 4       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18109801    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19027401    | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19093801    | 6       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 18320801    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19093702    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19192001    | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19093601    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19192101    | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19191901    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19093602    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19268502    | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19268203    | 9       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19268202    | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 19192301    | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20000190001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20000192001 | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20000193002 | 15      |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20000191001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20000189001 | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001249001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001248001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001251001 | 3       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001250001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001247001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001978001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20001979001 | 4       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | AP210204-02 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20003308001 | 2       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20004292001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20003309001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20004294001 | 1       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 20004293001 | 5       |
| Caesar & Loretz GmbH       | Anionic hydrophilic cream wi... | 21000681001 | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream wi... | 18297401    | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream wi... | 20000190001 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream wi... | 20000193002 | 1       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream wi... | 19093801    | 2       |
| Caesar & Loretz GmbH / ... | Anionic hydrophilic cream wi... | 19093602    | 1       |
| Caesar & Loretz GmbH Hi... | Anionic hydrophilic cream wi... | B1334301    | 1       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream wi... | 13072302    | 3       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream wi... | 12352702    | 1       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream wi... | 13125901    | 2       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream wi... | 13244401    | 1       |
| Caesar & Loretz GmbH, 4... | Anionic hydrophilic cream wi... | 13244201    | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream wi... | 19192001    | 1       |
| Caesar & Loretz GmbH/ P... | Anionic hydrophilic cream wi... | 20000193002 | 1       |
| Caesar & Loretz GmbH/AHC   | Anionic hydrophilic cream wi... | 18297501    | 1       |
| Caesar & Loretz GmbH/AHD   | Anionic hydrophilic cream wi... | 19192001    | 1       |
| Caesar & Loretz GmbH/G     | Anionic hydrophilic cream wi... | 18297501    | 1       |
| Caesar & Loretz GmbH/gehe  | Anionic hydrophilic cream wi... | 18248101    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream wi... | 18248101    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream wi... | 19192201    | 1       |
| Caesar & Loretz GmbH/Gehe  | Anionic hydrophilic cream wi... | 19268401    | 1       |

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| Supplier                   | Substance                       | Batch        | Spectra |
|----------------------------|---------------------------------|--------------|---------|
| Caesar & Loretz GmbH/GEHE  | Anionic hydrophilic cream wi... | 18297501     | 1       |
| Caesar & Loretz GmbH/GEHE  | Anionic hydrophilic cream wi... | 19093701     | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream wi... | 19093801     | 1       |
| Caesar & Loretz GmbH/Je... | Anionic hydrophilic cream wi... | 19268401     | 2       |
| Caesar & Loretz GmbH/No... | Anionic hydrophilic cream wi... | 20003309001  | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 18297501     | 2       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 19027502     | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 19192001     | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 19268203     | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 20001251001  | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 18248101     | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 19268203     | 1       |
| Caesar & Loretz GmbH/Ph... | Anionic hydrophilic cream wi... | 20003309001  | 2       |
| Caesar & Loretz GmbH/Px    | Anionic hydrophilic cream wi... | 18320901     | 1       |
| Caesar & Loretz GmbH/Sa... | Anionic hydrophilic cream wi... | AP210622-07  | 1       |
| Caesar & Loretz Hilden     | Anionic hydrophilic cream wi... | 18248101     | 1       |
| Caesar&lorenz,Phoenix      | Anionic hydrophilic cream wi... | 14030701     | 1       |
| Cealo                      | Anionic hydrophilic cream wi... | 13165001     | 1       |
| Cealo                      | Anionic hydrophilic cream wi... | 14214201     | 1       |
| Cealo                      | Anionic hydrophilic cream wi... | 1726202      | 1       |
| Cealo / Otto Geilenkirc... | Anionic hydrophilic cream wi... | 19027601     | 1       |
| Cealo / Otto Geilenkirc... | Anionic hydrophilic cream wi... | 19027501     | 1       |
| Cealo / Otto Geilenkirc... | Anionic hydrophilic cream wi... | 19093702     | 1       |
| Cealo/Gehe                 | Anionic hydrophilic cream wi... | 19093901     | 1       |
| Cealo/Sanacorp             | Anionic hydrophilic cream wi... | 200000193002 | 1       |
| Ebert und Jacobi           | Anionic hydrophilic cream wi... | 18297501     | 2       |
| EuRho                      | Anionic hydrophilic cream wi... | 17262101     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 15273101     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 16191601     | 2       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 17262101     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 17102301     | 3       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 17030301     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 17262201     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 14030701     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 18041601     | 1       |
| euro//Noweda               | Anionic hydrophilic cream wi... | 18041501     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 14334501     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 16067801     | 1       |
| Euro OTC                   | Anionic hydrophilic cream wi... | 16290301     | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 17262101     | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 17335401     | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 1903701      | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 18041401     | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 18320901     | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 16191901     | 1       |
| Fiebig                     | Anionic hydrophilic cream wi... | 17102301     | 1       |
| gehe                       | Anionic hydrophilic cream wi... | 17335601     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 1307302      | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 13244401     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 14334501     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 15048301     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 15133001     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 15273101     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 15273201     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 15405301     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 16067301     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 16067401     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 16191501     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 16191801     | 1       |
| Gehe                       | Anionic hydrophilic cream wi... | 16290401     | 1       |

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| Supplier          | Substance                       | Batch         | Spectra |
|-------------------|---------------------------------|---------------|---------|
| Gehe              | Anionic hydrophilic cream wi... | 17030001      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17030101      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17102101      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17102201      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17156602      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17262001      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17335501      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17262201      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17335601      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 17335701      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 18041601      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 18109901      | 2       |
| Gehe              | Anionic hydrophilic cream wi... | 18180902      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 19027502      | 2       |
| Gehe              | Anionic hydrophilic cream wi... | 19093901      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 19027601      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 1909301       | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 19192201      | 1       |
| Gehe              | Anionic hydrophilic cream wi... | 20000192001   | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 12301302      | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 13072303      | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 17156501      | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 18109601      | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 17261901      | 2       |
| GEHE              | Anionic hydrophilic cream wi... | 19027401      | 1       |
| GEHE              | Anionic hydrophilic cream wi... | 18320801      | 1       |
| Gehe amax         | Anionic hydrophilic cream wi... | 18041401      | 1       |
| Gehe amax         | Anionic hydrophilic cream wi... | 18109801      | 1       |
| gehe,08.03.19     | Anionic hydrophilic cream wi... | 18297401      | 1       |
| Caelo             | Anionic hydrophilic cream wi... | 19191901      | 3       |
| Geilenkirchen     | Anionic hydrophilic cream wi... | 15048501      | 2       |
| Geilenkirchen     | Anionic hydrophilic cream wi... | 20000190001   | 1       |
| Hedinger          | Anionic hydrophilic cream wi... | 19093602 (2x) | 1       |
| Ichthyol / Gehe   | Anionic hydrophilic cream wi... | 17335601      | 2       |
| Kehr              | Anionic hydrophilic cream wi... | 17030301      | 1       |
| Kehr              | Anionic hydrophilic cream wi... | 17156601      | 1       |
| Kehr              | Anionic hydrophilic cream wi... | 18109801      | 2       |
| Caelo             | Anionic hydrophilic cream wi... | 17029901      | 34      |
| Krieger           | Anionic hydrophilic cream wi... | 20000191001   | 1       |
| L10               | Anionic hydrophilic cream wi... | 16290101      | 2       |
| L10               | Anionic hydrophilic cream wi... | 17261901      | 5       |
| L10               | Anionic hydrophilic cream wi... | 18041501      | 1       |
| L10               | Anionic hydrophilic cream wi... | 18180801      | 3       |
| L11               | Anionic hydrophilic cream wi... | 16067401      | 1       |
| L12               | Anionic hydrophilic cream wi... | 16290201      | 1       |
| L12               | Anionic hydrophilic cream wi... | 17102001      | 2       |
| L12               | Anionic hydrophilic cream wi... | 17030202      | 1       |
| L12               | Anionic hydrophilic cream wi... | 18109601      | 2       |
| Lamotte           | Anionic hydrophilic cream wi... | 2x19192101    | 1       |
| Martinus-Apotheke | Anionic hydrophilic cream wi... | 16067801      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 13072302      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 13072401      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 13172203      | 2       |
| Noweda            | Anionic hydrophilic cream wi... | 13343301      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 13343402      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 16290501      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 17102101      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 16191601      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 17030301      | 1       |
| Noweda            | Anionic hydrophilic cream wi... | 17156601      | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Noweda                     | Anionic hydrophilic cream wi... | 17262101    | 1       |
| Noweda                     | Anionic hydrophilic cream wi... | 17335501    | 1       |
| Noweda                     | Anionic hydrophilic cream wi... | 18181001    | 1       |
| Noweda                     | Anionic hydrophilic cream wi... | 19093702    | 1       |
| Noweda                     | Anionic hydrophilic cream wi... | 19191901    | 1       |
| Noweda                     | Anionic hydrophilic cream wi... | 19192201    | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 18189901    | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 12216501    | 1       |
| Noweda/ Caesar&Lorenz G... | Anionic hydrophilic cream wi... | 19027401    | 1       |
| Noweda/ Caesar&Lorenz G... | Anionic hydrophilic cream wi... | 20000189001 | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 14146001    | 2       |
| Phoenix                    | Anionic hydrophilic cream wi... | 14030702    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 17029901    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 3057        | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 3193        | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 18041401    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 3226        | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 18181001    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 18248101    | 2       |
| Phoenix                    | Anionic hydrophilic cream wi... | 18320901    | 2       |
| Phoenix                    | Anionic hydrophilic cream wi... | 3359        | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19027601    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19027501    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 18320802    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19093801    | 3       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19192101    | 2       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19B60312    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 19192301    | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 200431105   | 1       |
| Phoenix                    | Anionic hydrophilic cream wi... | 200793107   | 1       |
| phönix                     | Anionic hydrophilic cream wi... | 18320802    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 13172203    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 13072302    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 17335402    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 3143        | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 3152        | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 3159        | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 3160        | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 17335701    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 18297301    | 1       |
| Phönix                     | Anionic hydrophilic cream wi... | 20000192001 | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 18248102    | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 1334302     | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 1324402     | 1       |
| Caelo                      | Anionic hydrophilic cream wi... | 190382703   | 1       |
| Fagron                     | Anionic hydrophilic cream wi... | 16067801    | 2       |
| Phönix/gepepharm           | Anionic hydrophilic cream wi... | 13244201    | 2       |
| Px/Phoenix                 | Anionic hydrophilic cream wi... | 17335501    | 1       |
| Rondell Apotheke           | Anionic hydrophilic cream wi... | 15273301    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 24AKD1      | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 14214301    | 3       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 14334401    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 39/AKD4     | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 41/AKD6     | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 50/AKD12    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 16067901    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 16264601    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 17030301    | 1       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 19268202    | 2       |
| Sanacorp                   | Anionic hydrophilic cream wi... | 19268502    | 1       |

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| Supplier                    | Substance                       | Batch       | Spectra |
|-----------------------------|---------------------------------|-------------|---------|
| Sanacorp                    | Anionic hydrophilic cream wi... | 20001246001 | 2       |
| Caelo                       | Anionic hydrophilic cream wi... | 15405301    | 12      |
| Sanacorp WE 23.02.17 -1...  | Anionic hydrophilic cream wi... | 16290501    | 1       |
| sanacorp, 5,75EUR, 12.09... | Anionic hydrophilic cream wi... | 16191601    | 2       |
| Caelo                       | Anionic hydrophilic cream wi... | 18180801    | 2       |
| Sanacorp/ Noweda            | Anionic hydrophilic cream wi... | 18248101    | 2       |
| Caelo                       | Anionic hydrophilic cream wi... | 12221003    | 3       |
| Caelo                       | Anionic hydrophilic cream wi... | 12352701    | 5       |
| Caelo                       | Anionic hydrophilic cream wi... | 12283001    | 1       |
| Caelo                       | Anionic hydrophilic cream wi... | 12301301    | 2       |
| Caelo                       | Anionic hydrophilic cream wi... | 13072301    | 2       |
| Caelo                       | Anionic hydrophilic cream wi... | 130723301   | 1       |
| Caelo                       | Anionic hydrophilic cream wi... | 13343501    | 9       |
| Caelo                       | Anionic hydrophilic cream wi... | 18/AKD1511  | 1       |
| Caelo                       | Anionic hydrophilic cream wi... | 14214301    | 6       |
| Caelo                       | Anionic hydrophilic cream wi... | 32/AKD2     | 1       |
| Caelo                       | Anionic hydrophilic cream wi... | 15132701    | 5       |
| Caelo                       | Anionic hydrophilic cream wi... | 18920801    | 1       |
| Caelo                       | Anionic hydrophilic cream wi... | 5/2021      | 1       |
| THC Rezeptur-Set            | Anionic hydrophilic cream wi... | 17102101    | 1       |
| vdl                         | Anionic hydrophilic cream wi... | 12221002    | 1       |
| Alliance/ Apomix            | Anionic hydrophlic cream wit... | 9B141019    | 1       |
| Alliance/ Apomix            | Anionic hydrophlic cream wit... | 10B251119   | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 10B060814   | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 6B060514    | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 4B100314    | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 7B080615    | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 6B190516    | 1       |
| AMH Niemann / G             | Anionic hydrophlic cream wit... | 4B220518    | 1       |
| AMH Niemann GmbH& CoKG/...  | Anionic hydrophlic cream wit... | 9B141019    | 1       |
| AMH Niemann GmbH&Co.KG      | Anionic hydrophlic cream wit... | 3B020315    | 1       |
| AMH Niemann/G               | Anionic hydrophlic cream wit... | 10B160712   | 1       |
| AMH Niemann/G               | Anionic hydrophlic cream wit... | 1B070114    | 1       |
| AMH Niemann/K               | Anionic hydrophlic cream wit... | 17B271212   | 1       |
| AMH Niemann/K               | Anionic hydrophlic cream wit... | 14B161213   | 1       |
| AMW Niemann GmbH & Co. KG   | Anionic hydrophlic cream wit... | 9B150816    | 1       |
| Anzag/ apomix               | Anionic hydrophlic cream wit... | 88121118    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 7B210616    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 13b141216   | 2       |
| apomix                      | Anionic hydrophlic cream wit... | 6B190617    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 10B291117   | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 1B080118    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 5B080419    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 8b200819    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 3B030320    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 5B280420    | 1       |
| apomix                      | Anionic hydrophlic cream wit... | 2B020221    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 12B040912   | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 7B180613    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 2B250213    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 6B220513    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 8B100614    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 12B220914   | 2       |
| Apomix                      | Anionic hydrophlic cream wit... | 6B04515     | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 8B170615    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 6B040515    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 3B170216    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 10B060916   | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 8B210716    | 1       |
| Apomix                      | Anionic hydrophlic cream wit... | 12B141116   | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix                     | Anionic hydrophlic cream wit... | 13B141216 | 2       |
| Apomix                     | Anionic hydrophlic cream wit... | 1B160117  | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 3B030417  | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 4B020517  | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 7B010817  | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 9B181017  | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 10B291117 | 1       |
| Apomix                     | Anionic hydrophlic cream wit... | 6B290519  | 1       |
| Apomix / Noweda            | Anionic hydrophlic cream wit... | 2B220218  | 1       |
| Apomix / Noweda            | Anionic hydrophlic cream wit... | 9B141019  | 1       |
| apomix, Alliance           | Anionic hydrophlic cream wit... | 8B200819  | 1       |
| apomix, Kehr 02.01.2020    | Anionic hydrophlic cream wit... | 10B251119 | 1       |
| Apomix/ Noweda             | Anionic hydrophlic cream wit... | 8B121118  | 1       |
| Apomix/AHD                 | Anionic hydrophlic cream wit... | 3B170216  | 1       |
| Apomix/AHD                 | Anionic hydrophlic cream wit... | 1B080118  | 1       |
| Apomix/AHD                 | Anionic hydrophlic cream wit... | 7B040918  | 1       |
| Apomix/AHD                 | Anionic hydrophlic cream wit... | 8B121118  | 1       |
| Apomix/Alliance            | Anionic hydrophlic cream wit... | 1B070119  | 1       |
| apomix/apomix              | Anionic hydrophlic cream wit... | 5B280420  | 1       |
| apomix/apomix              | Anionic hydrophlic cream wit... | 9B141020  | 1       |
| apomix/apomix              | Anionic hydrophlic cream wit... | 4B120421  | 1       |
| apomix/Gehe                | Anionic hydrophlic cream wit... | 7B210616  | 1       |
| Apomix/Gehe                | Anionic hydrophlic cream wit... | 4B110319  | 1       |
| Apomix/Kehr                | Anionic hydrophlic cream wit... | 9B141020  | 1       |
| apomix/Noweda              | Anionic hydrophlic cream wit... | 6B060514  | 1       |
| apomix/Noweda              | Anionic hydrophlic cream wit... | 2B250116  | 1       |
| apomix/Noweda              | Anionic hydrophlic cream wit... | 3B280318  | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 15B291214 | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 5B070414  | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 9B220714  | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 3B240214  | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 12B212015 | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 9B130715  | 1       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 5B250618  | 2       |
| Apomix/Noweda              | Anionic hydrophlic cream wit... | 8B121118  | 1       |
| APOMIX/Noweda              | Anionic hydrophlic cream wit... | 4B210316  | 1       |
| apomix/Phoenix             | Anionic hydrophlic cream wit... | 9B141019  | 1       |
| Apomix/Phoenix             | Anionic hydrophlic cream wit... | 8B121118  | 1       |
| Apomix/Phoenix             | Anionic hydrophlic cream wit... | 4B110319  | 1       |
| Apomix/Phoenix             | Anionic hydrophlic cream wit... | 9B141019  | 1       |
| apomix/Phönix              | Anionic hydrophlic cream wit... | 4B250315  | 1       |
| apomix/Phönix              | Anionic hydrophlic cream wit... | 13B161115 | 1       |
| apomix/Phönix              | Anionic hydrophlic cream wit... | 1B160117  | 1       |
| Apomix/Phönix              | Anionic hydrophlic cream wit... | 2B220218  | 1       |
| Bombastus                  | Anionic hydrophlic cream wit... | 285829    | 1       |
| Caelo                      | Anionic hydrophlic cream wit... | 7B040918  | 1       |
| Caelo                      | Anionic hydrophlic cream wit... | 4B220518  | 1       |
| Gehe                       | Anionic hydrophlic cream wit... | 2B100214  | 1       |
| Bombastus                  | Anionic hydrophlic cream wit... | 302197    | 1       |
| Noweda                     | Anionic hydrophlic cream wit... | 6B040515  | 1       |
| PKH Halle                  | Anionic hydrophlic cream wit... | 4B210316  | 1       |
| PKH Halle                  | Anionic hydrophlic cream wit... | 13B141216 | 1       |
| PKH Halle                  | Anionic hydrophlic cream wit... | 2B060317  | 2       |
| PKH Halle/AHD              | Anionic hydrophlic cream wit... | 4B220518  | 2       |
| PKH Halle/PKH Halle        | Anionic hydrophlic cream wit... | 4B110319  | 2       |
| PKH Halle/PKH Halle        | Anionic hydrophlic cream wit... | 9B141019  | 1       |
| Sonnen-Apotheke Wefensl... | Anionic hydrophlic cream wit... | 1B080118  | 1       |
| Caelo                      | Base cream, diluted             | 18106601  | 2       |
| Caelo                      | Base cream, diluted             | 19105701  | 3       |
| Caelo                      | Base cream, diluted             | 19253701  | 7       |

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| Supplier                   | Substance                   | Batch          | Spectra |
|----------------------------|-----------------------------|----------------|---------|
| Caelo                      | Base cream, diluted         | 19190402       | 2       |
| Caelo                      | Base cream, diluted         | 19278901       | 3       |
| Caelo                      | Base cream, diluted         | 19025901       | 1       |
| Caelo                      | Base cream, diluted         | 20001670002    | 11      |
| Caelo                      | Base cream, diluted         | 20003510001    | 6       |
| Caelo                      | Base cream, diluted         | 20001059001    | 2       |
| Caelo                      | Base cream, diluted         | 19229902       | 3       |
| Caelo                      | Base cream, diluted         | 20000701002    | 5       |
| Caelo                      | Base cream, diluted         | 2000351001     | 1       |
| Caelo                      | Base cream, diluted         | 2000000701002  | 1       |
| Caelo                      | Base cream, diluted         | 21490200016702 | 1       |
| Caelo                      | Base cream, diluted         | 20002515004    | 3       |
| Caelo                      | Base cream, diluted         | 18240802       | 1       |
| Caelo                      | Base cream, diluted         | 18106602       | 1       |
| Caelo                      | Base cream, diluted         | 20002515002    | 1       |
| Caelo                      | Base cream, diluted         | 20001667001    | 9       |
| Caelo                      | Base cream, diluted         | 1670002        | 1       |
| Caelo                      | Base cream, diluted         | 19000843001    | 1       |
| Caelo                      | Base cream, diluted         | 19000843002    | 6       |
| Caelo                      | Base cream, diluted         | 20001668001    | 3       |
| Caelo                      | Base cream, diluted         | 20000701001    | 1       |
| Caelo                      | Base cream, diluted         | 19105602       | 3       |
| Caelo                      | Base cream, diluted         | 20003510002    | 1       |
| Caelo                      | Base cream, diluted         | 2001667001     | 1       |
| Caeöp                      | Base cream, diluted         | 20003510002    | 1       |
| Caesar & Loretz            | Base cream, diluted         | 20001667001    | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19025901       | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 18240802       | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19190403       | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19229902       | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19190401       | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19105602       | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19278901       | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19229801       | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19000843001    | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 19000843002    | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20000701002    | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20001670002    | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20002515004    | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20001670003    | 1       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20001669001    | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 20003510001    | 2       |
| Caesar & Loretz GmbH       | Base cream, diluted         | 21000785001    | 1       |
| Caesar & Loretz GmbH/Je... | Base cream, diluted         | 20003510002    | 1       |
| Caesar & Loretz GmbH/No... | Base cream, diluted         | 19278901       | 1       |
| Caesar & Loretz GmbH/No... | Base cream, diluted         | 19190403       | 2       |
| Caesar & Loretz GmbH/No... | Base cream, diluted         | 20001670002    | 3       |
| Caesar & Loretz GmbH/Ph... | Base cream, diluted         | 20001059001    | 1       |
| Caesar & Loretz Hilden     | Base cream, diluted         | 19229902       | 1       |
| Caesar & Loretz Hilden/... | Base cream, diluted         | 20001670002    | 1       |
| Doppeleiche Apotheke       | Base cream, diluted         | 200714001      | 1       |
| Caelo                      | Base cream, diluted         | 19025902       | 1       |
| Noweda                     | Base cream, diluted         | 20001667001    | 1       |
| NOWEDA                     | Base cream, diluted         | 19190401       | 1       |
| Phoenix                    | Base cream, diluted         | 20000701002    | 1       |
| 0056373                    | Base cream, hydrophobic DAC | 180757         | 2       |
| 13.11.18 PHARMACHEM/GEHE   | Base cream, hydrophobic DAC | 181196         | 1       |
| Aallianc. Healthc. / Ph... | Base cream, hydrophobic DAC | 191489         | 3       |
| AH 24.02.15                | Base cream, hydrophobic DAC | 14335502       | 1       |
| AHD                        | Base cream, hydrophobic DAC | 14145401       | 1       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| AHD                        | Base cream, hydrophobic DAC | 18G31-t09-058735 | 1       |
| AHD / Pharmachem Pößneck   | Base cream, hydrophobic DAC | 160814           | 1       |
| AHD / Pharmachem Pößneck   | Base cream, hydrophobic DAC | 160138           | 1       |
| AHD / Pharmachem Pößneck   | Base cream, hydrophobic DAC | 162169           | 1       |
| AHD / Pharmachem Pößneck   | Base cream, hydrophobic DAC | 171128           | 2       |
| Caelo                      | Base cream, hydrophobic DAC | 160575101        | 1       |
| AHD Pharmachem Gmbh        | Base cream, hydrophobic DAC | 190638           | 1       |
| AHD Pharmachem Gmbh        | Base cream, hydrophobic DAC | 191488           | 1       |
| AHD Pharmachem Gmbh        | Base cream, hydrophobic DAC | 191487           | 1       |
| AHD Pharmachem Gmbh        | Base cream, hydrophobic DAC | 1925661          | 3       |
| AHD, 02.04.2013            | Base cream, hydrophobic DAC | 12308102         | 1       |
| AHD/ Pharmachem            | Base cream, hydrophobic DAC | 152210           | 2       |
| AHD/ Pharmachem            | Base cream, hydrophobic DAC | 160137           | 3       |
| AHD/ Pharmachem            | Base cream, hydrophobic DAC | 163238           | 2       |
| AHD/Pharmachem             | Base cream, hydrophobic DAC | 150404           | 1       |
| AHD/Pharmachem             | Base cream, hydrophobic DAC | 152210           | 1       |
| AHD/Pharmachem             | Base cream, hydrophobic DAC | 153625           | 4       |
| AHD/Pharmachem             | Base cream, hydrophobic DAC | 153626           | 1       |
| AHD/Pharmachem             | Base cream, hydrophobic DAC | 162170           | 1       |
| AHD/Pharmachem GmbH        | Base cream, hydrophobic DAC | 153627           | 1       |
| AHD/Pharmachem GmbH&Co.K   | Base cream, hydrophobic DAC | 182221           | 1       |
| AHD/Pharmachem GmbH&Co.K   | Base cream, hydrophobic DAC | 1925661          | 1       |
| AHD/Pharmachem.            | Base cream, hydrophobic DAC | 170008           | 1       |
| Ahd/PharmachemPößneck      | Base cream, hydrophobic DAC | 21013            | 1       |
| Allianc. Health. / Phar... | Base cream, hydrophobic DAC | 170010           | 1       |
| alliance                   | Base cream, hydrophobic DAC | 18286702         | 1       |
| Alliance                   | Base cream, hydrophobic DAC | 170010           | 2       |
| Alliance Healthcare/Pha... | Base cream, hydrophobic DAC | 190207           | 1       |
| Alliance/Pharmachem        | Base cream, hydrophobic DAC | 181196           | 1       |
| Allianz                    | Base cream, hydrophobic DAC | 180756           | 1       |
| Alte Apotheke              | Base cream, hydrophobic DAC | 16165701         | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 308508           | 1       |
| Anzag                      | Base cream, hydrophobic DAC | 150405           | 1       |
| Anzag                      | Base cream, hydrophobic DAC | 160136           | 1       |
| Anzag                      | Base cream, hydrophobic DAC | 171127           | 2       |
| Anzag                      | Base cream, hydrophobic DAC | 18002827         | 1       |
| Anzag                      | Base cream, hydrophobic DAC | 190638           | 1       |
| Anzag /Pharmachem          | Base cream, hydrophobic DAC | 160825           | 1       |
| Anzag 07.05.13 ek:12,66EUR | Base cream, hydrophobic DAC | 12229302         | 1       |
| Anzag 30.10.12 ek:12,68EUR | Base cream, hydrophobic DAC | 12151601         | 1       |
| Anzag/Bambastus            | Base cream, hydrophobic DAC | 305079           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 271092           | 3       |
| Caelo                      | Base cream, hydrophobic DAC | 19058501         | 13      |
| Anzag/Pharmachem           | Base cream, hydrophobic DAC | 120712           | 2       |
| api-ident                  | Base cream, hydrophobic DAC | 18051001         | 1       |
| apomix/ Anzag              | Base cream, hydrophobic DAC | 307766           | 1       |
| Berkel AHK                 | Base cream, hydrophobic DAC | 14145401         | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 269276           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 271091           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 271093           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 276085           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 261112           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 279147           | 2       |
| Bombastus                  | Base cream, hydrophobic DAC | 277696           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 279148           | 3       |
| Bombastus                  | Base cream, hydrophobic DAC | 282163           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 280811           | 2       |
| Bombastus                  | Base cream, hydrophobic DAC | 282162           | 2       |
| Bombastus                  | Base cream, hydrophobic DAC | 285437           | 2       |
| Bombastus                  | Base cream, hydrophobic DAC | 284173           | 1       |

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| <b>Supplier</b> | <b>Substance</b>            | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-----------------------------|--------------|----------------|
| Bombastus       | Base cream, hydrophobic DAC | 286515       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 286514       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 288499       | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 60080401     | 5              |
| Bombastus       | Base cream, hydrophobic DAC | 289720       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 289718       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 289717       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 291593       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 293162       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 291590       | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 293167       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 293163       | 5              |
| Bombastus       | Base cream, hydrophobic DAC | 293168       | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 294685       | 6              |
| Bombastus       | Base cream, hydrophobic DAC | 297044       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 294686       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 297047       | 8              |
| Bombastus       | Base cream, hydrophobic DAC | 15221301     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 293161       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 289721       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 297045       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 300417       | 5              |
| Bombastus       | Base cream, hydrophobic DAC | 301455       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 300352       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 300894       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 302131       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 162168       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 305083       | 8              |
| Bombastus       | Base cream, hydrophobic DAC | 160136       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 303374       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 305080       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 307771       | 12             |
| Bombastus       | Base cream, hydrophobic DAC | 171126       | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 308507       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 171128       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 310826       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 310828       | 7              |
| Bombastus       | Base cream, hydrophobic DAC | 17001096     | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 17001093     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 180515       | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 18002001     | 9              |
| Bombastus       | Base cream, hydrophobic DAC | 18001998     | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 18001994     | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 18005487     | 13             |
| Bombastus       | Base cream, hydrophobic DAC | 19002279     | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 19004008     | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 19005600     | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 20000149     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20002007     | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 20001230     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20003559     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20004863     | 6              |
| Bombastus       | Base cream, hydrophobic DAC | 20004862     | 2              |
| Bombastus       | Base cream, hydrophobic DAC | 21000159     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20003558     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20003557     | 1              |
| Bombastus       | Base cream, hydrophobic DAC | 20000150     | 4              |
| Bombastus       | Base cream, hydrophobic DAC | 307768       | 3              |
| Bombastus       | Base cream, hydrophobic DAC | 310827       | 13             |
| Bombastus       | Base cream, hydrophobic DAC | 19001125     | 2              |

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| Supplier  | Substance                   | Batch      | Spectra |
|-----------|-----------------------------|------------|---------|
| Bombastus | Base cream, hydrophobic DAC | 18002829   | 4       |
| Bombastus | Base cream, hydrophobic DAC | 307770     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 18005488   | 6       |
| Bombastus | Base cream, hydrophobic DAC | 286516     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 308508     | 7       |
| Bombastus | Base cream, hydrophobic DAC | 308509     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 310824     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 19004009   | 4       |
| Bombastus | Base cream, hydrophobic DAC | 160814     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 297046     | 5       |
| Bombastus | Base cream, hydrophobic DAC | 143093     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 284170     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 282161     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 284171     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 307769     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 60080402   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 17001094   | 1       |
| Bombastus | Base cream, hydrophobic DAC | 18001999   | 5       |
| Bombastus | Base cream, hydrophobic DAC | 180054852x | 1       |
| Bombastus | Base cream, hydrophobic DAC | 18005485   | 1       |
| Bombastus | Base cream, hydrophobic DAC | 271095     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 20000153   | 9       |
| Bombastus | Base cream, hydrophobic DAC | 307766     | 2       |
| Bombastus | Base cream, hydrophobic DAC | 18001992   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 20003560   | 3       |
| Bombastus | Base cream, hydrophobic DAC | 18002826   | 5       |
| Bombastus | Base cream, hydrophobic DAC | 20001677   | 1       |
| Bombastus | Base cream, hydrophobic DAC | 298353     | 8       |
| Bombastus | Base cream, hydrophobic DAC | 19005603   | 5       |
| Bombastus | Base cream, hydrophobic DAC | 303083     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 20001675   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 302133     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 306395     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 190002281  | 1       |
| Bombastus | Base cream, hydrophobic DAC | 20003555   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 18001993   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 18002827   | 8       |
| Bombastus | Base cream, hydrophobic DAC | 19001126   | 4       |
| Bombastus | Base cream, hydrophobic DAC | 308504     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 297043     | 2       |
| Bombastus | Base cream, hydrophobic DAC | 302134     | 3       |
| Bombastus | Base cream, hydrophobic DAC | 300893     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 305081     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 18051001   | 1       |
| Bombastus | Base cream, hydrophobic DAC | 18002002   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 18002828   | 4       |
| Bombastus | Base cream, hydrophobic DAC | 18005486   | 1       |
| Bombastus | Base cream, hydrophobic DAC | 19001124   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 19002276   | 5       |
| Bombastus | Base cream, hydrophobic DAC | 9001127    | 1       |
| Bombastus | Base cream, hydrophobic DAC | 20001678   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 20001676   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 17001095   | 2       |
| Bombastus | Base cream, hydrophobic DAC | 285434     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 279145     | 2       |
| Bombastus | Base cream, hydrophobic DAC | 288497     | 4       |
| Bombastus | Base cream, hydrophobic DAC | 285435     | 2       |
| Bombastus | Base cream, hydrophobic DAC | 19002280   | 6       |
| Bombastus | Base cream, hydrophobic DAC | 307767     | 1       |
| Bombastus | Base cream, hydrophobic DAC | 298351     | 1       |

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| Supplier      | Substance                   | Batch     | Spectra |
|---------------|-----------------------------|-----------|---------|
| Bombastus     | Base cream, hydrophobic DAC | 303376    | 5       |
| Bombastus     | Base cream, hydrophobic DAC | 303377    | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 306397    | 8       |
| Bombastus     | Base cream, hydrophobic DAC | 20000152  | 4       |
| Bombastus     | Base cream, hydrophobic DAC | 20001680  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 20003022  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 163237    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 276087    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 307765    | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 305082    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 310825    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 18002831  | 6       |
| Bombastus     | Base cream, hydrophobic DAC | 19005602  | 8       |
| Bombastus     | Base cream, hydrophobic DAC | 301457    | 6       |
| Bombastus     | Base cream, hydrophobic DAC | 171815    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 18002830  | 13      |
| Bombastus     | Base cream, hydrophobic DAC | 18002824  | 3       |
| Bombastus     | Base cream, hydrophobic DAC | 18005484  | 3       |
| Bombastus     | Base cream, hydrophobic DAC | 19001123  | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 19004007  | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 19002281  | 6       |
| Bombastus     | Base cream, hydrophobic DAC | 19005597  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 19005598  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 20000148  | 4       |
| Bombastus     | Base cream, hydrophobic DAC | 20000728  | 4       |
| Bombastus     | Base cream, hydrophobic DAC | 20003018  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 20003019  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 310823    | 6       |
| Bombastus     | Base cream, hydrophobic DAC | 308506    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 308505    | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 18001997  | 6       |
| Bombastus     | Base cream, hydrophobic DAC | 12229302  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 19001127  | 8       |
| Bombastus     | Base cream, hydrophobic DAC | 19002277  | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 19005599  | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 298350    | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 18001995  | 2       |
| Bombastus     | Base cream, hydrophobic DAC | 18002000  | 11      |
| Bombastus     | Base cream, hydrophobic DAC | 18002825  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 19001128  | 7       |
| Bombastus     | Base cream, hydrophobic DAC | 19002278  | 1       |
| Bombastus     | Base cream, hydrophobic DAC | 298354    | 6       |
| Bombstus/San  | Base cream, hydrophobic DAC | 162168    | 1       |
| Cael/Sanacorp | Base cream, hydrophobic DAC | 15421302  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 11289204  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 11038802  | 2       |
| Caelo         | Base cream, hydrophobic DAC | 11341301  | 2       |
| Caelo         | Base cream, hydrophobic DAC | 113401301 | 1       |
| Caelo         | Base cream, hydrophobic DAC | 11153902  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 12064705  | 6       |
| Caelo         | Base cream, hydrophobic DAC | 12025003  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 12064704  | 5       |
| Caelo         | Base cream, hydrophobic DAC | 12064047  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 12151601  | 9       |
| Caelo         | Base cream, hydrophobic DAC | 2111201   | 1       |
| Caelo         | Base cream, hydrophobic DAC | 12217603  | 6       |
| Caelo         | Base cream, hydrophobic DAC | 1215601   | 1       |
| Caelo         | Base cream, hydrophobic DAC | 12308201  | 6       |
| Caelo         | Base cream, hydrophobic DAC | 12229304  | 1       |
| Caelo         | Base cream, hydrophobic DAC | 123082011 | 1       |

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| Supplier | Substance                   | Batch            | Spectra |
|----------|-----------------------------|------------------|---------|
| Caelo    | Base cream, hydrophobic DAC | 12308202         | 2       |
| Caelo    | Base cream, hydrophobic DAC | 13019302         | 6       |
| Caelo    | Base cream, hydrophobic DAC | 13072602         | 5       |
| Caelo    | Base cream, hydrophobic DAC | 13175901         | 15      |
| Caelo    | Base cream, hydrophobic DAC | 230713           | 3       |
| Caelo    | Base cream, hydrophobic DAC | 13085702         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13275303         | 5       |
| Caelo    | Base cream, hydrophobic DAC | 21122013B        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14000701         | 19      |
| Caelo    | Base cream, hydrophobic DAC | 410211-1-P       | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14028002         | 2       |
| Caelo    | Base cream, hydrophobic DAC | 13H13-T06-006165 | 1       |
| Caelo    | Base cream, hydrophobic DAC | 282163           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1406140          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14145401         | 27      |
| Caelo    | Base cream, hydrophobic DAC | 286516           | 4       |
| Caelo    | Base cream, hydrophobic DAC | 14145301         | 21      |
| Caelo    | Base cream, hydrophobic DAC | 14145202         | 5       |
| Caelo    | Base cream, hydrophobic DAC | 1414501          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 13012015A        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14335501         | 13      |
| Caelo    | Base cream, hydrophobic DAC | 10022015F        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 230115/2         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 10032015B        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18031505         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15048701         | 14      |
| Caelo    | Base cream, hydrophobic DAC | 15001003         | 2       |
| Caelo    | Base cream, hydrophobic DAC | 15132502         | 6       |
| Caelo    | Base cream, hydrophobic DAC | 15221301         | 23      |
| Caelo    | Base cream, hydrophobic DAC | 152209           | 2       |
| Caelo    | Base cream, hydrophobic DAC | 293162           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15421201         | 34      |
| Caelo    | Base cream, hydrophobic DAC | 26011603         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 2754             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20160222         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16074802         | 25      |
| Caelo    | Base cream, hydrophobic DAC | 160136           | 2       |
| Caelo    | Base cream, hydrophobic DAC | 16074901         | 23      |
| Caelo    | Base cream, hydrophobic DAC | 16075003         | 5       |
| Caelo    | Base cream, hydrophobic DAC | 123588           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 46074802         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 2793             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16174201         | 15      |
| Caelo    | Base cream, hydrophobic DAC | 16165502         | 4       |
| Caelo    | Base cream, hydrophobic DAC | 16654403         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 303376           | 3       |
| Caelo    | Base cream, hydrophobic DAC | 2893             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 23021712         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16293601         | 7       |
| Caelo    | Base cream, hydrophobic DAC | 16330301         | 23      |
| Caelo    | Base cream, hydrophobic DAC | 1615500          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16293902         | 12      |
| Caelo    | Base cream, hydrophobic DAC | 170008           | 2       |
| Caelo    | Base cream, hydrophobic DAC | 17073202         | 30      |
| Caelo    | Base cream, hydrophobic DAC | 171126           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 171128           | 2       |
| Caelo    | Base cream, hydrophobic DAC | 17073103         | 4       |
| Caelo    | Base cream, hydrophobic DAC | 17112903         | 10      |
| Caelo    | Base cream, hydrophobic DAC | 17113001         | 2       |
| Caelo    | Base cream, hydrophobic DAC | 171127           | 2       |

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| Supplier | Substance                   | Batch             | Spectra |
|----------|-----------------------------|-------------------|---------|
| Caelo    | Base cream, hydrophobic DAC | 172552010         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17255301          | 35      |
| Caelo    | Base cream, hydrophobic DAC | 305808            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 172552201         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 172194            | 2       |
| Caelo    | Base cream, hydrophobic DAC | 17001093          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18051001          | 53      |
| Caelo    | Base cream, hydrophobic DAC | 18051101          | 75      |
| Caelo    | Base cream, hydrophobic DAC | 180515            | 2       |
| Caelo    | Base cream, hydrophobic DAC | 26051807          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18100801          | 66      |
| Caelo    | Base cream, hydrophobic DAC | 18061805          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18551001          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1580755           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 30081812          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18100902          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 3247              | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18173903          | 52      |
| Caelo    | Base cream, hydrophobic DAC | 18002830          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18002831          | 3       |
| Caelo    | Base cream, hydrophobic DAC | 18002002          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1824502           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18C23-T04-054141  | 3       |
| Caelo    | Base cream, hydrophobic DAC | 181197            | 2       |
| Caelo    | Base cream, hydrophobic DAC | 18286702          | 28      |
| Caelo    | Base cream, hydrophobic DAC | 19002001          | 16      |
| Caelo    | Base cream, hydrophobic DAC | 18005488          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 19002002          | 27      |
| Caelo    | Base cream, hydrophobic DAC | 190640            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 191458602         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1004302           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20000426001       | 35      |
| Caelo    | Base cream, hydrophobic DAC | 20001593002       | 16      |
| Caelo    | Base cream, hydrophobic DAC | 20001592001       | 24      |
| Caelo    | Base cream, hydrophobic DAC | 2000159001        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 21000396001       | 6       |
| Caelo    | Base cream, hydrophobic DAC | 210003960001      | 1       |
| Caelo    | Base cream, hydrophobic DAC | 11222003          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13085504          | 3       |
| Caelo    | Base cream, hydrophobic DAC | 18002828          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 301457            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 171816            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20003446002       | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13176002          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 1233              | 1       |
| Caelo    | Base cream, hydrophobic DAC | 163237            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 171117HB/17150401 | 1       |
| Caelo    | Base cream, hydrophobic DAC | 171219HB/17150401 | 1       |
| Caelo    | Base cream, hydrophobic DAC | 182220            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16165501          | 53      |
| Caelo    | Base cream, hydrophobic DAC | 19058402          | 12      |
| Caelo    | Base cream, hydrophobic DAC | 12229302          | 7       |
| Caelo    | Base cream, hydrophobic DAC | 15044702          | 6       |
| Caelo    | Base cream, hydrophobic DAC | 16330302          | 4       |
| Caelo    | Base cream, hydrophobic DAC | 1900041503        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20001590001       | 5       |
| Caelo    | Base cream, hydrophobic DAC | 190637            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 172195            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 200028540003      | 1       |
| Caelo    | Base cream, hydrophobic DAC | 3422              | 1       |

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| Supplier | Substance                   | Batch                | Spectra |
|----------|-----------------------------|----------------------|---------|
| Caelo    | Base cream, hydrophobic DAC | 1400701              | 1       |
| Caelo    | Base cream, hydrophobic DAC | 160130               | 3       |
| Caelo    | Base cream, hydrophobic DAC | 180755               | 7       |
| Caelo    | Base cream, hydrophobic DAC | 16165403             | 29      |
| Caelo    | Base cream, hydrophobic DAC | 13127502             | 2       |
| Caelo    | Base cream, hydrophobic DAC | 13086701             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13274902             | 2       |
| Caelo    | Base cream, hydrophobic DAC | 13386401             | 13      |
| Caelo    | Base cream, hydrophobic DAC | 294686               | 3       |
| Caelo    | Base cream, hydrophobic DAC | 200004266001         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18242601P190225-2    | 1       |
| Caelo    | Base cream, hydrophobic DAC | 19145602P200206-5    | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20000427001          | 33      |
| Caelo    | Base cream, hydrophobic DAC | 19058301P-190926-4   | 1       |
| Caelo    | Base cream, hydrophobic DAC | 19204801P-200331-4   | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20000426002P200709-7 | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20000425001P-200602  | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15048702             | 3       |
| Caelo    | Base cream, hydrophobic DAC | 14207002             | 3       |
| Caelo    | Base cream, hydrophobic DAC | 14277401             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13019304             | 3       |
| Caelo    | Base cream, hydrophobic DAC | 16293901             | 27      |
| Caelo    | Base cream, hydrophobic DAC | 16E03-T02-032868     | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16(18173902)         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17(19058401)         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20002854003          | 11      |
| Caelo    | Base cream, hydrophobic DAC | 293163               | 1       |
| Caelo    | Base cream, hydrophobic DAC | 180756               | 3       |
| Caelo    | Base cream, hydrophobic DAC | 2000427001           | 2       |
| Caelo    | Base cream, hydrophobic DAC | 17150501             | 15      |
| Caelo    | Base cream, hydrophobic DAC | 17255202             | 14      |
| Caelo    | Base cream, hydrophobic DAC | 18242603             | 7       |
| Caelo    | Base cream, hydrophobic DAC | 19001127             | 2       |
| Caelo    | Base cream, hydrophobic DAC | 19001128             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14L18-T21-018124     | 2       |
| Caelo    | Base cream, hydrophobic DAC | 15/13-T01-026887     | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13275301             | 11      |
| Caelo    | Base cream, hydrophobic DAC | 1615501              | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16330201             | 20      |
| Caelo    | Base cream, hydrophobic DAC | 18242601             | 30      |
| Caelo    | Base cream, hydrophobic DAC | 150405               | 2       |
| Caelo    | Base cream, hydrophobic DAC | 1018A-03497          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18119901             | 22      |
| Caelo    | Base cream, hydrophobic DAC | 4004319              | 2       |
| Caelo    | Base cream, hydrophobic DAC | 17C06-T08-042287     | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13085701             | 21      |
| Caelo    | Base cream, hydrophobic DAC | 16293701             | 38      |
| Caelo    | Base cream, hydrophobic DAC | 19000415001          | 23      |
| Caelo    | Base cream, hydrophobic DAC | 308507               | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17097709             | 1       |
| Caelo    | Base cream, hydrophobic DAC | 180860               | 2       |
| Caelo    | Base cream, hydrophobic DAC | 181198               | 4       |
| Caelo    | Base cream, hydrophobic DAC | 19145602             | 16      |
| Caelo    | Base cream, hydrophobic DAC | 21001222003          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13175902             | 8       |
| Caelo    | Base cream, hydrophobic DAC | 13B04-T17-001037     | 2       |
| Caelo    | Base cream, hydrophobic DAC | 5017E-03497          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1118Q-03497          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 1219Q-03497          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 20003445001          | 6       |

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| Supplier | Substance                   | Batch             | Spectra |
|----------|-----------------------------|-------------------|---------|
| Caelo    | Base cream, hydrophobic DAC | 12064703          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 12025002          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 170009            | 2       |
| Caelo    | Base cream, hydrophobic DAC | 15046401          | 12      |
| Caelo    | Base cream, hydrophobic DAC | 294682            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16074801          | 14      |
| Caelo    | Base cream, hydrophobic DAC | 14061601          | 5       |
| Caelo    | Base cream, hydrophobic DAC | 14215701          | 9       |
| Caelo    | Base cream, hydrophobic DAC | 289720            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15030702          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15132503          | 3       |
| Caelo    | Base cream, hydrophobic DAC | 15240801          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16075101          | 11      |
| Caelo    | Base cream, hydrophobic DAC | 16075201          | 12      |
| Caelo    | Base cream, hydrophobic DAC | 162170            | 3       |
| Caelo    | Base cream, hydrophobic DAC | 17001096          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18174002          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18193301          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 190002002         | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15221401          | 5       |
| Caelo    | Base cream, hydrophobic DAC | 210000396001      | 1       |
| Caelo    | Base cream, hydrophobic DAC | 15111401          | 6       |
| Caelo    | Base cream, hydrophobic DAC | 19058302          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 18(19058401)      | 1       |
| Caelo    | Base cream, hydrophobic DAC | 2001592001        | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17255201          | 25      |
| Caelo    | Base cream, hydrophobic DAC | 19115901          | 15      |
| Caelo    | Base cream, hydrophobic DAC | 20001591001       | 8       |
| Caelo    | Base cream, hydrophobic DAC | 19205101          | 9       |
| Caelo    | Base cream, hydrophobic DAC | 11222002          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 14028102          | 10      |
| Caelo    | Base cream, hydrophobic DAC | 302134            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 16330203          | 15      |
| Caelo    | Base cream, hydrophobic DAC | 307771            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17150401          | 29      |
| Caelo    | Base cream, hydrophobic DAC | 1715050           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 180308HB/17255301 | 1       |
| Caelo    | Base cream, hydrophobic DAC | 181194            | 3       |
| Caelo    | Base cream, hydrophobic DAC | 18212501          | 1       |
| Caelo    | Base cream, hydrophobic DAC | 18242502          | 4       |
| Caelo    | Base cream, hydrophobic DAC | 19002003          | 4       |
| Caelo    | Base cream, hydrophobic DAC | 19058301          | 44      |
| Caelo    | Base cream, hydrophobic DAC | 190004150003      | 1       |
| Caelo    | Base cream, hydrophobic DAC | 21001223001       | 2       |
| Caelo    | Base cream, hydrophobic DAC | 5013q-03497       | 1       |
| Caelo    | Base cream, hydrophobic DAC | 153627            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 13275302          | 7       |
| Caelo    | Base cream, hydrophobic DAC | 14335502          | 13      |
| Caelo    | Base cream, hydrophobic DAC | 15001001          | 11      |
| Caelo    | Base cream, hydrophobic DAC | 151259            | 3       |
| Caelo    | Base cream, hydrophobic DAC | 1522301           | 1       |
| Caelo    | Base cream, hydrophobic DAC | 162168            | 3       |
| Caelo    | Base cream, hydrophobic DAC | 4004302           | 4       |
| Caelo    | Base cream, hydrophobic DAC | 171815            | 1       |
| Caelo    | Base cream, hydrophobic DAC | 17192002          | 2       |
| Caelo    | Base cream, hydrophobic DAC | 19032002          | 5       |
| Caelo    | Base cream, hydrophobic DAC | 19145603          | 12      |
| Caelo    | Base cream, hydrophobic DAC | 19145601          | 20      |
| Caelo    | Base cream, hydrophobic DAC | 20000425001       | 8       |
| Caelo    | Base cream, hydrophobic DAC | 20003445002       | 5       |

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| Supplier             | Substance                   | Batch            | Spectra |
|----------------------|-----------------------------|------------------|---------|
| Caelo                | Base cream, hydrophobic DAC | 20003445003      | 1       |
| Caelo                | Base cream, hydrophobic DAC | 142154           | 2       |
| Caelo                | Base cream, hydrophobic DAC | 16074803         | 6       |
| Caelo                | Base cream, hydrophobic DAC | 160826           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 1615403          | 1       |
| Caelo                | Base cream, hydrophobic DAC | 303377           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 17150402         | 2       |
| Caelo                | Base cream, hydrophobic DAC | 303374           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 310826           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 18051401         | 13      |
| Caelo                | Base cream, hydrophobic DAC | 18051301         | 6       |
| Caelo                | Base cream, hydrophobic DAC | 18242501         | 21      |
| Caelo                | Base cream, hydrophobic DAC | 18G31-T09-058736 | 3       |
| Caelo                | Base cream, hydrophobic DAC | 1824601          | 2       |
| Caelo                | Base cream, hydrophobic DAC | 19058401         | 23      |
| Caelo                | Base cream, hydrophobic DAC | 19204801         | 29      |
| Caelo                | Base cream, hydrophobic DAC | 19000415003      | 7       |
| Caelo                | Base cream, hydrophobic DAC | 1925681          | 1       |
| Caelo                | Base cream, hydrophobic DAC | 20002854002      | 4       |
| Caelo                | Base cream, hydrophobic DAC | 20002852001      | 1       |
| Caelo                | Base cream, hydrophobic DAC | 18100901         | 10      |
| Caelo                | Base cream, hydrophobic DAC | 192005101        | 1       |
| Caelo                | Base cream, hydrophobic DAC | 19000414001      | 12      |
| Caelo                | Base cream, hydrophobic DAC | 13085602         | 7       |
| Caelo                | Base cream, hydrophobic DAC | 13176003         | 11      |
| Caelo                | Base cream, hydrophobic DAC | 13386403         | 3       |
| Caelo                | Base cream, hydrophobic DAC | 14000601         | 7       |
| Caelo                | Base cream, hydrophobic DAC | 140885           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 14379902         | 6       |
| Caelo                | Base cream, hydrophobic DAC | 1435501          | 1       |
| Caelo                | Base cream, hydrophobic DAC | 1513502          | 1       |
| Caelo                | Base cream, hydrophobic DAC | 9AKD15           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 16165701         | 11      |
| Caelo                | Base cream, hydrophobic DAC | 17073201         | 14      |
| Caelo                | Base cream, hydrophobic DAC | 1715001          | 1       |
| Caelo                | Base cream, hydrophobic DAC | 17255302         | 8       |
| Caelo                | Base cream, hydrophobic DAC | 17255402         | 7       |
| Caelo                | Base cream, hydrophobic DAC | 18173902         | 20      |
| Caelo                | Base cream, hydrophobic DAC | 18174101         | 13      |
| Caelo                | Base cream, hydrophobic DAC | 18286802         | 9       |
| Caelo                | Base cream, hydrophobic DAC | 195841           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 191489           | 1       |
| Caelo                | Base cream, hydrophobic DAC | 19204802         | 5       |
| Caelo                | Base cream, hydrophobic DAC | 192209001        | 1       |
| Caelo                | Base cream, hydrophobic DAC | 210003455001     | 1       |
| Caelo                | Base cream, hydrophobic DAC | 15421303         | 2       |
| Caeol/Noweda         | Base cream, hydrophobic DAC | 19058301         | 2       |
| Caeolo/Krieger       | Base cream, hydrophobic DAC | 16330301         | 1       |
| Caesar & Lorenz      | Base cream, hydrophobic DAC | 14061501         | 1       |
| Caesar & Lorenz      | Base cream, hydrophobic DAC | 14028002         | 1       |
| Caelo                | Base cream, hydrophobic DAC | 1914602          | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 16075201         | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 16174201         | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 16293601         | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 17255202         | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 18051301         | 1       |
| Caesar & Loretz      | Base cream, hydrophobic DAC | 18174101         | 1       |
| caesar & Loretz GmbH | Base cream, hydrophobic DAC | 14061601         | 2       |
| Caesar & Loretz GmbH | Base cream, hydrophobic DAC | 13275302         | 2       |
| Caesar & Loretz GmbH | Base cream, hydrophobic DAC | 13386401         | 2       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 14000701    | 3       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 14061501    | 3       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 14335501    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 15048701    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 15046401    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 15111402    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 15221401    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 15421201    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 16074901    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 16174201    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 16330203    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 17112903    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18242601    | 5       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18242502    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18174101    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18173903    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18242501    | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18286802    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18286702    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19002003    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 18242603    | 3       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19002002    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19002001    | 8       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19058401    | 10      |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19058402    | 3       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19032002    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19058301    | 18      |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19058501    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19145603    | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19115901    | 3       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19145602    | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19204801    | 5       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19204802    | 5       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 1925661     | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19000414001 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19000415003 | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 19000415001 | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20000426001 | 6       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20000425001 | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20000427001 | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20000426002 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20001592001 | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20001593002 | 7       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20001590001 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20002854003 | 5       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20003445001 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20002854002 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20003446002 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 20003445002 | 1       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 21000397003 | 4       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 21000396001 | 2       |
| Caesar & Loretz GmbH       | Base cream, hydrophobic DAC | 21001222003 | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 16165501    | 2       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 18242502    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 19115901    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 18173903    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 18119901    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 18286702    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 19205101    | 1       |
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 19000414001 | 1       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| Caesar & Loretz GmbH / ... | Base cream, hydrophobic DAC | 19058402    | 1       |
| Caesar & Loretz GmbH Hi... | Base cream, hydrophobic DAC | 115421302   | 1       |
| Caesar & Loretz GmbH Sa... | Base cream, hydrophobic DAC | 20001592001 | 1       |
| Caesar & Loretz GmbH, 4... | Base cream, hydrophobic DAC | 11289203    | 1       |
| Caesar & Loretz GmbH, 4... | Base cream, hydrophobic DAC | 13019303    | 1       |
| Caesar & Loretz GmbH/ F... | Base cream, hydrophobic DAC | 18174101    | 1       |
| Caesar & Loretz GmbH/ S... | Base cream, hydrophobic DAC | 19145602    | 1       |
| Caesar & Loretz GmbH/Gehe  | Base cream, hydrophobic DAC | 19058402    | 1       |
| Caesar & Loretz GmbH/Gehe  | Base cream, hydrophobic DAC | 19058401    | 1       |
| Caesar & Loretz GmbH/Gehe  | Base cream, hydrophobic DAC | 19204801    | 1       |
| Caesar & Loretz GmbH/Gehe  | Base cream, hydrophobic DAC | 19000415001 | 1       |
| Caesar & Loretz GmbH/Gehe  | Base cream, hydrophobic DAC | 20000427001 | 1       |
| Caesar & Loretz GmbH/Je... | Base cream, hydrophobic DAC | 19145602    | 1       |
| Caesar & Loretz GmbH/Je... | Base cream, hydrophobic DAC | 21001222003 | 1       |
| Caesar & Loretz GmbH/No... | Base cream, hydrophobic DAC | 18286702    | 1       |
| Caesar & Loretz GmbH/No... | Base cream, hydrophobic DAC | 19058401    | 2       |
| Caesar & Loretz GmbH/No... | Base cream, hydrophobic DAC | 19115901    | 2       |
| Caesar & Loretz GmbH/No... | Base cream, hydrophobic DAC | 19204802    | 1       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 19058401    | 1       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 19058301    | 1       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 20002854002 | 2       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 19032002    | 1       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 20000425001 | 2       |
| Caesar & Loretz GmbH/Ph... | Base cream, hydrophobic DAC | 19000415001 | 2       |
| Caesar & Loretz GmbH/Sa... | Base cream, hydrophobic DAC | 21000396001 | 2       |
| Caesar & Loretz Hilden     | Base cream, hydrophobic DAC | 18173902    | 1       |
| Caesar & Loretz Hilden     | Base cream, hydrophobic DAC | 1824501     | 1       |
| Caesar & Loretz Hilden     | Base cream, hydrophobic DAC | 19000415001 | 1       |
| Caesar & Loretz Hilden     | Base cream, hydrophobic DAC | 20000427001 | 1       |
| Caesar & Loretz Hilden2... | Base cream, hydrophobic DAC | 20001592001 | 1       |
| Caesar & Loretz/AHD        | Base cream, hydrophobic DAC | 16074901    | 1       |
| Caesar & Loretz/Gehe       | Base cream, hydrophobic DAC | 19145601    | 1       |
| Caesar & Loretz/Noweda     | Base cream, hydrophobic DAC | 16074802    | 1       |
| Caesar & Loretz/Phönix     | Base cream, hydrophobic DAC | 19204802    | 1       |
| Caesar und Loretz          | Base cream, hydrophobic DAC | 18100801    | 1       |
| Caesar und Loretz          | Base cream, hydrophobic DAC | 19145602    | 1       |
| Caesar&Loretz GmbH         | Base cream, hydrophobic DAC | 15221301    | 1       |
| Caesar&Loretz GmbH /Anzag  | Base cream, hydrophobic DAC | 15221301    | 1       |
| caesar&Loretz GmbH,Phön... | Base cream, hydrophobic DAC | 16165701    | 1       |
| Caesar&Loretz GmbH/Anzag   | Base cream, hydrophobic DAC | 14145301    | 1       |
| Caesar&lorenz,Phoenix      | Base cream, hydrophobic DAC | 13386401    | 1       |
| Caesar&lorenz,Phoenix      | Base cream, hydrophobic DAC | 14335502    | 1       |
| Caesar&lorenz,Phoenix      | Base cream, hydrophobic DAC | 15001002    | 1       |
| Caesar /Noweda             | Base cream, hydrophobic DAC | 15001002    | 1       |
| Caleo                      | Base cream, hydrophobic DAC | 17150402    | 1       |
| calo                       | Base cream, hydrophobic DAC | 13072602    | 3       |
| cealo                      | Base cream, hydrophobic DAC | 13274902    | 1       |
| Cealo/GEHE                 | Base cream, hydrophobic DAC | 18051101    | 1       |
| Ebert & Jacobi             | Base cream, hydrophobic DAC | 18051101    | 1       |
| Ebert u. Jacobi 16.0...    | Base cream, hydrophobic DAC | 160130      | 1       |
| Ebert/Pharmachem           | Base cream, hydrophobic DAC | 170008      | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 16293901    | 2       |
| Euro OTC                   | Base cream, hydrophobic DAC | 17255401    | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 18002830    | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 17150401    | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 18242601    | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 171816      | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 180757      | 2       |
| Euro OTC                   | Base cream, hydrophobic DAC | 18051001    | 1       |
| Euro OTC                   | Base cream, hydrophobic DAC | 16165501    | 1       |

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| <b>Supplier</b> | <b>Substance</b>            | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|-----------------------------|----------------------|----------------|
| Fagron          | Base cream, hydrophobic DAC | 12G026-0001          | 1              |
| Fagron          | Base cream, hydrophobic DAC | 513A-03497           | 1              |
| Fagron          | Base cream, hydrophobic DAC | 12G09-T03            | 2              |
| Fagron          | Base cream, hydrophobic DAC | 12D10-T02            | 1              |
| Fagron          | Base cream, hydrophobic DAC | 12J24-T01            | 5              |
| Fagron          | Base cream, hydrophobic DAC | 13E13-T01-003619     | 6              |
| Fagron          | Base cream, hydrophobic DAC | 13E13T01003619       | 1              |
| Fagron          | Base cream, hydrophobic DAC | 13E13-T01-003620     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 13H13-T06-006165     | 5              |
| Fagron          | Base cream, hydrophobic DAC | 13H13T06             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14A06T08009038       | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14A06-T08-009037     | 6              |
| Fagron          | Base cream, hydrophobic DAC | 14E06-T13-012209     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14H04-T05            | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14L18-T21-018127     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14H04-T05-014482     | 8              |
| Fagron          | Base cream, hydrophobic DAC | 14L18-T21-018125     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 15D03-T05-021168     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 15J13-T01-026888     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 15/13-T01-026887     | 3              |
| Fagron          | Base cream, hydrophobic DAC | 15J13-T01-036887     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 15J13-T02-026891     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 26887                | 1              |
| Fagron          | Base cream, hydrophobic DAC | 16E03-T02-032869     | 2              |
| Fagron          | Base cream, hydrophobic DAC | 16E03-T02-032868     | 9              |
| Fagron          | Base cream, hydrophobic DAC | 16F27-T22-034684     | 3              |
| Fagron          | Base cream, hydrophobic DAC | 16B10-T01-030202     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17D19-T03-043551     | 2              |
| Fagron          | Base cream, hydrophobic DAC | 171126               | 2              |
| Fagron          | Base cream, hydrophobic DAC | 171817               | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17C06                | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17C06-T08-04228      | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17c06-T08-042287     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17C06-T08-0422870019 | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17B03-T01-041253     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18002000             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18C23-T04-054141     | 8              |
| Fagron          | Base cream, hydrophobic DAC | 18C23-T04            | 2              |
| Fagron          | Base cream, hydrophobic DAC | 18051001             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18001997             | 2              |
| Fagron          | Base cream, hydrophobic DAC | 181008001            | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18005488             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18G31-T09-58735      | 1              |
| Fagron          | Base cream, hydrophobic DAC | 19058401             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18G31-T09_058735     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 14118-T21-018124     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 16F03-To2-032868     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 16E03T02032868       | 1              |
| Fagron          | Base cream, hydrophobic DAC | 17C06-108-042287     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18L18-T09-062848     | 4              |
| Fagron          | Base cream, hydrophobic DAC | T09-0783401          | 1              |
| Fagron          | Base cream, hydrophobic DAC | 13H13-T06            | 2              |
| Fagron          | Base cream, hydrophobic DAC | 18G31-T09-058736     | 4              |
| Fagron          | Base cream, hydrophobic DAC | 18C31-T09-058736     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 19H21-T08-071088     | 5              |
| Fagron          | Base cream, hydrophobic DAC | 20D01-T09-078346     | 1              |
| Fagron          | Base cream, hydrophobic DAC | 13T13-T06-006166     | 1              |
| Fagron          | Base cream, hydrophobic DAC | T08-0710906          | 2              |
| Fagron          | Base cream, hydrophobic DAC | 20000728             | 1              |
| Fagron          | Base cream, hydrophobic DAC | 18G31-T09            | 2              |

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| Supplier          | Substance                   | Batch             | Spectra |
|-------------------|-----------------------------|-------------------|---------|
| Fagron            | Base cream, hydrophobic DAC | 18D12-T01-054746  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 19H21-T04-071052  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 13B04-T17-001040  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 13B04-T17-001037  | 4       |
| Fagron            | Base cream, hydrophobic DAC | 13E13-T06-006     | 2       |
| Fagron            | Base cream, hydrophobic DAC | 14A06-T07-009033  | 3       |
| Fagron            | Base cream, hydrophobic DAC | 16E03T02-032868   | 1       |
| Fagron            | Base cream, hydrophobic DAC | 18G31-T09-058735  | 12      |
| Fagron            | Base cream, hydrophobic DAC | 18C23-T04-054142  | 3       |
| Fagron            | Base cream, hydrophobic DAC | 18A09-T01-051635  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 14L18-T21-018124  | 7       |
| Fagron            | Base cream, hydrophobic DAC | 307770            | 1       |
| Fagron            | Base cream, hydrophobic DAC | 16293601          | 1       |
| Fagron            | Base cream, hydrophobic DAC | 19H21-T08-0710906 | 1       |
| Fagron            | Base cream, hydrophobic DAC | 17c06-t08-042287  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 14E06-T13-01220   | 1       |
| Fagron            | Base cream, hydrophobic DAC | 17C06-T08-04287   | 1       |
| Fagron            | Base cream, hydrophobic DAC | 19H21-T08-071096  | 4       |
| Fagron            | Base cream, hydrophobic DAC | 15J13-T01-026887  | 5       |
| Fagron            | Base cream, hydrophobic DAC | 18A09-T01-051636  | 1       |
| Fagron            | Base cream, hydrophobic DAC | 17Co6-To8-o42287  | 2       |
| Fagron            | Base cream, hydrophobic DAC | 17Co6-To8-042287  | 2       |
| Faaron/anzag      | Base cream, hydrophobic DAC | 14A06-t08-009037  | 1       |
| Faaron/Anzag      | Base cream, hydrophobic DAC | 14A06-T08-009037  | 4       |
| FEJ               | Base cream, hydrophobic DAC | 152209            | 1       |
| Fiebig            | Base cream, hydrophobic DAC | 160136            | 2       |
| Fiebig            | Base cream, hydrophobic DAC | 160825            | 1       |
| Fiebig            | Base cream, hydrophobic DAC | 171815            | 1       |
| Fiebig            | Base cream, hydrophobic DAC | 310828            | 3       |
| Fiebig            | Base cream, hydrophobic DAC | 172194            | 2       |
| Fiebig            | Base cream, hydrophobic DAC | 18051101          | 2       |
| Fiebig            | Base cream, hydrophobic DAC | 181198            | 1       |
| Fiebig            | Base cream, hydrophobic DAC | 18173902          | 1       |
| Fiebig/Pharmachem | Base cream, hydrophobic DAC | 181198            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 13019304          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 12308102          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 13175902          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 13386402          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 13175901          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 289721            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 15001002          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 151258            | 3       |
| Gehe              | Base cream, hydrophobic DAC | 17150401          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 17255202          | 3       |
| Gehe              | Base cream, hydrophobic DAC | 308508            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 172194            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 180515            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 18051101          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 17C06-T08-042287  | 1       |
| Gehe              | Base cream, hydrophobic DAC | 180756            | 4       |
| Gehe              | Base cream, hydrophobic DAC | 18051103          | 2       |
| Gehe              | Base cream, hydrophobic DAC | 181196            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 182221            | 3       |
| Gehe              | Base cream, hydrophobic DAC | 18100801          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 18286701          | 1       |
| Gehe              | Base cream, hydrophobic DAC | 190638            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 190206            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 190640            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 191487            | 1       |
| Gehe              | Base cream, hydrophobic DAC | 191489            | 1       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Gehe                       | Base cream, hydrophobic DAC | 1925681          | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 303373           | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 17073202         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 310824           | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18051101         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18051401         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18051301         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18051103         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18119901         | 2       |
| GEHE                       | Base cream, hydrophobic DAC | 18174101         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 18286802         | 1       |
| GEHE                       | Base cream, hydrophobic DAC | 19115901         | 2       |
| Caelo                      | Base cream, hydrophobic DAC | 20000426002      | 2       |
| Caelo                      | Base cream, hydrophobic DAC | 20002853001      | 2       |
| Caelo                      | Base cream, hydrophobic DAC | 15421401         | 13      |
| GEHE 08.12.2014            | Base cream, hydrophobic DAC | 14145301         | 1       |
| Gehe 10.03.15              | Base cream, hydrophobic DAC | 143094           | 2       |
| Gehe,27.0415               | Base cream, hydrophobic DAC | 15001003         | 2       |
| Gehe/ Pharmachem GmbH      | Base cream, hydrophobic DAC | 190206           | 1       |
| Gehe/apomix/17.12.2014     | Base cream, hydrophobic DAC | 289719           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 306396           | 2       |
| Bombastus                  | Base cream, hydrophobic DAC | 19002275         | 3       |
| Bombastus                  | Base cream, hydrophobic DAC | 264854           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 280809           | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 15001002         | 12      |
| Caelo                      | Base cream, hydrophobic DAC | 14335601         | 4       |
| Caelo                      | Base cream, hydrophobic DAC | 14145402         | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 15046402         | 6       |
| Caelo                      | Base cream, hydrophobic DAC | 15421302         | 14      |
| Caelo                      | Base cream, hydrophobic DAC | 16293701/1020317 | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 1290318          | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 20000448         | 2       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 160137           | 1       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 172194           | 5       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 180755           | 1       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 191489           | 2       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 1925681          | 1       |
| Gehe/Pharmachem            | Base cream, hydrophobic DAC | 19000732         | 1       |
| Gehe/Pharmachem Pöfneck    | Base cream, hydrophobic DAC | 190638           | 1       |
| Gehe/Pharmachem Pöfneck    | Base cream, hydrophobic DAC | 1925661          | 1       |
| Gehe/Pharmachen GmbH       | Base cream, hydrophobic DAC | 191489           | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 15111403         | 4       |
| Gehe-Pharmachem            | Base cream, hydrophobic DAC | 160136           | 1       |
| Gehe-Pharmachem            | Base cream, hydrophobic DAC | 162168           | 1       |
| Klenk                      | Base cream, hydrophobic DAC | 181198           | 1       |
| Henry Lamotte Oils GmbH... | Base cream, hydrophobic DAC | 171126           | 1       |
| Hepart                     | Base cream, hydrophobic DAC | 18002830         | 1       |
| Hirsch                     | Base cream, hydrophobic DAC | 12J24-T01        | 2       |
| Ichthyol Gesellschaft      | Base cream, hydrophobic DAC | 18100801         | 2       |
| Infectopharm/Phönix        | Base cream, hydrophobic DAC | S081801          | 1       |
| jenne                      | Base cream, hydrophobic DAC | 1203488          | 1       |
| Jenne                      | Base cream, hydrophobic DAC | 18173903         | 1       |
| Jenne                      | Base cream, hydrophobic DAC | 182221           | 1       |
| Jenne                      | Base cream, hydrophobic DAC | 190206           | 2       |
| Kehr                       | Base cream, hydrophobic DAC | 310825           | 1       |
| Kehr                       | Base cream, hydrophobic DAC | 18051101         | 1       |
| Kehr                       | Base cream, hydrophobic DAC | 18002826         | 1       |
| Kehr                       | Base cream, hydrophobic DAC | 18002827         | 1       |
| Kehr / Pharmachem          | Base cream, hydrophobic DAC | 141489           | 1       |
| Kehr /Pharmachem           | Base cream, hydrophobic DAC | 190206           | 1       |

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| Supplier              | Substance                   | Batch       | Spectra |
|-----------------------|-----------------------------|-------------|---------|
| Kurpark-Apotheke      | Base cream, hydrophobic DAC | 190638      | 1       |
| medphano Arzneimittel | Base cream, hydrophobic DAC | 6510115     | 1       |
| medphano/Phönix       | Base cream, hydrophobic DAC | 6510115     | 4       |
| Midas Göttingen       | Base cream, hydrophobic DAC | 16293901    | 1       |
| Nachprüfung 3083      | Base cream, hydrophobic DAC | 141318      | 1       |
| Noveda                | Base cream, hydrophobic DAC | 19002002    | 1       |
| Noveda                | Base cream, hydrophobic DAC | 19058301    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 11289203    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 12025002    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 110413      | 2       |
| Noweda                | Base cream, hydrophobic DAC | 14028101    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 15221301    | 4       |
| Noweda                | Base cream, hydrophobic DAC | 152209      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 16074901    | 2       |
| Noweda                | Base cream, hydrophobic DAC | 16165403    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 16293701    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 308508      | 2       |
| Noweda                | Base cream, hydrophobic DAC | 307771      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 17073202    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 17112903    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 17073103    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 17255301    | 5       |
| Noweda                | Base cream, hydrophobic DAC | 172194      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 180515      | 3       |
| Noweda                | Base cream, hydrophobic DAC | 18051001    | 2       |
| Noweda                | Base cream, hydrophobic DAC | 18100801    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 18286701    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 18242601    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 19002001    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 18173903    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 182220      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 18286702    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 190207      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 19058401    | 2       |
| Noweda                | Base cream, hydrophobic DAC | 19002003    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 19145602    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 190640      | 1       |
| Noweda                | Base cream, hydrophobic DAC | 20000431    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 20001593002 | 1       |
| Noweda                | Base cream, hydrophobic DAC | 20001230    | 1       |
| Noweda                | Base cream, hydrophobic DAC | 20003560    | 1       |
| Caelo                 | Base cream, hydrophobic DAC | 13019303    | 14      |
| Noweda 4.6.18         | Base cream, hydrophobic DAC | 180517      | 1       |
| Noweda am 08.07.2019  | Base cream, hydrophobic DAC | 19002001    | 1       |
| Noweda Pharmachem     | Base cream, hydrophobic DAC | 20001230    | 2       |
| Noweda Pharmachem     | Base cream, hydrophobic DAC | 20001231    | 1       |
| Noweda/ Ichtyol       | Base cream, hydrophobic DAC | 12151601    | 2       |
| Noweda/ Pharmachem    | Base cream, hydrophobic DAC | 182220      | 1       |
| Noweda/ Pharmachem    | Base cream, hydrophobic DAC | 18286701    | 1       |
| noweda/anzag          | Base cream, hydrophobic DAC | 190638      | 1       |
| noweda/anzag          | Base cream, hydrophobic DAC | 191489      | 1       |
| Caelo                 | Base cream, hydrophobic DAC | 14061402    | 5       |
| Caelo                 | Base cream, hydrophobic DAC | 14120903    | 3       |
| Fagron                | Base cream, hydrophobic DAC | 14215701    | 2       |
| Noweda/pharmachem     | Base cream, hydrophobic DAC | 181196      | 1       |
| Noweda/pharmachem     | Base cream, hydrophobic DAC | 181197      | 1       |
| Noweda/Pharmachem     | Base cream, hydrophobic DAC | 142154      | 1       |
| Noweda/Pharmachem     | Base cream, hydrophobic DAC | 160137      | 1       |
| Noweda/Pharmachem     | Base cream, hydrophobic DAC | 180756      | 1       |
| Noweda/Pharmachem0    | Base cream, hydrophobic DAC | 143094      | 1       |

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| Supplier                  | Substance                   | Batch        | Spectra |
|---------------------------|-----------------------------|--------------|---------|
| Caelo                     | Base cream, hydrophobic DAC | 200001592001 | 1       |
| Euro OTC                  | Base cream, hydrophobic DAC | 300415       | 1       |
| Pala                      | Base cream, hydrophobic DAC | 18002000     | 2       |
| Pharmachem GmbH           | Base cream, hydrophobic DAC | 120712       | 2       |
| Pharmachem/Alliance He... | Base cream, hydrophobic DAC | 142154       | 1       |
| Pharmachem/Alliance He... | Base cream, hydrophobic DAC | 151258       | 1       |
| pharma pöckneck           | Base cream, hydrophobic DAC | 190206       | 1       |
| pharma/phönix             | Base cream, hydrophobic DAC | 143094       | 1       |
| Pharma/Phönix             | Base cream, hydrophobic DAC | 153627       | 1       |
| Pharma/Phönix             | Base cream, hydrophobic DAC | 160136       | 2       |
| Pharma/Phönix             | Base cream, hydrophobic DAC | 162168       | 1       |
| Pharma/Phönix             | Base cream, hydrophobic DAC | 190206       | 2       |
| Pharmaachen GmbH & Co.KG  | Base cream, hydrophobic DAC | 191489       | 1       |
| Pharmacem                 | Base cream, hydrophobic DAC | 172194       | 1       |
| PharmacheGehe             | Base cream, hydrophobic DAC | 162167       | 3       |
| pharmachem                | Base cream, hydrophobic DAC | 110413       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 231213       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 140886       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 151258       | 2       |
| pharmachem                | Base cream, hydrophobic DAC | 160130       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 160136       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 160825       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 162170       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 162168       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 180515       | 2       |
| pharmachem                | Base cream, hydrophobic DAC | 181194       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 180860       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 190209       | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 191488       | 2       |
| pharmachem                | Base cream, hydrophobic DAC | 1925681      | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 1925691      | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 19000732     | 3       |
| pharmachem                | Base cream, hydrophobic DAC | 20000431     | 1       |
| pharmachem                | Base cream, hydrophobic DAC | 20001232     | 3       |
| Pharmachem                | Base cream, hydrophobic DAC | 131011       | 1       |
| Pharmachem                | Base cream, hydrophobic DAC | 131211       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 261112       | 1       |
| Pharmachem                | Base cream, hydrophobic DAC | 110413       | 7       |
| Pharmachem                | Base cream, hydrophobic DAC | 230713       | 1       |
| Pharmachem                | Base cream, hydrophobic DAC | 21013        | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 231213       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 140885       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 140886       | 3       |
| Pharmachem                | Base cream, hydrophobic DAC | 141317       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 141318       | 1       |
| Pharmachem                | Base cream, hydrophobic DAC | 141489       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 142154       | 7       |
| Pharmachem                | Base cream, hydrophobic DAC | 142155       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 143094       | 11      |
| Pharmachem                | Base cream, hydrophobic DAC | 143093       | 6       |
| Pharmachem                | Base cream, hydrophobic DAC | 150405       | 4       |
| Pharmachem                | Base cream, hydrophobic DAC | 151259       | 5       |
| Pharmachem                | Base cream, hydrophobic DAC | 151258       | 6       |
| Pharmachem                | Base cream, hydrophobic DAC | 152211       | 3       |
| Pharmachem                | Base cream, hydrophobic DAC | 152210       | 2       |
| Pharmachem                | Base cream, hydrophobic DAC | 152209       | 4       |
| Pharmachem                | Base cream, hydrophobic DAC | 153627       | 12      |
| Pharmachem                | Base cream, hydrophobic DAC | 153625       | 8       |
| Pharmachem                | Base cream, hydrophobic DAC | 153626       | 5       |
| Pharmachem                | Base cream, hydrophobic DAC | 160136       | 9       |

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| Supplier   | Substance                   | Batch       | Spectra |
|------------|-----------------------------|-------------|---------|
| Pharmachem | Base cream, hydrophobic DAC | 160130      | 9       |
| Pharmachem | Base cream, hydrophobic DAC | 160137      | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 160138      | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 160814      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 160826      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 162167      | 7       |
| Pharmachem | Base cream, hydrophobic DAC | 7676        | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 162169      | 7       |
| Pharmachem | Base cream, hydrophobic DAC | 162170      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 163237      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 162168      | 6       |
| Pharmachem | Base cream, hydrophobic DAC | 170008      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 163238      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 170010      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 170009      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 171128      | 8       |
| Pharmachem | Base cream, hydrophobic DAC | 171127      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 2x171816    | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 171816      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 171815      | 7       |
| Pharmachem | Base cream, hydrophobic DAC | 171817      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 171B16      | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 172195      | 9       |
| Pharmachem | Base cream, hydrophobic DAC | 171817 (2x) | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 172194      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 1721195     | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 172196      | 6       |
| Pharmachem | Base cream, hydrophobic DAC | 1721945506  | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 180515      | 8       |
| Pharmachem | Base cream, hydrophobic DAC | 180517      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 180755      | 7       |
| Pharmachem | Base cream, hydrophobic DAC | 17196       | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 180756      | 9       |
| Pharmachem | Base cream, hydrophobic DAC | 180860      | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 180757      | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 2x180757    | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 180759      | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 181194      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 181198      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 181196      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 182220      | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 181197      | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 182170      | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 182221      | 7       |
| Pharmachem | Base cream, hydrophobic DAC | 190206      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 190209      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 190207      | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 190637      | 5       |
| Pharmachem | Base cream, hydrophobic DAC | 190639      | 8       |
| Pharmachem | Base cream, hydrophobic DAC | 190638      | 10      |
| Pharmachem | Base cream, hydrophobic DAC | 190640      | 3       |
| Pharmachem | Base cream, hydrophobic DAC | 191487      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 191488      | 6       |
| Pharmachem | Base cream, hydrophobic DAC | 90638       | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 191489      | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 1914487     | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 1923234     | 4       |
| Pharmachem | Base cream, hydrophobic DAC | 1925662     | 1       |
| Pharmachem | Base cream, hydrophobic DAC | 1925661     | 2       |
| Pharmachem | Base cream, hydrophobic DAC | 190004531   | 4       |

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| Supplier                   | Substance                   | Batch    | Spectra |
|----------------------------|-----------------------------|----------|---------|
| Pharmachem                 | Base cream, hydrophobic DAC | 1925691  | 5       |
| Pharmachem                 | Base cream, hydrophobic DAC | 1925681  | 7       |
| Pharmachem                 | Base cream, hydrophobic DAC | 1925682  | 2       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20000448 | 4       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20000431 | 4       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20001227 | 2       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20001230 | 5       |
| Pharmachem                 | Base cream, hydrophobic DAC | 19000732 | 4       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20001232 | 4       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20001233 | 2       |
| Pharmachem                 | Base cream, hydrophobic DAC | 20001234 | 1       |
| PharmaChem                 | Base cream, hydrophobic DAC | 110413   | 1       |
| PharmaChem                 | Base cream, hydrophobic DAC | 141318   | 2       |
| PHARMACHEM / 20            | Base cream, hydrophobic DAC | 140885   | 1       |
| Pharmachem / AHD           | Base cream, hydrophobic DAC | 170009   | 1       |
| Pharmachem / AHD           | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem / AHD           | Base cream, hydrophobic DAC | 20000431 | 1       |
| Pharmachem / Alli          | Base cream, hydrophobic DAC | 190639   | 1       |
| Pharmachem / Alliance      | Base cream, hydrophobic DAC | 181196   | 1       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 162168   | 2       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 170010   | 2       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 182221   | 2       |
| Pharmachem / Alliance H... | Base cream, hydrophobic DAC | 190206   | 1       |
| Pharmachem / Anzag         | Base cream, hydrophobic DAC | 230713   | 2       |
| Pharmachem / Anzag         | Base cream, hydrophobic DAC | 171127   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 172195   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 172196   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 180754   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 180860   | 3       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 181196   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 182220   | 2       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 182170   | 1       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 20000448 | 2       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 20001227 | 3       |
| Pharmachem / Gehe          | Base cream, hydrophobic DAC | 20001233 | 1       |
| Pharmachem / GEHE          | Base cream, hydrophobic DAC | 171127   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 171816   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 171815   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 180517   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 180860   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 181196   | 3       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 181197   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 190209   | 3       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 190637   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 190639   | 2       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 191487   | 3       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem / Noweda        | Base cream, hydrophobic DAC | 2001232  | 1       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 172194   | 2       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 180755   | 1       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 181198   | 1       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 182220   | 2       |
| Pharmachem / Phoenix       | Base cream, hydrophobic DAC | 182170   | 1       |

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| Supplier                 | Substance                   | Batch     | Spectra |
|--------------------------|-----------------------------|-----------|---------|
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 190207    | 1       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 190640    | 2       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 191488    | 1       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 1925661   | 2       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 1925662   | 1       |
| Pharmachem / Phoenix     | Base cream, hydrophobic DAC | 20001230  | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 180515    | 2       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 181198    | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 190206    | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 191488    | 2       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 191487    | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 190004531 | 1       |
| Pharmachem / Sanacorp    | Base cream, hydrophobic DAC | 172196    | 1       |
| Pharmachem / Sanacorp    | Base cream, hydrophobic DAC | 20003527  | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 152209    | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 153627    | 1       |
| Pharmachem / Phönix      | Base cream, hydrophobic DAC | 153626    | 1       |
| Pharmachem Anzag         | Base cream, hydrophobic DAC | 141318    | 1       |
| Pharmachem Anzag         | Base cream, hydrophobic DAC | 162168    | 1       |
| Pharmachem Anzag         | Base cream, hydrophobic DAC | 163238    | 1       |
| Pharmachem Anzag         | Base cream, hydrophobic DAC | 171128    | 1       |
| Pharmachem Gehe          | Base cream, hydrophobic DAC | 180756    | 1       |
| Pharmachem Gehe          | Base cream, hydrophobic DAC | 180755    | 1       |
| Pharmachem Gehe          | Base cream, hydrophobic DAC | 181194    | 1       |
| pharmachem gmbh          | Base cream, hydrophobic DAC | 181197    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 120712    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 261112    | 3       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 240113    | 2       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 140885    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 140886    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 151259    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 153627    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 160826    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 162169    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 162168    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 171128    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 17009     | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 172194    | 2       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 180515    | 3       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 181194    | 2       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 181196    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 181198    | 7       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 180756    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 181197    | 12      |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 182221    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 190206    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 190207    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 191488    | 3       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 191489    | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 20000448  | 3       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 19000732  | 1       |
| Pharmachem GmbH          | Base cream, hydrophobic DAC | 20001231  | 5       |
| Pharmachem GmbH / Jenne  | Base cream, hydrophobic DAC | 181198    | 1       |
| Pharmachem GmbH / Jenne  | Base cream, hydrophobic DAC | 20001230  | 1       |
| Pharmachem GmbH & Co KG  | Base cream, hydrophobic DAC | 191488    | 1       |
| Pharmachem GmbH & Co KG  | Base cream, hydrophobic DAC | 1925661   | 1       |
| Pharmachem GmbH & Co KG  | Base cream, hydrophobic DAC | 190004531 | 1       |
| Pharmachem GmbH & Co. KG | Base cream, hydrophobic DAC | 160825    | 1       |

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| Supplier                     | Substance                   | Batch    | Spectra |
|------------------------------|-----------------------------|----------|---------|
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 162168   | 2       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 170010   | 1       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 170009   | 2       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 180755   | 1       |
| Pharmachem GmbH & Co. KG     | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem GmbH & Co. K...   | Base cream, hydrophobic DAC | 17185    | 1       |
| Pharmachem GmbH & Co. K...   | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachem GmbH & Co. K...   | Base cream, hydrophobic DAC | 20001228 | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 152209   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 160130   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 162168   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 172196   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 191487   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 19000732 | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 20000431 | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 20001233 | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 181196   | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 190206   | 2       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 190207   | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 191489   | 2       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 1925661  | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 20000431 | 1       |
| Pharmachem GmbH & Co.KG...   | Base cream, hydrophobic DAC | 20001228 | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 21013    | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 140886   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 140318   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 143093   | 2       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 153627   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 160136   | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 1600825  | 1       |
| Pharmachem GmbH & Co.KG      | Base cream, hydrophobic DAC | 160814   | 1       |
| Pharmachem GmbH & Co.KG.     | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem GmbH & Co.KG/F... | Base cream, hydrophobic DAC | 170010   | 1       |
| Pharmachem GmbH /            | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem GmbH /            | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem GmbH /            | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem GmbH /            | Base cream, hydrophobic DAC | 190639   | 1       |
| Pharmachem GmbH / Allia...   | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem GmbH / Allia...   | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem GmbH / Allia...   | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem GmbH / Allia...   | Base cream, hydrophobic DAC | 190206   | 1       |
| Pharmachem GmbH / Anzag      | Base cream, hydrophobic DAC | 230713   | 1       |
| Pharmachem GmbH / Anzag      | Base cream, hydrophobic DAC | 150405   | 1       |
| Pharmachem GmbH / Anzag      | Base cream, hydrophobic DAC | 152209   | 1       |
| Pharmachem GmbH / Phönix     | Base cream, hydrophobic DAC | 181198   | 1       |
| Pharmachem GmbH Pößneck      | Base cream, hydrophobic DAC | 160825   | 1       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 160130   | 1       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 162168   | 1       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 171815   | 1       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 181198   | 2       |
| Pharmachem GmbH u.Co.KG      | Base cream, hydrophobic DAC | 180756   | 1       |
| Pharmachem GmbH und Co.KG    | Base cream, hydrophobic DAC | 191488   | 2       |
| Pharmachem GmbH und Co.KG    | Base cream, hydrophobic DAC | 20000431 | 2       |
| Pharmachem GmbH und Co.KG    | Base cream, hydrophobic DAC | 1925661  | 1       |
| Pharmachem GmbH & Co. KG...  | Base cream, hydrophobic DAC | 20001230 | 1       |

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| Supplier                   | Substance                   | Batch    | Spectra |
|----------------------------|-----------------------------|----------|---------|
| pharmachem GmbH&Co.KG      | Base cream, hydrophobic DAC | 20001228 | 2       |
| Pharmachem GmbH&Co.KG      | Base cream, hydrophobic DAC | 21013    | 1       |
| Pharmachem GmbH&Co.KG      | Base cream, hydrophobic DAC | 141489   | 1       |
| Pharmachem GmbH&Co.KG      | Base cream, hydrophobic DAC | 160825   | 3       |
| Pharmachem GmbH&Co.KG      | Base cream, hydrophobic DAC | 180754   | 1       |
| Pharmachem GmbH&Co.KG /... | Base cream, hydrophobic DAC | 180755   | 3       |
| Pharmachem GmbH&Co.KG /... | Base cream, hydrophobic DAC | 190207   | 1       |
| Pharmachem GmbH&Co.KG /... | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem GmbH&Co.KG /... | Base cream, hydrophobic DAC | 20000431 | 1       |
| Pharmachem GmbH&Co.KG /... | Base cream, hydrophobic DAC | 20001231 | 1       |
| Pharmachem GmbH&Co.KG/N... | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem GmbH&Co.KG/N... | Base cream, hydrophobic DAC | 181198   | 1       |
| Pharmachem GmbH&Co.KG/P... | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachem GmbH/ AHD       | Base cream, hydrophobic DAC | 191489   | 1       |
| Pharmachem GmbH/ Noweda    | Base cream, hydrophobic DAC | 180755   | 1       |
| Pharmachem GmbH/ Noweda    | Base cream, hydrophobic DAC | 181198   | 1       |
| Pharmachem GmbH/ Noweda    | Base cream, hydrophobic DAC | 190207   | 2       |
| Pharmachem GmbH/ Noweda    | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem GmbH/ Noweda    | Base cream, hydrophobic DAC | 20000431 | 1       |
| Pharmachem GmbH/AHD        | Base cream, hydrophobic DAC | 171815   | 1       |
| Pharmachem GmbH/Gehe       | Base cream, hydrophobic DAC | 20000448 | 1       |
| Pharmachem GmbH/GEHE       | Base cream, hydrophobic DAC | 182221   | 1       |
| Pharmachem GmbH/GEHE       | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachem GmbH/GEHE       | Base cream, hydrophobic DAC | 190638   | 1       |
| Pharmachem GmbH/Kehr       | Base cream, hydrophobic DAC | 191487   | 1       |
| Pharmachem GmbH/Noweda     | Base cream, hydrophobic DAC | 150405   | 1       |
| Pharmachem GmbH/Phoenix    | Base cream, hydrophobic DAC | 20001227 | 1       |
| Pharmachem GmbH/Phönix     | Base cream, hydrophobic DAC | 171127   | 1       |
| Pharmachem GmbH/Phönix     | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem Noweda          | Base cream, hydrophobic DAC | 162168   | 1       |
| Pharmachem Pösneck/ Now... | Base cream, hydrophobic DAC | 141318   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 20000448 | 1       |
| pharmachem pösneck         | Base cream, hydrophobic DAC | 160130   | 1       |
| pharmachem pösneck         | Base cream, hydrophobic DAC | 171127   | 3       |
| pharmachem Pösneck         | Base cream, hydrophobic DAC | 143119   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 110413   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 160825   | 2       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 162169   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 163238   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 170010   | 2       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 171816   | 2       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 172195   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 172196   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 180517   | 2       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 180816   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 181194   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 181196   | 2       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 182221   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 190209   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 190638   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 190640   | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 1925691  | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 19000732 | 1       |
| Pharmachem Pösneck         | Base cream, hydrophobic DAC | 20000448 | 1       |
| Pharmachem Pösneck 004     | Base cream, hydrophobic DAC | 261112   | 1       |
| Pharmachem Pösneck GmbH... | Base cream, hydrophobic DAC | 172194   | 1       |

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| Supplier                   | Substance                   | Batch    | Spectra |
|----------------------------|-----------------------------|----------|---------|
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 180756   | 2       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 170008   | 1       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 171815   | 1       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 171127   | 2       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 180754   | 1       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 180755   | 2       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 181194   | 2       |
| Pharmachem Pöšneck GmbH... | Base cream, hydrophobic DAC | 181196   | 1       |
| Pharmachem Pöšneck/ Now... | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachem Pöšneck/AHD     | Base cream, hydrophobic DAC | 180757   | 2       |
| Pharmachem Pöšneck/AHD     | Base cream, hydrophobic DAC | 181194   | 1       |
| Pharmachem Pöšneck/E.J     | Base cream, hydrophobic DAC | 180756   | 1       |
| Pharmachem Pöšneck/Gehe    | Base cream, hydrophobic DAC | 20001227 | 3       |
| Pharmachem Pöšneck/GEHE    | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem Pöšneck/Phoe... | Base cream, hydrophobic DAC | 153627   | 1       |
| Pharmachem Pöšneck/Phoe... | Base cream, hydrophobic DAC | 170010   | 1       |
| Pharmachem Pöšneck/Phönix  | Base cream, hydrophobic DAC | 160825   | 1       |
| Pharmachem Pöšneck/Phönix  | Base cream, hydrophobic DAC | 191489   | 1       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 143093   | 2       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 152210   | 1       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 153625   | 1       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 153626   | 1       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 160137   | 2       |
| Pharmachem Pöšneck/Sana... | Base cream, hydrophobic DAC | 160826   | 2       |
| Pharmachem./Gehe           | Base cream, hydrophobic DAC | 20001227 | 3       |
| Pharmachem./Gehe           | Base cream, hydrophobic DAC | 20001228 | 2       |
| Pharmachem./Noweda         | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem./Noweda         | Base cream, hydrophobic DAC | 172196   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 172195   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 172196   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 181198   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 182220   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 191488   | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 1925661  | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 1925682  | 1       |
| PHARMACHEM./PHOENIX        | Base cream, hydrophobic DAC | 1925691  | 1       |
| Pharmachem.Thüringen       | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachem.Thüringen       | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmachem.Thüringen       | Base cream, hydrophobic DAC | 180756   | 1       |
| Pharmachem/ /Sanacorp      | Base cream, hydrophobic DAC | 140885   | 1       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 172196   | 1       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 190209   | 2       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 182220   | 1       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 191488   | 1       |
| Pharmachem/ AHD            | Base cream, hydrophobic DAC | 1923234  | 1       |
| Pharmachem/ Alliance He... | Base cream, hydrophobic DAC | 152209   | 1       |
| Pharmachem/ Alliance He... | Base cream, hydrophobic DAC | 181196   | 1       |
| Pharmachem/ Alliance He... | Base cream, hydrophobic DAC | 181197   | 2       |
| Pharmachem/ Alliance He... | Base cream, hydrophobic DAC | 190209   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 153627   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 163238   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 180757   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 181197   | 2       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 190206   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 191489   | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 1925691  | 1       |
| Pharmachem/ Anzag          | Base cream, hydrophobic DAC | 19000732 | 1       |
| Pharmachem/ Fiebig         | Base cream, hydrophobic DAC | 171127   | 1       |

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| Supplier             | Substance                   | Batch     | Spectra |
|----------------------|-----------------------------|-----------|---------|
| pharmachem/ Gehe     | Base cream, hydrophobic DAC | 180756    | 1       |
| pharmachem/ Gehe     | Base cream, hydrophobic DAC | 181198    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 1511258   | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 152210    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 150404    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 160814    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 160826    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 162169    | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 1925691   | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 20000431  | 1       |
| Pharmachem/ Gehe     | Base cream, hydrophobic DAC | 20001232  | 1       |
| Pharmachem/ GEHE     | Base cream, hydrophobic DAC | 190219    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 141489    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 142154    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 143094    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 151259    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 152209    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 160136    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 162167    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 162169    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 172194    | 2       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 180515    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 182220    | 1       |
| Pharmachem/ Noweda   | Base cream, hydrophobic DAC | 20000431  | 1       |
| Pharmachem/ Phoenix  | Base cream, hydrophobic DAC | 153625    | 1       |
| Pharmachem/ Phoenix  | Base cream, hydrophobic DAC | 182220    | 1       |
| Pharmachem/ Phoenix  | Base cream, hydrophobic DAC | 190637    | 1       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 160130    | 1       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 170009    | 2       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 170010    | 2       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 171127    | 1       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 171815    | 1       |
| Pharmachem/ Phönix   | Base cream, hydrophobic DAC | 172194    | 1       |
| Pharmachem/ Sanacorp | Base cream, hydrophobic DAC | 140886    | 1       |
| Pharmachem/ Sanacorp | Base cream, hydrophobic DAC | 182221    | 1       |
| Pharmachem/ Sanacorp | Base cream, hydrophobic DAC | 191488    | 2       |
| Pharmachem/30        | Base cream, hydrophobic DAC | 21013     | 1       |
| Pharmachem/30        | Base cream, hydrophobic DAC | 141317    | 2       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 26112     | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 261112    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 110413    | 2       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 230713    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 231213    | 2       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 150405    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 160825    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 171127    | 5       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 172194    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 172195    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 180757    | 4       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 180754    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 181196    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 182220    | 2       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 181197    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 190207    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 190639    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 190209    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 191487    | 1       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 1923234   | 3       |
| Pharmachem/AHD       | Base cream, hydrophobic DAC | 190004531 | 3       |

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| <b>Supplier</b>            | <b>Substance</b>            | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------------|--------------|----------------|
| Pharmachem/AHD             | Base cream, hydrophobic DAC | 20000448     | 2              |
| Pharmachem/AHD             | Base cream, hydrophobic DAC | 1925691      | 2              |
| Pharmachem/AHD             | Base cream, hydrophobic DAC | 19000732     | 1              |
| Pharmachem/Alliance        | Base cream, hydrophobic DAC | 190638       | 1              |
| Pharmachem/Alliance        | Base cream, hydrophobic DAC | 191489       | 1              |
| Pharmachem/Alliance        | Base cream, hydrophobic DAC | 1925681      | 1              |
| Pharmachem/Alliance        | Base cream, hydrophobic DAC | 20001227     | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 160138       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 162168       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 162170       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 170008       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 172194       | 3              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 172195       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 180756       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 181194       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 181198       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 190637       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 191489       | 1              |
| Pharmachem/Alliance Hea... | Base cream, hydrophobic DAC | 190209       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 152209       | 3              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 160136       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 180756       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 181198       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 182220       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 190207       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 171127       | 2              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 190206       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 190640       | 1              |
| Pharmachem/Anzag           | Base cream, hydrophobic DAC | 1925661      | 1              |
| Pharmachem/E&J             | Base cream, hydrophobic DAC | 170009       | 1              |
| Pharmachem/E&J             | Base cream, hydrophobic DAC | 171816       | 1              |
| Pharmachem/E&J             | Base cream, hydrophobic DAC | 180757       | 1              |
| Pharmachem/E&J             | Base cream, hydrophobic DAC | 180860       | 1              |
| Pharmachem/Fiebi           | Base cream, hydrophobic DAC | 190638       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 120712       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 240113       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 21013        | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 231213       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 141318       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 141489       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 151259       | 5              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 151258       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 152209       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 152211       | 3              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 153625       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 160130       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 162170       | 3              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 160825       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 162168       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 162169       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 170008       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 170010       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 171815       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 172196       | 3              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 6107319      | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 172194       | 3              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 172195       | 1              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 180517       | 4              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 180755       | 2              |
| Pharmachem/Gehe            | Base cream, hydrophobic DAC | 180860       | 2              |

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| Supplier                 | Substance                   | Batch     | Spectra |
|--------------------------|-----------------------------|-----------|---------|
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 180754    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 180756    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 181196    | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 181194    | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 182221    | 3       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 181197    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 190209    | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 190638    | 6       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 190263    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 190639    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 191487    | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 191489    | 3       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 192323    | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 191488    | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 1925681   | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 1925661   | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20001227  | 2       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20001230  | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20001228  | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20001234  | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20003528  | 1       |
| Pharmachem/Gehe          | Base cream, hydrophobic DAC | 20003527  | 1       |
| Pharmachem/GEHE          | Base cream, hydrophobic DAC | 141489    | 1       |
| Pharmachem/GEHE          | Base cream, hydrophobic DAC | 172194    | 4       |
| Pharmachem/GEHE          | Base cream, hydrophobic DAC | 181197    | 3       |
| Pharmachem/GEHE          | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem/Gehe 27.09.18 | Base cream, hydrophobic DAC | 181194    | 3       |
| Pharmachem/Gehe 31.12.18 | Base cream, hydrophobic DAC | 181197    | 3       |
| Pharmachem/Jenne         | Base cream, hydrophobic DAC | 180755    | 1       |
| Pharmachem/Jenne         | Base cream, hydrophobic DAC | 190206    | 1       |
| Pharmachem/Jenne         | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem/Jenne         | Base cream, hydrophobic DAC | 1925661   | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 153627    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 162168    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 180515    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 180756    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 180745    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 182220    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 182221    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 182221    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 190638    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 190637    | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 191489    | 2       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 190206    | 2       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 190004531 | 2       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 1925682   | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 1925691   | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 20000448  | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 20000431  | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 20001233  | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 20001232  | 1       |
| Pharmachem/Kehr          | Base cream, hydrophobic DAC | 20003527  | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 230713    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 231213    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 142154    | 2       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 143093    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 143094    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 151259    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 160136    | 1       |
| Pharmachem/Noweda        | Base cream, hydrophobic DAC | 160825    | 2       |

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| <b>Supplier</b>    | <b>Substance</b>            | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-----------------------------|--------------|----------------|
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 162168       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 163237       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 170010       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 171128       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 171127       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 171815       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 171816       | 3              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 172196       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 172194       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 180517       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 180755       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 181194       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 180860       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 180756       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 181196       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 181197       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 190206       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 190209       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 190638       | 5              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 190637       | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 190639       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 191489       | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 1925661      | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 1925681      | 2              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 20000448     | 3              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 20001227     | 5              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 20001228     | 1              |
| Pharmachem/Noweda  | Base cream, hydrophobic DAC | 200001234    | 1              |
| Pharmachem/NOWEDA  | Base cream, hydrophobic DAC | 180755       | 1              |
| pharmachem/Phoenix | Base cream, hydrophobic DAC | 182220       | 2              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 240113       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 152210       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 160138       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 162168       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 162170       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 163238       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 171816       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 172196       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 180517       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 180754       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 180755       | 2              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 180860       | 2              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 180756       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 181198       | 2              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 181196       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 182220       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 190512705    | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 191041909    | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 190207       | 1              |
| Pharmachem/Phoenix | Base cream, hydrophobic DAC | 20001231     | 1              |
| pharmachem/Phönix  | Base cream, hydrophobic DAC | 1925691      | 3              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 231213       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 151259       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 153625       | 2              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 153626       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 160136       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 160814       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 163238       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 170009       | 1              |
| Pharmachem/Phönix  | Base cream, hydrophobic DAC | 170008       | 1              |

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| Supplier              | Substance                   | Batch     | Spectra |
|-----------------------|-----------------------------|-----------|---------|
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 171815    | 2       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 171817    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 171185    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 172194    | 3       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 172196    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 180756    | 3       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 180757    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 181194    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 181197    | 2       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 190209    | 1       |
| Pharmachem/Phönix     | Base cream, hydrophobic DAC | 20001230  | 1       |
| Pharmachem/Sana       | Base cream, hydrophobic DAC | 142154    | 1       |
| Pharmachem/Sana       | Base cream, hydrophobic DAC | 152209    | 1       |
| Pharmachem/Sana       | Base cream, hydrophobic DAC | 160825    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 143094    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 151259    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 15221     | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 160814    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 170010    | 3       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 171127    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 172195    | 5       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 171815    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 172196    | 3       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 180517    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 180757    | 10      |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 180755    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 180756    | 4       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 181194    | 4       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 181196    | 4       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 181198    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190206    | 3       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190209    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190207    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190637    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190639    | 3       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 191487    | 8       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 191488    | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 191489    | 2       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 1923234   | 9       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 190004531 | 5       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 1925661   | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 1925682   | 10      |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 1925681   | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 1925691   | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 20001227  | 1       |
| Pharmachem/Sanacorp   | Base cream, hydrophobic DAC | 20001228  | 4       |
| pharmachem/spangro    | Base cream, hydrophobic DAC | 142154    | 1       |
| Pharmachem;           | Base cream, hydrophobic DAC | 160136    | 1       |
| PharmachemGmbH/Gehe   | Base cream, hydrophobic DAC | 20001230  | 2       |
| PharmachemGmbH/Gehe   | Base cream, hydrophobic DAC | 20001234  | 1       |
| PharmachemGmbH/Noweda | Base cream, hydrophobic DAC | 18002831  | 1       |
| PharmachemGmbH/Phönix | Base cream, hydrophobic DAC | 181198    | 2       |
| pharmachen            | Base cream, hydrophobic DAC | 240113    | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 21013     | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 240113    | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 231213    | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 140885    | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 141318    | 1       |
| Pharmachen            | Base cream, hydrophobic DAC | 142154    | 3       |
| Pharmachen            | Base cream, hydrophobic DAC | 143094    | 1       |

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| Supplier                   | Substance                   | Batch    | Spectra |
|----------------------------|-----------------------------|----------|---------|
| Pharmachen                 | Base cream, hydrophobic DAC | 151258   | 2       |
| Pharmachen                 | Base cream, hydrophobic DAC | 152209   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 160130   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 162168   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 162170   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 171127   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 180755   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 182220   | 2       |
| Pharmachen                 | Base cream, hydrophobic DAC | 181197   | 1       |
| Pharmachen                 | Base cream, hydrophobic DAC | 190207   | 1       |
| Pharmachen GmbH            | Base cream, hydrophobic DAC | 152209   | 1       |
| Pharmachen GmbH            | Base cream, hydrophobic DAC | 160136   | 1       |
| Pharmachen GmbH            | Base cream, hydrophobic DAC | 171817   | 1       |
| Pharmachen GmbH            | Base cream, hydrophobic DAC | 171815   | 1       |
| Pharmachen GmbH            | Base cream, hydrophobic DAC | 172195   | 1       |
| Pharmachen GmbH / Sana...  | Base cream, hydrophobic DAC | 1925661  | 1       |
| Pharmachen GmbH / Sana...  | Base cream, hydrophobic DAC | 20000448 | 1       |
| Pharmachen GmbH / Sana...  | Base cream, hydrophobic DAC | 20001233 | 1       |
| Pharmachen GmbH & Co. K... | Base cream, hydrophobic DAC | 182220   | 1       |
| pharmachen gmbh&co.kg/ ... | Base cream, hydrophobic DAC | 181198   | 1       |
| pharmachen gmbh&co.kg/ ... | Base cream, hydrophobic DAC | 190638   | 2       |
| pharmachen gmbh&co.kg/ ... | Base cream, hydrophobic DAC | 191489   | 1       |
| Pharmachen GmbH/ Sanacorp  | Base cream, hydrophobic DAC | 180755   | 1       |
| Pharmachen GmbH/Allianc... | Base cream, hydrophobic DAC | 162169   | 1       |
| Pharmachen GmbH/Allianc... | Base cream, hydrophobic DAC | 191488   | 2       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 21013    | 1       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 141318   | 1       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 143094   | 3       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 151258   | 2       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 153625   | 2       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 160130   | 2       |
| Pharmachen GmbH/Gehe       | Base cream, hydrophobic DAC | 190206   | 1       |
| Pharmachen Pöfneck         | Base cream, hydrophobic DAC | 261112   | 1       |
| Pharmachen Pöfneck         | Base cream, hydrophobic DAC | 150405   | 2       |
| Pharmachen Pöfneck         | Base cream, hydrophobic DAC | 151258   | 1       |
| Pharmachen Pöfneck         | Base cream, hydrophobic DAC | 162167   | 1       |
| Pharmachen/gehe            | Base cream, hydrophobic DAC | 162170   | 1       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 160826   | 1       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 170010   | 1       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 171815   | 4       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 172194   | 1       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 180515   | 2       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 180755   | 3       |
| Pharmachen/Gehe            | Base cream, hydrophobic DAC | 190638   | 1       |
| Pharmachen/Noweda          | Base cream, hydrophobic DAC | 171126   | 3       |
| Pharmachen/Noweda          | Base cream, hydrophobic DAC | 20000448 | 1       |
| Pharmachen/Phoenix         | Base cream, hydrophobic DAC | 171127   | 1       |
| Pharmachen/Sana            | Base cream, hydrophobic DAC | 190638   | 1       |
| Pharmachen/Sana            | Base cream, hydrophobic DAC | 2001227  | 1       |
| Pharmachen/Sanacorp        | Base cream, hydrophobic DAC | 1925681  | 1       |
| Pharmachen/Sanacorp        | Base cream, hydrophobic DAC | 20001227 | 3       |
| Pharmachen/Sanacorp        | Base cream, hydrophobic DAC | 20003530 | 2       |
| PharmaChin/ Anzag          | Base cream, hydrophobic DAC | 230713   | 1       |
| Pharmamachem/ AHD          | Base cream, hydrophobic DAC | 180515   | 1       |
| Pharmamachem/ AHD          | Base cream, hydrophobic DAC | 180860   | 1       |
| Pharmamachem/ AHD          | Base cream, hydrophobic DAC | 181194   | 1       |
| Pharmamachem/ AHD          | Base cream, hydrophobic DAC | 181197   | 1       |
| Pharmamachem/ AHD          | Base cream, hydrophobic DAC | 190639   | 1       |
| Pharmamachem/Phoenix       | Base cream, hydrophobic DAC | 180755   | 3       |
| Pharmamachem/Phoenix       | Base cream, hydrophobic DAC | 181198   | 1       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| Pharmamachem/Phoenix       | Base cream, hydrophobic DAC | 190207      | 3       |
| Pharmamachem/Phoenix       | Base cream, hydrophobic DAC | 191488      | 2       |
| Pharmamacher GmbH/Allia... | Base cream, hydrophobic DAC | 190640      | 1       |
| Pharmamacher GmbH/Allia... | Base cream, hydrophobic DAC | 191488      | 1       |
| Pharmamacher/Noweda        | Base cream, hydrophobic DAC | 181198      | 1       |
| Pharmamacher/Noweda        | Base cream, hydrophobic DAC | 190206      | 1       |
| Pharmamacher/Noweda        | Base cream, hydrophobic DAC | 190640      | 1       |
| Pharmchem                  | Base cream, hydrophobic DAC | 181198      | 1       |
| Pharmchem/Sanacorp         | Base cream, hydrophobic DAC | 162169      | 1       |
| PhCHEM/Phönix              | Base cream, hydrophobic DAC | 162170      | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 13175902    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 14028101    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 14061501    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 14145401    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 15001001    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 16075101    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 16174201    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 17073202    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 3030        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 3050        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 3093        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 3122        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 18051001    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 180754      | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 18051101    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 3222        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 182221      | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 19002001    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 19002002    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 19058301    | 2       |
| Phoenix                    | Base cream, hydrophobic DAC | 190207      | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 190638      | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 3394        | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 19145601    | 1       |
| Phoenix                    | Base cream, hydrophobic DAC | 200320904   | 1       |
| PHOENIX 11.09.2014         | Base cream, hydrophobic DAC | 14061501    | 1       |
| Phoenix 13.09.19 6,79EUR   | Base cream, hydrophobic DAC | 19058401    | 1       |
| Phoenix Calo               | Base cream, hydrophobic DAC | 20000426001 | 1       |
| Phoenix Calo               | Base cream, hydrophobic DAC | 20001592001 | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 12308103    | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 14061501    | 20      |
| Caelo                      | Base cream, hydrophobic DAC | 170010      | 1       |
| Phoenix/Cealo              | Base cream, hydrophobic DAC | 172194      | 1       |
| Phoenix/Pharmachem         | Base cream, hydrophobic DAC | 110413      | 1       |
| Phoenix/Pharmachem         | Base cream, hydrophobic DAC | 191489      | 1       |
| Phola                      | Base cream, hydrophobic DAC | 181198      | 1       |
| phönix                     | Base cream, hydrophobic DAC | 2/AKD12     | 1       |
| phönix                     | Base cream, hydrophobic DAC | 160136      | 1       |
| phönix                     | Base cream, hydrophobic DAC | 160825      | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 13085701    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 13386402    | 2       |
| Phönix                     | Base cream, hydrophobic DAC | 14000701    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 14061501    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 14145301    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 16165501    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 16293901    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 17255201    | 2       |
| Phönix                     | Base cream, hydrophobic DAC | 17192002    | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 180515      | 2       |
| Phönix                     | Base cream, hydrophobic DAC | 180517      | 2       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Phönix                     | Base cream, hydrophobic DAC | 3163             | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 3169             | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 180756           | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 180757           | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 18173903         | 2       |
| Phönix                     | Base cream, hydrophobic DAC | 18005487         | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 18005488         | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 191488           | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 1925691          | 1       |
| Phönix                     | Base cream, hydrophobic DAC | 20000431         | 1       |
| PHÖNIX                     | Base cream, hydrophobic DAC | 16165701         | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 170009           | 1       |
| Phönix 01.06.15            | Base cream, hydrophobic DAC | 15048701         | 2       |
| Phönix Gotha               | Base cream, hydrophobic DAC | 276087           | 2       |
| Phönix Gotha               | Base cream, hydrophobic DAC | 277696           | 1       |
| Bombastus                  | Base cream, hydrophobic DAC | 180754           | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 17150401/2041217 | 1       |
| Phönix/Pharmachem          | Base cream, hydrophobic DAC | 182221           | 1       |
| Pöckneck Pharma / Gehe     | Base cream, hydrophobic DAC | 162169           | 1       |
| Pöckneck/Gehe              | Base cream, hydrophobic DAC | 153626           | 1       |
| Pöckneck/Gehe              | Base cream, hydrophobic DAC | 170008           | 1       |
| Pöckneck/Gehe              | Base cream, hydrophobic DAC | 181197           | 2       |
| Pöckneck Pharma / Gehe     | Base cream, hydrophobic DAC | 151258           | 1       |
| Pöckneck Pharma / Gehe     | Base cream, hydrophobic DAC | 152210           | 2       |
| Pröckneck                  | Base cream, hydrophobic DAC | 142154           | 2       |
| Raben-Apotheke Mildenau    | Base cream, hydrophobic DAC | 14061501         | 4       |
| sanacorb                   | Base cream, hydrophobic DAC | 180756           | 1       |
| sanacorb                   | Base cream, hydrophobic DAC | 190638           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 12151602         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 12308102         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 12229304         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13019303         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13085701         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13175902         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13175901         | 3       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13275301         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 13275302         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 140885           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 4/AKD3           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 15421201         | 3       |
| Sanacorp                   | Base cream, hydrophobic DAC | 16165501         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 16293701         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 16330301         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 17073201         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 171815           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 172194           | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 17255201         | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 180515           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 18051101         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 180755           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 181194           | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 19058301         | 2       |
| Sanacorp                   | Base cream, hydrophobic DAC | 1900415001       | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC | 20001593002      | 2       |
| Caelo                      | Base cream, hydrophobic DAC | 1309302          | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 15111402         | 16      |
| Caelo                      | Base cream, hydrophobic DAC | 5421201          | 1       |
| Caelo                      | Base cream, hydrophobic DAC | 18286701         | 32      |
| Sanacorp W.E: 26.01.18 ... | Base cream, hydrophobic DAC | 17150401         | 1       |
| Sanacorp WE 25.02.17 -1... | Base cream, hydrophobic DAC | 16293701         | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | Base cream, hydrophobic DAC     | 286515      | 1       |
| Sanacorp/ Pharmachem       | Base cream, hydrophobic DAC     | 131211      | 2       |
| Sanacorp/ Pharmachem       | Base cream, hydrophobic DAC     | 90512       | 3       |
| Sanacorp/ Pharmachem       | Base cream, hydrophobic DAC     | 261112      | 2       |
| Sanacorp/ Pharmachem       | Base cream, hydrophobic DAC     | 231213      | 2       |
| Sanacorp/ Pharmachem       | Base cream, hydrophobic DAC     | 142155      | 1       |
| Sanacorp/ Pharmachem GmbH  | Base cream, hydrophobic DAC     | 180515      | 1       |
| Caelo                      | Base cream, hydrophobic DAC     | 11341402    | 2       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 171816      | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 171817      | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 172195      | 2       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 182221      | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 190639      | 3       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 190637      | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 191489      | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 1925681     | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 190004531   | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 1925682     | 2       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 19000732    | 1       |
| Sanacorp/Pharmachem        | Base cream, hydrophobic DAC     | 20001232    | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC     | 181198      | 1       |
| Sanacorp                   | Base cream, hydrophobic DAC     | 19000415003 | 2       |
| Caelo                      | Base cream, hydrophobic DAC     | 190206      | 6       |
| siehe Protokoll            | Base cream, hydrophobic DAC     | 305080      | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 120214-2023 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 120601-2137 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 120719-2199 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 121205-2299 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 121205-2276 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 130312-3053 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 130124-3021 | 1       |
| Taoasis                    | Base cream, hydrophobic DAC     | 130719-3198 | 1       |
| WE:06.04.2016 Phönix ...   | Base cream, hydrophobic DAC     | 15421201    | 1       |
| 00229352                   | Hydrophilic cream, non-ionic... | 19005193    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 19003819    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 19006521    | 1       |
| Aallianc. Healthc. / Ap... | Hydrophilic cream, non-ionic... | 28A18018    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 300760      | 5       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 310516      | 3       |
| AHD                        | Hydrophilic cream, non-ionic... | 14A300418   | 1       |
| AHD                        | Hydrophilic cream, non-ionic... | 19002037    | 1       |
| AHD                        | Hydrophilic cream, non-ionic... | 18005880    | 1       |
| AHD                        | Hydrophilic cream, non-ionic... | 20001910    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 301622      | 5       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 309905      | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 20001012    | 6       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 20005128    | 2       |
| AHD 08.09.14 EK 5,31       | Hydrophilic cream, non-ionic... | 287711      | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 297305      | 7       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 305143      | 4       |
| AHD/apomix/23.07.14        | Hydrophilic cream, non-ionic... | 36A140514   | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 118005877   | 1       |
| All..Healthc./Apomix       | Hydrophilic cream, non-ionic... | 12A040313   | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 294310      | 2       |
| Allianc. Health. / Apomix  | Hydrophilic cream, non-ionic... | 48A181115   | 1       |
| Allianc. Health. / Apomix  | Hydrophilic cream, non-ionic... | 36A261016   | 1       |
| Allianc. Health. / Apomix  | Hydrophilic cream, non-ionic... | 25A270618   | 1       |
| Allianc. Health. /Apomix   | Hydrophilic cream, non-ionic... | 25A300516   | 1       |
| Allianc. Health. /Apomix   | Hydrophilic cream, non-ionic... | 7A310316    | 1       |
| Allianc. Healthc. / Apo... | Hydrophilic cream, non-ionic... | 11A270319   | 2       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Alliance                   | Hydrophilic cream, non-ionic... | 90714      | 1       |
| Alliance H.                | Hydrophilic cream, non-ionic... | 19055601   | 1       |
| Alliance Healthcare        | Hydrophilic cream, non-ionic... | 1A030113   | 2       |
| Alliance Healthcare        | Hydrophilic cream, non-ionic... | 301627     | 1       |
| Alliance Healthcare        | Hydrophilic cream, non-ionic... | 9A240418   | 1       |
| Alliance Healthcare        | Hydrophilic cream, non-ionic... | 14A-110619 | 1       |
| Alliance Healthcare        | Hydrophilic cream, non-ionic... | 19005187   | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 33A240713  | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 55A181213  | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 38A050614  | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 50A101114  | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 42A070714  | 1       |
| Alliance Healthcare/Apo... | Hydrophilic cream, non-ionic... | 31A280818  | 1       |
| Alliance/ Apomix           | Hydrophilic cream, non-ionic... | 10B070420  | 1       |
| AMH Niemann / apomix       | Hydrophilic cream, non-ionic... | 43a140714  | 1       |
| AMH Niemann GmbH & Co. KG  | Hydrophilic cream, non-ionic... | 27A150513  | 1       |
| AMH Niemann GmbH & Co. KG  | Hydrophilic cream, non-ionic... | 35A070813  | 1       |
| AMH Niemann GmbH & Co. KG  | Hydrophilic cream, non-ionic... | 34A210916  | 1       |
| AMH Niemann GmbH & Co. ... | Hydrophilic cream, non-ionic... | 35A251016  | 4       |
| AMH Niemann/G              | Hydrophilic cream, non-ionic... | 15A140512  | 1       |
| AMH Niemann/G              | Hydrophilic cream, non-ionic... | 20A090413  | 1       |
| AMH Niemann/K              | Hydrophilic cream, non-ionic... | 10A190312  | 1       |
| Anzag                      | Hydrophilic cream, non-ionic... | 114761     | 1       |
| Anzag                      | Hydrophilic cream, non-ionic... | 286330     | 2       |
| Anzag                      | Hydrophilic cream, non-ionic... | 294311     | 1       |
| Anzag                      | Hydrophilic cream, non-ionic... | 19055601   | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 274212     | 2       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 274103     | 2       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 288793     | 1       |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 18175301   | 1       |
| ANZAG/apomix/22.10.2013    | Hydrophilic cream, non-ionic... | 30A030613  | 2       |
| Anzag/apomix/26.03.14      | Hydrophilic cream, non-ionic... | 40A281013  | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 18001332   | 10      |
| Caelo                      | Hydrophilic cream, non-ionic... | 47A071014  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 30A170912  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 2A140113   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 9A060213   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 3A240413   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 27A150513  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 52a081214  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 2A090215   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 17A100315  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 19A300315  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 20A280415  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 32A220915  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 28A060815  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 3A030216   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 30A020816  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 11A190417  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 15A270617  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 18A100717  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 38A241017  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 1A030118   | 4       |
| apomix                     | Hydrophilic cream, non-ionic... | 3A240118   | 2       |
| apomix                     | Hydrophilic cream, non-ionic... | 5B190218   | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 8A230418   | 2       |
| apomix                     | Hydrophilic cream, non-ionic... | 17A030518  | 2       |
| apomix                     | Hydrophilic cream, non-ionic... | 24A270618  | 3       |
| apomix                     | Hydrophilic cream, non-ionic... | 32A280818  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 33A110918  | 1       |

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| Supplier | Substance                       | Batch      | Spectra |
|----------|---------------------------------|------------|---------|
| apomix   | Hydrophilic cream, non-ionic... | 4A030119   | 3       |
| apomix   | Hydrophilic cream, non-ionic... | 9A050319   | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 18A020719  | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 25A070819  | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 7A110320   | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 6A110320   | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 9A300320   | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 27A211019  | 1       |
| apomix   | Hydrophilic cream, non-ionic... | 33A121119  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 1A030112   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 33A051211  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 16A300512  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 18A070612  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 38A051112  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 42A191212  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 31A170912  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 2A140113   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 1A030113   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 39A131112  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 12A040313  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 11A040313  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 36B270513  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 32A090713  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 30A030613  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 54A021213  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 40A281013  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 1A080113   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 7A020414   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 53A191113  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 36A140514a | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 38A050614  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 40A160614  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 48A081014  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 51A261114  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 50A101114  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 1A210115   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 49A241115  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 1A200116   | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 5A080316   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 23A280416  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 32A010916  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 17009601   | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 8A120416   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 7A140217   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 37A071216  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 9A210317   | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 37A241017  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 18A100717  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 2A040118   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 8A230418   | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 17A030518  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 25A270618  | 4       |
| Apomix   | Hydrophilic cream, non-ionic... | 28A180718  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 32A280818  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 24A270618  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 33A110918  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 12A160419  | 2       |
| Apomix   | Hydrophilic cream, non-ionic... | 35B101218  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 20A220719  | 1       |
| Apomix   | Hydrophilic cream, non-ionic... | 33A121119  | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Apomix                     | Hydrophilic cream, non-ionic... | 2A100220   | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 14A050520  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 26B201020  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 25A201020  | 1       |
| Apomix / AHD               | Hydrophilic cream, non-ionic... | 53A021213  | 1       |
| Apomix / Alliance Healt... | Hydrophilic cream, non-ionic... | 9A210317   | 1       |
| Apomix / Alliance Healt... | Hydrophilic cream, non-ionic... | 2A040118   | 2       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 32A250414  | 1       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 36A140514  | 1       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 51A261114  | 1       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 3A030216   | 1       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 26A210616  | 1       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 29A020816  | 2       |
| apomix / Anzag             | Hydrophilic cream, non-ionic... | 35A251016  | 1       |
| Apomix / Anzag             | Hydrophilic cream, non-ionic... | 36A261016  | 1       |
| Apomix / Gehe              | Hydrophilic cream, non-ionic... | 5B310817   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 33A240713  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 4A250118   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 25A270618  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 9A050319   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 12A160419  | 2       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 7A110320   | 1       |
| Apomix / Phoenix           | Hydrophilic cream, non-ionic... | 29B010818  | 1       |
| Apomix / Phoenix           | Hydrophilic cream, non-ionic... | 26A270618  | 1       |
| apomix / Phoenix / 02.0... | Hydrophilic cream, non-ionic... | 50a161215  | 1       |
| apomix / Phoenix 19.02...  | Hydrophilic cream, non-ionic... | 40a071217  | 1       |
| apomix / Phoenix Leipzi... | Hydrophilic cream, non-ionic... | 7-A140217  | 1       |
| apomix / Phoenix Leipzi... | Hydrophilic cream, non-ionic... | 1a200116   | 1       |
| apomix / Phoenix Leipzi... | Hydrophilic cream, non-ionic... | 36A261016  | 1       |
| apomix / Phoenix Leipzi... | Hydrophilic cream, non-ionic... | 41a141015  | 2       |
| apomix / Phoenix Leipzi... | Hydrophilic cream, non-ionic... | 28A060815  | 1       |
| Apomix / Phönix            | Hydrophilic cream, non-ionic... | 11A040313  | 1       |
| Apomix / Phönix            | Hydrophilic cream, non-ionic... | 32A090713  | 1       |
| Apomix / Phönix            | Hydrophilic cream, non-ionic... | 35A070813  | 1       |
| Apomix / Phönix            | Hydrophilic cream, non-ionic... | 4A250214   | 2       |
| Apomix / Phönix            | Hydrophilic cream, non-ionic... | 7A020414   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 2A090215   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 19A300315  | 2       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 7a310316   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 8A120416   | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 28A220616  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 36A261016  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 33A121119  | 1       |
| apomix AMH Niemann GmbH... | Hydrophilic cream, non-ionic... | 7A310316   | 1       |
| apomix AMH Niemann GmbH... | Hydrophilic cream, non-ionic... | 30A020816  | 2       |
| apomix AMH Niemann GmbH... | Hydrophilic cream, non-ionic... | 34A210916  | 1       |
| Apomix Anzag               | Hydrophilic cream, non-ionic... | 33A240713  | 1       |
| Apomix Halle               | Hydrophilic cream, non-ionic... | 14A180619  | 1       |
| apomix, phoenix 28.05.2... | Hydrophilic cream, non-ionic... | 6a130318   | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 18A020719  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 20A220719  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 25A070819  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 1A020120   | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 14A050520  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 24A290920  | 2       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 25A201020  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 34A101120  | 1       |
| apomix, Phönix, 07.12.2017 | Hydrophilic cream, non-ionic... | 35a270917  | 1       |
| Apomix / AHD               | Hydrophilic cream, non-ionic... | 12A2500417 | 1       |
| apomix / AHD 18.06.2018    | Hydrophilic cream, non-ionic... | 3A240118   | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| apomix/ AHD 22.10.2018     | Hydrophilic cream, non-ionic... | 8A230418  | 1       |
| Apomix/ Alliance Health... | Hydrophilic cream, non-ionic... | 33B110918 | 2       |
| Apomix/ Alliance Health... | Hydrophilic cream, non-ionic... | 19B220719 | 1       |
| apomix/ Gehe               | Hydrophilic cream, non-ionic... | 20A220719 | 1       |
| apomix/ Gehe               | Hydrophilic cream, non-ionic... | 18A020719 | 1       |
| apomix/ Gehe/27.08.20      | Hydrophilic cream, non-ionic... | 2A100220  | 1       |
| Apomix/ Kehr               | Hydrophilic cream, non-ionic... | 33A110918 | 1       |
| apomix/ Noweda             | Hydrophilic cream, non-ionic... | 15A090620 | 1       |
| Apomix/ Noweda             | Hydrophilic cream, non-ionic... | 18A020719 | 1       |
| Apomix/ Noweda             | Hydrophilic cream, non-ionic... | 6A110320  | 1       |
| Apomix/ Noweda             | Hydrophilic cream, non-ionic... | 9A300320  | 1       |
| apomix/ Phoenix            | Hydrophilic cream, non-ionic... | 25A270618 | 1       |
| apomix/ Phoenix / 09.11... | Hydrophilic cream, non-ionic... | 30a020816 | 2       |
| apomix/ Phoenix / 26.10... | Hydrophilic cream, non-ionic... | 32a010916 | 1       |
| apomix/ Phoenix / 30.08... | Hydrophilic cream, non-ionic... | 8a120416  | 1       |
| apomix/ Phoenix 07.02.2... | Hydrophilic cream, non-ionic... | 37a241017 | 1       |
| apomix/ Phoenix Leipzig    | Hydrophilic cream, non-ionic... | 27A220715 | 1       |
| apomix/ Phoenix Leipzig... | Hydrophilic cream, non-ionic... | 7A140217  | 1       |
| apomix/ Phoenix Leipzig... | Hydrophilic cream, non-ionic... | 2a160117  | 1       |
| Apomix/ Sanacorp           | Hydrophilic cream, non-ionic... | 9A210317  | 1       |
| Apomix/AHD                 | Hydrophilic cream, non-ionic... | 18A100717 | 1       |
| Apomix/AHD                 | Hydrophilic cream, non-ionic... | 8A230418  | 1       |
| APOMIX/AHD                 | Hydrophilic cream, non-ionic... | 35A130514 | 1       |
| Apomix/AHD/24.06.14        | Hydrophilic cream, non-ionic... | 32A250414 | 1       |
| Apomix/Alliance Healthc... | Hydrophilic cream, non-ionic... | 12A040313 | 1       |
| Apomix/Alliance Healthc... | Hydrophilic cream, non-ionic... | 8/14      | 1       |
| apomix/Anzag               | Hydrophilic cream, non-ionic... | 40A281013 | 2       |
| apomix/Anzag               | Hydrophilic cream, non-ionic... | 4A240215  | 1       |
| apomix/Anzag               | Hydrophilic cream, non-ionic... | 1a200116  | 1       |
| apomix/Anzag               | Hydrophilic cream, non-ionic... | 9a210317  | 1       |
| Apomix/Anzag               | Hydrophilic cream, non-ionic... | 3A090215  | 1       |
| Apomix/Anzag               | Hydrophilic cream, non-ionic... | 26A080715 | 1       |
| Apomix/Anzag               | Hydrophilic cream, non-ionic... | 47A281015 | 1       |
| Apomix/E&J                 | Hydrophilic cream, non-ionic... | 5B190218  | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 51A261114 | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 24A270618 | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 28A180718 | 1       |
| Apomix/Gehe                | Hydrophilic cream, non-ionic... | 18A220518 | 1       |
| apomix/GEHE/02.07.2013     | Hydrophilic cream, non-ionic... | 40A261112 | 1       |
| apomix/GEHE/22.05.2013     | Hydrophilic cream, non-ionic... | 2A140113  | 1       |
| apomix/Holdermann          | Hydrophilic cream, non-ionic... | 32A250414 | 2       |
| apomix/Holdermann          | Hydrophilic cream, non-ionic... | 43A140714 | 1       |
| Apomix/Jenne               | Hydrophilic cream, non-ionic... | 9A300320  | 1       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 33A110918 | 2       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 15B090620 | 1       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 26B201020 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 2A090215  | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 48A181115 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 8A120416  | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 32A210916 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 36A261016 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 7A140217  | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 12A160419 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 15A090620 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 1A210115  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 7A310316  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 3A240118  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 5B190218  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 18A020719 | 3       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 25A070819 | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 33A121119        | 4       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 19B220719        | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 7A110320         | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 6A110320         | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 9A30032004546291 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 16B300620        | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 33A091120        | 2       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 54A021213        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 7A020414         | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 39A160614        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 2A090215         | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 4A240215         | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 50A161215        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 26A270618        | 2       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 32A280818        | 2       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 30A010818        | 3       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 33A110918        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 4A030119         | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 12A160419        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 33A121119        | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 6A110320         | 1       |
| Apomix/NOWEDA              | Hydrophilic cream, non-ionic... | 19A300315        | 1       |
| Apomix/NOWEDA              | Hydrophilic cream, non-ionic... | 17002160         | 1       |
| Apomix/NOWEDA              | Hydrophilic cream, non-ionic... | 29B010818        | 1       |
| APOMIX/Noweda              | Hydrophilic cream, non-ionic... | 4a230216         | 1       |
| apomix/Phoenix Leipzig ... | Hydrophilic cream, non-ionic... | 12a250417        | 1       |
| Apomix/Phoenix Leipzig ... | Hydrophilic cream, non-ionic... | 12A250417        | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 3A090215         | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 19A300315        | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 23A100615        | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 47A281015        | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 5A080316         | 3       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 26A210616        | 1       |
| apomix/Phönix              | Hydrophilic cream, non-ionic... | 7A140217         | 1       |
| Apomix/Phönix              | Hydrophilic cream, non-ionic... | 18A020719        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 53A191113        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 36A140514        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 40A160614        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 48A081014        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 52A081214        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 19A300315        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 26A080715        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 29A110815        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 32A220915        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 47A281015        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 47A2801015       | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 37A071216        | 1       |
| Apomix/Sanacorp            | Hydrophilic cream, non-ionic... | 14A220517        | 1       |
| Beiersdorf/Kehr            | Hydrophilic cream, non-ionic... | 294407           | 1       |
| Bionorica/Kehr             | Hydrophilic cream, non-ionic... | 19000218         | 1       |
| Bobbastus/Noweda           | Hydrophilic cream, non-ionic... | 279660           | 1       |
| Bomastus                   | Hydrophilic cream, non-ionic... | 19005185         | 1       |
| Bomastus/Kehr              | Hydrophilic cream, non-ionic... | 20002898         | 1       |
| bomb/Alkun                 | Hydrophilic cream, non-ionic... | 310520           | 1       |
| bomb/alliance              | Hydrophilic cream, non-ionic... | 307525           | 1       |
| Bomb/Phoenix               | Hydrophilic cream, non-ionic... | 18005882         | 2       |
| bomb/phönix                | Hydrophilic cream, non-ionic... | 302691           | 1       |
| Bombast./Phönix            | Hydrophilic cream, non-ionic... | 18005880         | 1       |
| Bombastis/Gehe/18.10.19    | Hydrophilic cream, non-ionic... | 19003825         | 1       |
| Bombastu/Alliance Healt... | Hydrophilic cream, non-ionic... | 309908           | 1       |

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| Supplier        | Substance                       | Batch    | Spectra |
|-----------------|---------------------------------|----------|---------|
| Bombastu/Noweda | Hydrophilic cream, non-ionic... | 18001334 | 1       |
| Bombastu/Noweda | Hydrophilic cream, non-ionic... | 18004212 | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 265335   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 267061   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 267185   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 268354   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 273126   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 271521   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 96914    | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 273130   | 4       |
| Bombastus       | Hydrophilic cream, non-ionic... | 269712   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 273132   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274223   | 5       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274217   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 268347   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274211   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 276252   | 5       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274102   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274216   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 277871   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 271520   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 277637   | 7       |
| Bombastus       | Hydrophilic cream, non-ionic... | 276725   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 278027   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 277874   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 279655   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 278028   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 282212   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 282216   | 8       |
| Bombastus       | Hydrophilic cream, non-ionic... | 282213   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 281737   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 283637   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 282215   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 284899   | 6       |
| Bombastus       | Hydrophilic cream, non-ionic... | 279660   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 286326   | 7       |
| Bombastus       | Hydrophilic cream, non-ionic... | 287711   | 9       |
| Bombastus       | Hydrophilic cream, non-ionic... | 284897   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 286329   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 279653   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 274214   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 286325   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 287763   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 288796   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 287761   | 4       |
| Bombastus       | Hydrophilic cream, non-ionic... | 291388   | 9       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292452   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292809   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292806   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292739   | 2       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292736   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292814   | 8       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292738   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292970   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292812   | 3       |
| Bombastus       | Hydrophilic cream, non-ionic... | 292811   | 5       |
| Bombastus       | Hydrophilic cream, non-ionic... | 294407   | 5       |
| Bombastus       | Hydrophilic cream, non-ionic... | 294408   | 5       |
| Bombastus       | Hydrophilic cream, non-ionic... | 294340   | 1       |
| Bombastus       | Hydrophilic cream, non-ionic... | 295648   | 3       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Bombastus       | Hydrophilic cream, non-ionic... | 294313       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295657       | 11             |
| Bombastus       | Hydrophilic cream, non-ionic... | 294305       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295650       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295644       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297298       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297299       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297309       | 17             |
| Bombastus       | Hydrophilic cream, non-ionic... | 297303       | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295651       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297302       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297310       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297372       | 8              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297374       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 298978       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 300766       | 11             |
| Bombastus       | Hydrophilic cream, non-ionic... | 300763       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 297300       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 301627       | 14             |
| Bombastus       | Hydrophilic cream, non-ionic... | 29739        | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295591       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302691       | 11             |
| Bombastus       | Hydrophilic cream, non-ionic... | 300758       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 301624       | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 30162        | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302690       | 8              |
| Bombastus       | Hydrophilic cream, non-ionic... | 229352       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302686       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 301625       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 304776       | 7              |
| Bombastus       | Hydrophilic cream, non-ionic... | 303764       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 60089511     | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 105019       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 2293552      | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 306128       | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 306129       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 309902       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 307523       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 307528       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 310515       | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 310518       | 8              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17000742     | 9              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17000741     | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17000740     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18001330     | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18003131     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18001333     | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18002064     | 34             |
| Bombastus       | Hydrophilic cream, non-ionic... | 18004212     | 13             |
| Bombastus       | Hydrophilic cream, non-ionic... | 18004211     | 7              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18004203     | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19002034     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19003825     | 27             |
| Bombastus       | Hydrophilic cream, non-ionic... | 19003824     | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19002035     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19002033     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19005184     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19005183     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20001015     | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19006522     | 1              |

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| Supplier  | Substance                       | Batch    | Spectra |
|-----------|---------------------------------|----------|---------|
| Bombastus | Hydrophilic cream, non-ionic... | 1906521  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001009 | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 140568   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001008 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003882 | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 18002060 | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 295652   | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 19002038 | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 19005187 | 8       |
| Bombastus | Hydrophilic cream, non-ionic... | 292810   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 306126   | 9       |
| Bombastus | Hydrophilic cream, non-ionic... | 307527   | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 310517   | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 306130   | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 295654   | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 297304   | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 304778   | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 297371   | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 295653   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 310519   | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000746 | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 18002061 | 10      |
| Bombastus | Hydrophilic cream, non-ionic... | 18002062 | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 18004208 | 10      |
| Bombastus | Hydrophilic cream, non-ionic... | 18005876 | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 1900218  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001907 | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 19002041 | 28      |
| Bombastus | Hydrophilic cream, non-ionic... | 291387   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 276593   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 292737   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 292740   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 294390   | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 298979   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 306123   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 310514   | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 19005189 | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 278025   | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 18001327 | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005875 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 286323   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 289942   | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 292804   | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 281774   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 19000222 | 23      |
| Bombastus | Hydrophilic cream, non-ionic... | 276595   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 300756   | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 310513   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18259501 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 277878   | 9       |
| Bombastus | Hydrophilic cream, non-ionic... | 280993   | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 304773   | 10      |
| Bombastus | Hydrophilic cream, non-ionic... | 272472   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 276597   | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 274213   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 99320    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 307531   | 23      |
| Bombastus | Hydrophilic cream, non-ionic... | 19002039 | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 20002896 | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 283639   | 1       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Bombastus       | Hydrophilic cream, non-ionic... | 286328       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 284898       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19002040     | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 277877       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 287710       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 160824UEASR  | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 306124       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 307524       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18005880     | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 283694       | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 300764       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18005878     | 9              |
| Bombastus       | Hydrophilic cream, non-ionic... | 283634       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 294311       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 295649       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17000745     | 13             |
| Bombastus       | Hydrophilic cream, non-ionic... | 298981       | 9              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19005192     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 274219       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 278026       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 280987       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 283692       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 286330       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 287716       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 2886797      | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 291385       | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19003820     | 12             |
| Bombastus       | Hydrophilic cream, non-ionic... | 271397       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 280986       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 283635       | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 289937       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20001906     | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 292808       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18004210     | 8              |
| Bombastus       | Hydrophilic cream, non-ionic... | 2003878      | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302764       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 298982       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 283695       | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 287717       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 289941       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 301626       | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20000806     | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 277881       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 82216        | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 284895       | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302687       | 6              |
| Bombastus       | Hydrophilic cream, non-ionic... | 181721       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 279656       | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17002160     | 4              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19002037     | 8              |
| Bombastus       | Hydrophilic cream, non-ionic... | 19006524     | 7              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20001011     | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 21001447     | 2              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18004207     | 5              |
| Bombastus       | Hydrophilic cream, non-ionic... | 302688       | 9              |
| Bombastus       | Hydrophilic cream, non-ionic... | 304779       | 3              |
| Bombastus       | Hydrophilic cream, non-ionic... | 17002159     | 7              |
| Bombastus       | Hydrophilic cream, non-ionic... | 18001328     | 9              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20002899     | 1              |
| Bombastus       | Hydrophilic cream, non-ionic... | 20003878     | 2              |

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| Supplier  | Substance                       | Batch     | Spectra |
|-----------|---------------------------------|-----------|---------|
| Bombastus | Hydrophilic cream, non-ionic... | 21001448  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005874  | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 294406    | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 288795    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 287762    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 291384    | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 292807    | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 297370    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 298983    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 304774    | 10      |
| Bombastus | Hydrophilic cream, non-ionic... | 2003876   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 277873    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 291382    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 291386    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 2x295649  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 3x297305  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 300764x2  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 301623    | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 309903    | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 309904    | 8       |
| Bombastus | Hydrophilic cream, non-ionic... | 19005186  | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 307529    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 1700750   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 273128    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 302685    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 18001331  | 9       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005877  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005881  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 19000221  | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 190002041 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 19003823  | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 19003821  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 19003822  | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 19005188  | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 90065     | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20002898  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003877  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003876  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 20005129  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 300762    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005882  | 30      |
| Bombastus | Hydrophilic cream, non-ionic... | 18002063  | 22      |
| Bombastus | Hydrophilic cream, non-ionic... | 19005487  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 284891    | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 1900222   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 289940    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 279658    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 300759    | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000749  | 15      |
| Bombastus | Hydrophilic cream, non-ionic... | 19000219  | 11      |
| Bombastus | Hydrophilic cream, non-ionic... | 19006523  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003884  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 21001450  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001010  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003879  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 279991    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 283636    | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 297911    | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 301621    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 302684    | 3       |

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| Supplier  | Substance                       | Batch     | Spectra |
|-----------|---------------------------------|-----------|---------|
| Bombastus | Hydrophilic cream, non-ionic... | 17000747  | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 19002036  | 5       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003424  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 20005132  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 278029    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 280984    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 297308    | 13      |
| Bombastus | Hydrophilic cream, non-ionic... | 300761    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 303735    | 11      |
| Bombastus | Hydrophilic cream, non-ionic... | 306127    | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 304771    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 307530    | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000743  | 14      |
| Bombastus | Hydrophilic cream, non-ionic... | 17000748  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 18002059  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 18005879  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 190241102 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 190441104 | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 19005190  | 8       |
| Bombastus | Hydrophilic cream, non-ionic... | 276599    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 287715    | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 289944    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 283693    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 295655    | 8       |
| Bombastus | Hydrophilic cream, non-ionic... | 295656    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 297373    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 302689    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 309908    | 23      |
| Bombastus | Hydrophilic cream, non-ionic... | 17000744  | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000737  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 1901327   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18001324  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 1900217   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18004523  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 2000190   | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000738  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 17000739  | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 17002158  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18001326  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18002057  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 18004204  | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 19000217  | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 271473    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 268349    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 276598    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 274222    | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 300035    | 4       |
| Bombastus | Hydrophilic cream, non-ionic... | 298984    | 3       |
| Bombastus | Hydrophilic cream, non-ionic... | 310520    | 19      |
| Bombastus | Hydrophilic cream, non-ionic... | 17000750  | 25      |
| Bombastus | Hydrophilic cream, non-ionic... | 18001329  | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 2A040118  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 19000220  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001016  | 9       |
| Bombastus | Hydrophilic cream, non-ionic... | 20001909  | 8       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003883  | 7       |
| Bombastus | Hydrophilic cream, non-ionic... | 20003874  | 1       |
| Bombastus | Hydrophilic cream, non-ionic... | 283638    | 2       |
| Bombastus | Hydrophilic cream, non-ionic... | 287713    | 6       |
| Bombastus | Hydrophilic cream, non-ionic... | 286838    | 3       |

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| Supplier           | Substance                       | Batch         | Spectra |
|--------------------|---------------------------------|---------------|---------|
| Bombastus          | Hydrophilic cream, non-ionic... | 19005193      | 16      |
| Bombastus          | Hydrophilic cream, non-ionic... | 20005131      | 2       |
| Bombastus          | Hydrophilic cream, non-ionic... | 309907        | 8       |
| Bombastus          | Hydrophilic cream, non-ionic... | 60089512      | 1       |
| Bombastus          | Hydrophilic cream, non-ionic... | 307526        | 5       |
| Bombastus          | Hydrophilic cream, non-ionic... | 288797        | 2       |
| Bombastus          | Hydrophilic cream, non-ionic... | 284896        | 2       |
| Bombastus          | Hydrophilic cream, non-ionic... | 287712        | 2       |
| Bombastus          | Hydrophilic cream, non-ionic... | 289943        | 4       |
| Bombastus          | Hydrophilic cream, non-ionic... | 20002900      | 9       |
| Bombastus          | Hydrophilic cream, non-ionic... | 304775        | 7       |
| Bombastus          | Hydrophilic cream, non-ionic... | 300765        | 2       |
| Bombastus/Phönix   | Hydrophilic cream, non-ionic... | 302689        | 1       |
| Bombostus / Noweda | Hydrophilic cream, non-ionic... | 295647        | 1       |
| Bombstus           | Hydrophilic cream, non-ionic... | 295654        | 1       |
| Bombstus/ Phoenix  | Hydrophilic cream, non-ionic... | 19005190      | 1       |
| Bombstus/ Phoenix  | Hydrophilic cream, non-ionic... | 20001009      | 1       |
| Bombstus/San       | Hydrophilic cream, non-ionic... | 306131        | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 16054101      | 6       |
| Caelo              | Hydrophilic cream, non-ionic... | 1622001       | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17113403      | 13      |
| Caelo              | Hydrophilic cream, non-ionic... | 1816801       | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 277877        | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 14063001      | 2       |
| Caelo              | Hydrophilic cream, non-ionic... | 14137002      | 5       |
| Caelo              | Hydrophilic cream, non-ionic... | 14221101      | 2       |
| Caelo              | Hydrophilic cream, non-ionic... | 14221102      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 289942        | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 14336001      | 2       |
| Caelo              | Hydrophilic cream, non-ionic... | 10A140414     | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 15325801      | 13      |
| Caelo              | Hydrophilic cream, non-ionic... | 2115E-03195NP | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 297309        | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 16017501      | 7       |
| Caelo              | Hydrophilic cream, non-ionic... | 300762        | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 16169501      | 4       |
| Caelo              | Hydrophilic cream, non-ionic... | 16222102      | 3       |
| Caelo              | Hydrophilic cream, non-ionic... | 16257902      | 7       |
| Caelo              | Hydrophilic cream, non-ionic... | 169222102     | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17009601      | 9       |
| Caelo              | Hydrophilic cream, non-ionic... | 17009701      | 10      |
| Caelo              | Hydrophilic cream, non-ionic... | 163210701     | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 16231701      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 171015015313  | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17168502      | 8       |
| Caelo              | Hydrophilic cream, non-ionic... | 129711-499    | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17168500      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 1794002       | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17313902      | 4       |
| Caelo              | Hydrophilic cream, non-ionic... | 38A241017     | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 22011801      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 23061812      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 18001334      | 2       |
| Caelo              | Hydrophilic cream, non-ionic... | 20A200618     | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 17002160      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 18175201      | 20      |
| Caelo              | Hydrophilic cream, non-ionic... | 18172501      | 1       |
| Caelo              | Hydrophilic cream, non-ionic... | 18218002      | 2       |
| Caelo              | Hydrophilic cream, non-ionic... | 18259502      | 25      |
| Caelo              | Hydrophilic cream, non-ionic... | 10A240418     | 1       |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Hydrophilic cream, non-ionic... | 18259501     | 18      |
| Caelo    | Hydrophilic cream, non-ionic... | 1825901      | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 180259502    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 19055601     | 18      |
| Caelo    | Hydrophilic cream, non-ionic... | 19176504     | 3       |
| Caelo    | Hydrophilic cream, non-ionic... | 19000222     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 20002461004  | 4       |
| Caelo    | Hydrophilic cream, non-ionic... | 18259504     | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 17144001     | 9       |
| Caelo    | Hydrophilic cream, non-ionic... | 36A140514    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 297374       | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 306128       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 309903       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 310515       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 18001332     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 18004207     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 20002423005  | 4       |
| Caelo    | Hydrophilic cream, non-ionic... | 27A130917    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 20002461001  | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 276596       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 17000745     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 18001330     | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 1805401      | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 292814       | 3       |
| Caelo    | Hydrophilic cream, non-ionic... | 18005877     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 280991       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 307531       | 3       |
| Caelo    | Hydrophilic cream, non-ionic... | 277878       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 18106903     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 15325702     | 4       |
| Caelo    | Hydrophilic cream, non-ionic... | 295649       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 16114201     | 13      |
| Caelo    | Hydrophilic cream, non-ionic... | 13k15-m09    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 20001015     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 15A200416    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 170909701    | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 1744001      | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 309906       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 181069015670 | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 294310       | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 18175301     | 12      |
| Caelo    | Hydrophilic cream, non-ionic... | 289944       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 19000219     | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 274223       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 283634       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 286327       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 15210303     | 6       |
| Caelo    | Hydrophilic cream, non-ionic... | 201015       | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 301627       | 4       |
| Caelo    | Hydrophilic cream, non-ionic... | 16321701     | 23      |
| Caelo    | Hydrophilic cream, non-ionic... | 309905       | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 17183901     | 11      |
| Caelo    | Hydrophilic cream, non-ionic... | 17212601     | 10      |
| Caelo    | Hydrophilic cream, non-ionic... | 17261001     | 10      |
| Caelo    | Hydrophilic cream, non-ionic... | 17261002     | 4       |
| Caelo    | Hydrophilic cream, non-ionic... | 17000749     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 18050304     | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 1A020119     | 2       |
| Caelo    | Hydrophilic cream, non-ionic... | 1700971      | 1       |
| Caelo    | Hydrophilic cream, non-ionic... | 15325802     | 1       |

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| Supplier             | Substance                       | Batch              | Spectra |
|----------------------|---------------------------------|--------------------|---------|
| Caelo                | Hydrophilic cream, non-ionic... | 170427NHCSR        | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 17144003           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 1212601            | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 180306UEN/17313902 | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 1700750            | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 18050501           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 18067801           | 48      |
| Caelo                | Hydrophilic cream, non-ionic... | 18004212           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 17212602           | 8       |
| Caelo                | Hydrophilic cream, non-ionic... | 18106801           | 6       |
| Caelo                | Hydrophilic cream, non-ionic... | 11A250418          | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 18106901           | 10      |
| Caelo                | Hydrophilic cream, non-ionic... | 18002064           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 3A030119           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 19176501           | 14      |
| Caelo                | Hydrophilic cream, non-ionic... | 18001331           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 17175201           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 15037703           | 8       |
| Caelo                | Hydrophilic cream, non-ionic... | 291388             | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 37A300915          | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 16222001           | 15      |
| Caelo                | Hydrophilic cream, non-ionic... | 18050303           | 19      |
| Caelo                | Hydrophilic cream, non-ionic... | 19055602           | 10      |
| Caelo                | Hydrophilic cream, non-ionic... | 19176502           | 10      |
| Caelo                | Hydrophilic cream, non-ionic... | 19055603           | 2       |
| Caelo                | Hydrophilic cream, non-ionic... | 20003016002        | 2       |
| Caelo                | Hydrophilic cream, non-ionic... | 19177104           | 7       |
| Caelo                | Hydrophilic cream, non-ionic... | 10B280317          | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 1700701            | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 6A130318           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 19000220           | 2       |
| Caelo                | Hydrophilic cream, non-ionic... | 18005874           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 31A301019          | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 2070219176501      | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 18004208           | 1       |
| Caelo                | Hydrophilic cream, non-ionic... | 18218001           | 14      |
| Caeol/Noweda         | Hydrophilic cream, non-ionic... | 18050303           | 1       |
| Caeolo/Phoenix       | Hydrophilic cream, non-ionic... | 18175201           | 1       |
| Caesar & Loretz      | Hydrophilic cream, non-ionic... | 17113403           | 1       |
| Caesar & Loretz      | Hydrophilic cream, non-ionic... | 17261002           | 1       |
| Caesar & Loretz      | Hydrophilic cream, non-ionic... | 17294003           | 1       |
| Caesar & Loretz      | Hydrophilic cream, non-ionic... | 18050501           | 1       |
| Caesar & Loretz      | Hydrophilic cream, non-ionic... | 18218002           | 2       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 17000750           | 1       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 18259502           | 2       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 18259501           | 4       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 18302501           | 5       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19055601           | 7       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19055602           | 7       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19093002           | 2       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19176504           | 2       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19176501           | 4       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19176502           | 7       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19240002           | 4       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19003824           | 1       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 19240001           | 5       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 20000522001        | 3       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 20000027002        | 1       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 20002461003        | 1       |
| Caesar & Loretz GmbH | Hydrophilic cream, non-ionic... | 20002461004        | 1       |

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| <b>Supplier</b>            | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Hydrophilic cream, non-ionic... | 20002423004  | 4              |
| Caesar & Loretz GmbH       | Hydrophilic cream, non-ionic... | 20003016002  | 1              |
| Caesar & Loretz GmbH       | Hydrophilic cream, non-ionic... | 20003746004  | 1              |
| Caesar & Loretz GmbH       | Hydrophilic cream, non-ionic... | 20003955002  | 2              |
| Caesar & Loretz GmbH Hi... | Hydrophilic cream, non-ionic... | 282216       | 1              |
| Caesar & Loretz/Noweda     | Hydrophilic cream, non-ionic... | 295648       | 1              |
| Caeser und Loretz GmbH     | Hydrophilic cream, non-ionic... | 18259502     | 1              |
| Caleo/ Noweda              | Hydrophilic cream, non-ionic... | 19055602     | 1              |
| Cealo/GEHE                 | Hydrophilic cream, non-ionic... | 181775301    | 1              |
| Ebert-Jacobi               | Hydrophilic cream, non-ionic... | 309904       | 1              |
| Eigene                     | Hydrophilic cream, non-ionic... | R12/0313     | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 292737       | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 298983       | 3              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 17000743     | 3              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 310514       | 3              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 25A120712    | 3              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 291388       | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 19002041     | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 18002063     | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 306131       | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 17000742     | 1              |
| EUro/AHD                   | Hydrophilic cream, non-ionic... | 277577       | 1              |
| EUro/AHD                   | Hydrophilic cream, non-ionic... | 34A240713    | 1              |
| Euro OTC                   | Hydrophilic cream, non-ionic... | 18050303     | 1              |
| Fagon/Noweda               | Hydrophilic cream, non-ionic... | 16A020518    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13D05-M07    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 12A180416    | 3              |
| Fagon                      | Hydrophilic cream, non-ionic... | 17212603     | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 24A110712    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13A30-M01    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13D18-M06    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 5A230113     | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 19A280313    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 412062-3-P   | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-M02    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13A250313    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-Mo2    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-Mo9    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-M09    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-M04    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14D28-M05    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14E07-M10    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14E14-M06    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 45A201216    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 34A290915    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 40a081015    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 10A130416    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13A180416    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 297372       | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 14A190416    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 11A180416    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 16A210416    | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 300765       | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 38A121216    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 17009601     | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 6061701      | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 4A170117     | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 27A130917    | 2              |
| Fagon                      | Hydrophilic cream, non-ionic... | 18001329     | 1              |
| Fagon                      | Hydrophilic cream, non-ionic... | 13A260418    | 2              |

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| Supplier | Substance                       | Batch       | Spectra |
|----------|---------------------------------|-------------|---------|
| Fagron   | Hydrophilic cream, non-ionic... | 10A240418   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 14A300418   | 3       |
| Fagron   | Hydrophilic cream, non-ionic... | 14A300148   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 21A060618   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 6A040319    | 4       |
| Fagron   | Hydrophilic cream, non-ionic... | 14a300418   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 3A03119     | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 6A40319     | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 22A050819   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 5A110320    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 4A100320    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 3A100320    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 21A010920   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 28A02120    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 14A110619   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13D05-M12   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 51A121113   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 46A061113   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13K12-M04   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13K20-M09   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 1017Q-03195 | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 8A050319    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13B06-M08   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13D05-M08   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 33A180912   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 12J04-M06   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13D18-M09   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 55A181213   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 43A191216   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13D05M08    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 2A140114    | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 48A071113   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 3A170117    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 28A130917   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 2A010321    | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 14D28-M03   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 17212601    | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 24A110917   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 40A131216   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 12A020315   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13K20-M10   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 14D28-M01   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 14d28-m01   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 16A020518   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 28A281019   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 11A040520   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 18A220720   | 3       |
| Fagron   | Hydrophilic cream, non-ionic... | 23A060819   | 4       |
| Fagron   | Hydrophilic cream, non-ionic... | 30A291019   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 30A041120   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 13D18-M10   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 13K12-M05   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 29A140917   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 14E07       | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 15A200416   | 3       |
| Fagron   | Hydrophilic cream, non-ionic... | 37A121216   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 22A050917   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 25A120917   | 1       |
| Fagron   | Hydrophilic cream, non-ionic... | 11A250418   | 2       |
| Fagron   | Hydrophilic cream, non-ionic... | 3A030119    | 2       |

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| Supplier       | Substance                       | Batch       | Spectra |
|----------------|---------------------------------|-------------|---------|
| Fagron         | Hydrophilic cream, non-ionic... | 12/26-M06   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 141114a     | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 3713U-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 15C04-M05   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 5214I-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 4315A-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 15A-200416  | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 5016I-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 39131216    | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 41A141216   | 3       |
| Fagron         | Hydrophilic cream, non-ionic... | 26A120917   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 2A020119    | 3       |
| Fagron         | Hydrophilic cream, non-ionic... | 3018E-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 29A291019   | 3       |
| Fagron         | Hydrophilic cream, non-ionic... | 2119I-03195 | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 13D05-M09   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 13K15-M07   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 16A120619   | 2       |
| Fagron         | Hydrophilic cream, non-ionic... | 24A060819   | 3       |
| Fagron         | Hydrophilic cream, non-ionic... | 19A220720   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 44A191216   | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 7A040319    | 1       |
| Fagron         | Hydrophilic cream, non-ionic... | 13K20-M11   | 1       |
| Fargon/Phoenix | Hydrophilic cream, non-ionic... | 13D18-M06   | 1       |
| Faron/Sanacorp | Hydrophilic cream, non-ionic... | 7A040319    | 1       |
| Fiebig         | Hydrophilic cream, non-ionic... | 18259501    | 2       |
| Fiebig         | Hydrophilic cream, non-ionic... | 19002041    | 1       |
| Fiebig         | Hydrophilic cream, non-ionic... | 19093001    | 1       |
| Bombastus      | Hydrophilic cream, non-ionic... | 306131      | 21      |
| Frago/Noweda   | Hydrophilic cream, non-ionic... | 46A201216   | 1       |
| Fragron        | Hydrophilic cream, non-ionic... | 9A240418    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 114761      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 120211      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 121431      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 122131      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 271521      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 274215      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 274216      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 125011      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 131451      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 132331      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 133121      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 280988      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 276599      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 280989      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 280992      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 282214      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 283637      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 288882      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 295653      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 306131      | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 18B060917   | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 17000745    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 17000737    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 17000746    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 18001333    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 18004208    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 18004209    | 1       |
| Gehe           | Hydrophilic cream, non-ionic... | 19003820    | 2       |
| Gehe           | Hydrophilic cream, non-ionic... | 19000218    | 3       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Gehe                       | Hydrophilic cream, non-ionic... | 18A020719 | 1       |
| GEHE                       | Hydrophilic cream, non-ionic... | 302685    | 1       |
| GEHE                       | Hydrophilic cream, non-ionic... | 306124    | 1       |
| GEHE                       | Hydrophilic cream, non-ionic... | 307521    | 1       |
| GEHE                       | Hydrophilic cream, non-ionic... | 17000738  | 1       |
| GEHE                       | Hydrophilic cream, non-ionic... | 17000749  | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 19003821  | 1       |
| Gehe 02.09.14              | Hydrophilic cream, non-ionic... | 287709    | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 18002059  | 2       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 19000220  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 19000221  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 18004209  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 18002060  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 19003821  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 19005187  | 1       |
| Gehe amax                  | Hydrophilic cream, non-ionic... | 20001908  | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 267186    | 1       |
| Gehe/Apomix                | Hydrophilic cream, non-ionic... | 2A140114  | 2       |
| Gehe/Apomix                | Hydrophilic cream, non-ionic... | 18A190315 | 1       |
| Gehe/Apomix                | Hydrophilic cream, non-ionic... | 12A250417 | 1       |
| Gehe/Apomix                | Hydrophilic cream, non-ionic... | 18A220518 | 1       |
| Gehe/Apomix                | Hydrophilic cream, non-ionic... | 4A030119  | 1       |
| GEHE/Apomix                | Hydrophilic cream, non-ionic... | 27A220715 | 2       |
| GEHE/Apomix                | Hydrophilic cream, non-ionic... | 18A220518 | 1       |
| GEHE/Apomix                | Hydrophilic cream, non-ionic... | 20A220719 | 2       |
| Gehe/apomix/09.10.14       | Hydrophilic cream, non-ionic... | 7A020414  | 1       |
| Gehe/Apomix/11.11.14       | Hydrophilic cream, non-ionic... | 4A250214  | 1       |
| Gehe/apomix/11.12.14       | Hydrophilic cream, non-ionic... | 48A081014 | 1       |
| GEHE/apomix/22.05.2012     | Hydrophilic cream, non-ionic... | 3A130212  | 1       |
| GEHE/Apomix/25.03.2014     | Hydrophilic cream, non-ionic... | 1A140114  | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 279661    | 9       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 304777    | 4       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 18004209  | 9       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 19000218  | 8       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 19006525  | 19      |
| Gehe/Leyh                  | Hydrophilic cream, non-ionic... | 150341    | 1       |
| Hedinger                   | Hydrophilic cream, non-ionic... | 286326    | 1       |
| Hedinger                   | Hydrophilic cream, non-ionic... | 17000742  | 1       |
| Henry Lamotte              | Hydrophilic cream, non-ionic... | 19000217  | 1       |
| Herbasinica                | Hydrophilic cream, non-ionic... | 284899    | 1       |
| Holdermann                 | Hydrophilic cream, non-ionic... | 287712    | 1       |
| Ichthyol/Fiebig            | Hydrophilic cream, non-ionic... | 17294002  | 1       |
| Ichthyol-Gesellschaft C... | Hydrophilic cream, non-ionic... | 18002064  | 1       |
| Jenne                      | Hydrophilic cream, non-ionic... | 19003821  | 1       |
| Kehr                       | Hydrophilic cream, non-ionic... | 309908    | 1       |
| Kehr                       | Hydrophilic cream, non-ionic... | 309904    | 1       |
| Kehr                       | Hydrophilic cream, non-ionic... | 18106901  | 1       |
| Kehr                       | Hydrophilic cream, non-ionic... | 18175201  | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 170000744 | 1       |
| Kehr/PKH Halle             | Hydrophilic cream, non-ionic... | 29B010818 | 1       |
| Kehr/PKH Halle             | Hydrophilic cream, non-ionic... | 33B110918 | 2       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 134841    | 1       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 153041    | 2       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 15521     | 1       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 162241    | 1       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 172831    | 1       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 174221    | 1       |
| Leyh Pharma                | Hydrophilic cream, non-ionic... | 180611    | 4       |
| Leyh Pharma / Alliance ... | Hydrophilic cream, non-ionic... | 155221    | 1       |
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 142311    | 1       |

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| Supplier                   | Substance                       | Batch    | Spectra |
|----------------------------|---------------------------------|----------|---------|
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 151711   | 1       |
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 162241   | 1       |
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 164441   | 1       |
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 184131   | 1       |
| Leyh Pharma / Phönix       | Hydrophilic cream, non-ionic... | 191021   | 1       |
| LEYH PHARMA / Phönix Le... | Hydrophilic cream, non-ionic... | 153621   | 1       |
| LEYH PHARMA / Phönix Le... | Hydrophilic cream, non-ionic... | 155221   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 172831   | 4       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 174221   | 4       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 174911   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 180611   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 181721   | 5       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 182731   | 6       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 191021   | 4       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 193021   | 4       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 193721   | 6       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 200741   | 2       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 206741   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 202411   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 180611   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 181721   | 1       |
| Leyh Pharma GmbH           | Hydrophilic cream, non-ionic... | 184131   | 6       |
| Leyh Pharma GmbH / Phönix  | Hydrophilic cream, non-ionic... | 193021   | 1       |
| Leyh Pharma GmbH / Phönix  | Hydrophilic cream, non-ionic... | 193721   | 1       |
| Leyh Pharma GmbH Brotte... | Hydrophilic cream, non-ionic... | 191021   | 2       |
| Leyh Pharma GmbH Brotte... | Hydrophilic cream, non-ionic... | 193021   | 1       |
| Leyh Pharma GmbH/Anzag     | Hydrophilic cream, non-ionic... | 133121   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 133911   | 2       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 142311   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 144021   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 143011   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 150341   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 150751   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 155221   | 1       |
| Leyh Pharma/ Phönix        | Hydrophilic cream, non-ionic... | 160651   | 1       |
| Leyh Pharma/Anzag          | Hydrophilic cream, non-ionic... | 160651   | 1       |
| Leyh Pharma/Gehe           | Hydrophilic cream, non-ionic... | 140551   | 1       |
| Leyh Pharma/Kehr           | Hydrophilic cream, non-ionic... | 16017501 | 1       |
| Leyh Pharma/Noweda         | Hydrophilic cream, non-ionic... | 162241   | 1       |
| Leyh Pharma/Noweda         | Hydrophilic cream, non-ionic... | 163611   | 1       |
| Leyh Pharma/Noweda         | Hydrophilic cream, non-ionic... | 170951   | 1       |
| Leyh Pharma/Noweda         | Hydrophilic cream, non-ionic... | 172831   | 1       |
| Leyh Pharma/Noweda         | Hydrophilic cream, non-ionic... | 202411   | 1       |
| Leyh Pharma/Phoenix        | Hydrophilic cream, non-ionic... | 172051   | 1       |
| Leyh Pharma/Phoenix        | Hydrophilic cream, non-ionic... | 180611   | 1       |
| Leyh Pharma/Phoenix        | Hydrophilic cream, non-ionic... | 181721   | 1       |
| Leyh Pharma/Phoenix        | Hydrophilic cream, non-ionic... | 191021   | 1       |
| Leyh Pharma/Phönix         | Hydrophilic cream, non-ionic... | 143011   | 1       |
| Leyh Pharma/Phönix         | Hydrophilic cream, non-ionic... | 174221   | 1       |
| Leyh Pharma/Sanacorp       | Hydrophilic cream, non-ionic... | 172051   | 1       |
| Leyh Pharma/Sanacorp       | Hydrophilic cream, non-ionic... | 181721   | 1       |
| Leyh Pharma/Sanacorp       | Hydrophilic cream, non-ionic... | 191021   | 1       |
| Leyh Pharma/Sanacorp       | Hydrophilic cream, non-ionic... | 193021   | 1       |
| Leyh Pharma GmbH / Phönix  | Hydrophilic cream, non-ionic... | 180611   | 1       |
| Leyh/Gehe                  | Hydrophilic cream, non-ionic... | 143011   | 2       |
| Midas                      | Hydrophilic cream, non-ionic... | 17000745 | 1       |
| Nachprüfung                | Hydrophilic cream, non-ionic... | 284899   | 1       |
| noweda                     | Hydrophilic cream, non-ionic... | 17261002 | 1       |
| noweda                     | Hydrophilic cream, non-ionic... | 19055601 | 1       |
| Noweda                     | Hydrophilic cream, non-ionic... | 291385   | 1       |

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| Supplier                | Substance                       | Batch     | Spectra |
|-------------------------|---------------------------------|-----------|---------|
| Noweda                  | Hydrophilic cream, non-ionic... | 292805    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 294408    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 294390    | 2       |
| Noweda                  | Hydrophilic cream, non-ionic... | 294311    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 90714     | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 297309    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 295648    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 300760    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 16321701  | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 309908    | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 17294002  | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 17313902  | 2       |
| Noweda                  | Hydrophilic cream, non-ionic... | 18002061  | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 18001333  | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 21A050819 | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 25A070819 | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 20001910  | 14      |
| noweda/anzag            | Hydrophilic cream, non-ionic... | 19176502  | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 8A230418  | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 17A030518 | 2       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 24A270618 | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 4A030119  | 2       |
| Bombastus               | Hydrophilic cream, non-ionic... | 30683     | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 302683    | 3       |
| Bombastus               | Hydrophilic cream, non-ionic... | 306125    | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 17002156  | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 18004206  | 3       |
| Caelo                   | Hydrophilic cream, non-ionic... | 15365601  | 3       |
| Fagron                  | Hydrophilic cream, non-ionic... | 13K15-M09 | 1       |
| Fagron                  | Hydrophilic cream, non-ionic... | 14D28-M05 | 2       |
| Fagron                  | Hydrophilic cream, non-ionic... | 18002057  | 1       |
| Pala                    | Hydrophilic cream, non-ionic... | 306128    | 1       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 80611     | 1       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 170412    | 2       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 220713    | 3       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 90714     | 6       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 201015    | 1       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 240217    | 10      |
| Pharmachem              | Hydrophilic cream, non-ionic... | 190918    | 3       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 2608101   | 1       |
| Pharmachem / Anzag      | Hydrophilic cream, non-ionic... | 282212    | 2       |
| Pharmachem / Gehe       | Hydrophilic cream, non-ionic... | 90714     | 1       |
| Pharmachem / Phönix     | Hydrophilic cream, non-ionic... | 220713    | 1       |
| Pharmachem GmbH         | Hydrophilic cream, non-ionic... | 50912     | 1       |
| Pharmachem GmbH         | Hydrophilic cream, non-ionic... | 220713    | 2       |
| Pharmachem GmbH & Co.KG | Hydrophilic cream, non-ionic... | 201015    | 5       |
| Pharmachem GmbH & Co.KG | Hydrophilic cream, non-ionic... | 240217    | 8       |
| Pharmachem GmbH & Co.KG | Hydrophilic cream, non-ionic... | 190918    | 1       |
| Pharmachem GmbH&Co.KG   | Hydrophilic cream, non-ionic... | 90714     | 1       |
| pharmachem./ Noweda     | Hydrophilic cream, non-ionic... | 190918    | 1       |
| pharmachem./ Noweda     | Hydrophilic cream, non-ionic... | 290519    | 1       |
| Pharmachem/Noweda       | Hydrophilic cream, non-ionic... | 240217    | 1       |
| Pharmachem/Phoenix      | Hydrophilic cream, non-ionic... | 50912     | 4       |
| Pharmachem/Phoenix      | Hydrophilic cream, non-ionic... | 90714     | 1       |
| Pharmachem/Phoenix      | Hydrophilic cream, non-ionic... | 201015    | 3       |
| Pharmachem/Phönix       | Hydrophilic cream, non-ionic... | 170412    | 1       |
| Pharmachem/Phönix       | Hydrophilic cream, non-ionic... | 220713    | 12      |
| Pharmachen GmbH         | Hydrophilic cream, non-ionic... | 201015    | 7       |
| Phoenix                 | Hydrophilic cream, non-ionic... | 300035    | 1       |
| Phoenix                 | Hydrophilic cream, non-ionic... | 3078      | 1       |

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| <b>Supplier</b>    | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|--------------------|---------------------------------|--------------|----------------|
| Phoenix            | Hydrophilic cream, non-ionic... | 3103         | 1              |
| Phoenix            | Hydrophilic cream, non-ionic... | 18005881     | 1              |
| Phoenix            | Hydrophilic cream, non-ionic... | 200041301    | 1              |
| Phoenix            | Hydrophilic cream, non-ionic... | 200461405    | 1              |
| Bombastus          | Hydrophilic cream, non-ionic... | 284893       | 2              |
| Fagron             | Hydrophilic cream, non-ionic... | 17261002     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 124511       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 278025       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 132331       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 304778       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 306128       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 17009701     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 26A120917    | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 309906       | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 17000749     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 18002064     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 18175301     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 18002062     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 18004212     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 19002041     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 18005882     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 19005192     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 19006525     | 1              |
| Phönix             | Hydrophilic cream, non-ionic... | 20003878     | 1              |
| Bombastus          | Hydrophilic cream, non-ionic... | 309906       | 2              |
| Bombastus          | Hydrophilic cream, non-ionic... | 119400       | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 122131       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 122841       | 4              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 123711       | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 124511       | 5              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 125011       | 3              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 130651       | 3              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 13065        | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 131451       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 132331       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 133121       | 3              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 13227701     | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 133911       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 134841       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 140551       | 4              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 141521       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 142311       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 143011       | 3              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 144811       | 5              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 150341       | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 150751       | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 151711       | 2              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 153041       | 4              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 153621       | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 25A270618    | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 18005882     | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 19002041     | 1              |
| Phönix Gotha       | Hydrophilic cream, non-ionic... | 19005193     | 1              |
| Caelo              | Hydrophilic cream, non-ionic... | 17313903     | 4              |
| Caelo              | Hydrophilic cream, non-ionic... | 17002159     | 1              |
| Caelo              | Hydrophilic cream, non-ionic... | 190331203    | 1              |
| Euro OTC           | Hydrophilic cream, non-ionic... | 19000218     | 1              |
| Phönix/Leyh Pharma | Hydrophilic cream, non-ionic... | 142311       | 1              |
| Phönix/Leyh Pharma | Hydrophilic cream, non-ionic... | 182731       | 1              |
| Phönix/Leyh Pharma | Hydrophilic cream, non-ionic... | 191021       | 2              |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Phönix20005128             | Hydrophilic cream, non-ionic... | 20005128  | 1       |
| PKH                        | Hydrophilic cream, non-ionic... | 51A301215 | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 21A110515 | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 36A261016 | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 18A100717 | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 12A160419 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 4A250118  | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 17A030518 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 29B010818 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 4A030119  | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 12A160419 | 2       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 20A220719 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 11A270319 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 25A070819 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 33A121119 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 1A020120  | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 2A100220  | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 14A050520 | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 15A090620 | 1       |
| PKH Halle/ Alliance H.     | Hydrophilic cream, non-ionic... | 33a240713 | 1       |
| PKH Halle/ Alliance H.     | Hydrophilic cream, non-ionic... | 33A240713 | 2       |
| PKH Halle/ Alliance Hea... | Hydrophilic cream, non-ionic... | 34B091018 | 2       |
| PKH Halle/ Alliance Hea... | Hydrophilic cream, non-ionic... | 12A160419 | 2       |
| PKH Halle/Kehr             | Hydrophilic cream, non-ionic... | 35B101218 | 1       |
| PKH Halle/Kehr             | Hydrophilic cream, non-ionic... | 12A160419 | 1       |
| PKH Halle/Kehr             | Hydrophilic cream, non-ionic... | 20C310820 | 1       |
| PKH Halle/Noweda           | Hydrophilic cream, non-ionic... | 20A280415 | 1       |
| PKH Halle/Noweda           | Hydrophilic cream, non-ionic... | 7A110320  | 2       |
| PKH Halle/Noweda           | Hydrophilic cream, non-ionic... | 20B310820 | 1       |
| PKH Halle/Sanacorp         | Hydrophilic cream, non-ionic... | 8A030414  | 1       |
| PKH/Fargon/Jenne           | Hydrophilic cream, non-ionic... | 23A060819 | 1       |
| PKH/Noweda                 | Hydrophilic cream, non-ionic... | 27A220715 | 1       |
| Raben-Apotheke Mildenau    | Hydrophilic cream, non-ionic... | 37A270514 | 1       |
| Reichelt                   | Hydrophilic cream, non-ionic... | 229352    | 1       |
| Sana                       | Hydrophilic cream, non-ionic... | 19003001  | 1       |
| Sana/ Bomb.                | Hydrophilic cream, non-ionic... | 20001015  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 220713    | 4       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 15039001  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 15325702  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 17261001  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 9A240418  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 19006525  | 1       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 20001016  | 1       |
| SANACORP                   | Hydrophilic cream, non-ionic... | 19055602  | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 50A111113 | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 20001908  | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 269711    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 269716    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 269715    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 271522    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 273134    | 1       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 289326    | 3       |
| Bombastus                  | Hydrophilic cream, non-ionic... | 288798    | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 22A050917 | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 17294002  | 7       |
| Sanacorp/Leyh Pharma       | Hydrophilic cream, non-ionic... | 193721    | 1       |
| SanacorpWE:01.12.2016 ...  | Hydrophilic cream, non-ionic... | 16222001  | 1       |
| Tsiripidou                 | Hydrophilic cream, non-ionic... | 17000748  | 1       |
| AMH Niemann GmbH & Co. ... | Hydrophilic cream, non-ionic... | 3B260219  | 1       |
| AMH Niemann GmbH & Co. ... | Hydrophilic cream, non-ionic... | 10B010719 | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| AMH Niemann GmbH& Co. K... | Hydrophilic cream, non-ionic... | 12B030613 | 1       |
| AMH Niemann GmbH&Co KG     | Hydrophilic cream, non-ionic... | 2B130114  | 1       |
| AMH-NiemannGmbH&CO,15.0... | Hydrophilic cream, non-ionic... | 15B010817 | 1       |
| Anzag/AMH/16.05.2012       | Hydrophilic cream, non-ionic... | 14B020212 | 1       |
| apo                        | Hydrophilic cream, non-ionic... | 4807013   | 1       |
| apo                        | Hydrophilic cream, non-ionic... | 21B171218 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 22B060812 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 2B140113  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 10B060514 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 3B020215  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 13B080615 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 24B241115 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 10B190516 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 9B020516  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 13B280616 | 2       |
| apomix                     | Hydrophilic cream, non-ionic... | 21B14116  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 18B060917 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 16B060917 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 23B291117 | 2       |
| apomix                     | Hydrophilic cream, non-ionic... | 22B201117 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 148200818 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 17B011018 | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 1B070120  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 18B190612 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 24B180912 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 19B260612 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 27B221012 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 4B070213  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 30B261112 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 26B151012 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 2B140113  | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 28B221012 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 33B271212 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 7B020413  | 3       |
| Apomix                     | Hydrophilic cream, non-ionic... | 5B250213  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 6B110313  | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 8B150413  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 9B300413  | 3       |
| Apomix                     | Hydrophilic cream, non-ionic... | 10B220513 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 21B141013 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 13B180613 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 16B290713 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 19B100913 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 238141113 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 6B100314  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 8B070414  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 12B210514 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 17B120814 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 6B020315  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 11B110515 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 1B120115  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 13B080615 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 18B240815 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 20B210915 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 1B070116  | 3       |
| Apomix                     | Hydrophilic cream, non-ionic... | 25B081215 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 4B170216  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 9B020516  | 3       |
| Apomix                     | Hydrophilic cream, non-ionic... | 11b300516 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 10B190516 | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix                     | Hydrophilic cream, non-ionic... | 5B01816   | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 18B270916 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 16B290816 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 22B281116 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 24B121216 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 2B300117  | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 4B210217  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 7B030417  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 15B010817 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 9B020517  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 18B060917 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 13B280617 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 22B201117 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 23B291117 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 24B271217 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 21B08117  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 1B090118  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 5B280318  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 12B100718 | 2       |
| Apomix                     | Hydrophilic cream, non-ionic... | 17B011018 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 5B020419  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 9B010719  | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 21B151220 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 20B231120 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 14B180820 | 1       |
| Apomix                     | Hydrophilic cream, non-ionic... | 19B031120 | 1       |
| Apomix (AMH)               | Hydrophilic cream, non-ionic... | 9B010719  | 1       |
| Apomix / 11                | Hydrophilic cream, non-ionic... | 10B060514 | 1       |
| Apomix / Alliance Haelt... | Hydrophilic cream, non-ionic... | 22B201117 | 2       |
| Apomix / Gehe              | Hydrophilic cream, non-ionic... | 13B310718 | 3       |
| Apomix / Gehe              | Hydrophilic cream, non-ionic... | 14B200818 | 1       |
| Apomix / Gehe              | Hydrophilic cream, non-ionic... | 5B020419  | 2       |
| Apomix / Gehe              | Hydrophilic cream, non-ionic... | 12A160419 | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 3B020215  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 9B200415  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 23B101115 | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 13B280617 | 2       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 5B150317  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 11B310517 | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 4B120318  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 1B090118  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 21B171218 | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 2B110219  | 3       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 1B070119  | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 17B011018 | 1       |
| Apomix / Noweda            | Hydrophilic cream, non-ionic... | 6B150419  | 1       |
| Apomix / Sanacorp          | Hydrophilic cream, non-ionic... | 12B210514 | 1       |
| Apomix / Sanacorp          | Hydrophilic cream, non-ionic... | 6B020315  | 1       |
| Apomix / Sanacorp          | Hydrophilic cream, non-ionic... | 18B240815 | 1       |
| Apomix / Sanacorp          | Hydrophilic cream, non-ionic... | 17B040815 | 3       |
| APOMIX /11                 | Hydrophilic cream, non-ionic... | 1B070114  | 1       |
| Apomix /Alliance           | Hydrophilic cream, non-ionic... | 22B281013 | 1       |
| Apomix /Noweda             | Hydrophilic cream, non-ionic... | 17b040815 | 1       |
| Apomix /Noweda             | Hydrophilic cream, non-ionic... | 21b141116 | 1       |
| Apomix Alliance healthc... | Hydrophilic cream, non-ionic... | 20B291118 | 1       |
| Apomix Alliance Healthc... | Hydrophilic cream, non-ionic... | 21B081117 | 3       |
| apomix GmbH/Phönix         | Hydrophilic cream, non-ionic... | 7B020413  | 1       |
| Apomix Noweda              | Hydrophilic cream, non-ionic... | 12B100718 | 1       |
| Apomix Noweda              | Hydrophilic cream, non-ionic... | 16B040918 | 1       |
| apomix noweder 23.10.2015  | Hydrophilic cream, non-ionic... | 18B240815 | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 9B010719  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 15B141019 | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 17B031219 | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 3B040220  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 6B180320  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 11B300620 | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 14B180820 | 2       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 19B031120 | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 21B151220 | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 2B010221  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 5B170321  | 1       |
| Apomix, PKH Halle          | Hydrophilic cream, non-ionic... | 11B090621 | 1       |
| Apomix/ Alliance           | Hydrophilic cream, non-ionic... | 18B291018 | 1       |
| Apomix/ Alliance Health... | Hydrophilic cream, non-ionic... | 21B171218 | 1       |
| Apomix/ Gehe               | Hydrophilic cream, non-ionic... | 5B290216  | 1       |
| Apomix/ Gehe berlin        | Hydrophilic cream, non-ionic... | 4B190319  | 1       |
| Apomix/ Gehe Berlin        | Hydrophilic cream, non-ionic... | 13B090919 | 1       |
| Apomix/ Gehe Berlin        | Hydrophilic cream, non-ionic... | 1B070120  | 1       |
| Apomix/ Noweda             | Hydrophilic cream, non-ionic... | 3B020215  | 1       |
| Apomix/ Noweda             | Hydrophilic cream, non-ionic... | 19B121118 | 2       |
| Apomix/ Phönix             | Hydrophilic cream, non-ionic... | 15B090713 | 1       |
| Apomix/ Phönix             | Hydrophilic cream, non-ionic... | 15B070714 | 1       |
| apomix/ Phönix/29.10.20    | Hydrophilic cream, non-ionic... | 12B070729 | 1       |
| Apomix/ Sanacorp           | Hydrophilic cream, non-ionic... | 8B030417  | 1       |
| Apomix/AHD                 | Hydrophilic cream, non-ionic... | 12B100718 | 1       |
| Apomix/ Anzag              | Hydrophilic cream, non-ionic... | 24B121216 | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 2B300117  | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 5B150317  | 1       |
| apomix/Gehe                | Hydrophilic cream, non-ionic... | 1B070120  | 1       |
| Apomix/Gehe                | Hydrophilic cream, non-ionic... | 3B020215  | 1       |
| Apomix/Gehe                | Hydrophilic cream, non-ionic... | 20B210915 | 1       |
| Apomix/Gehe                | Hydrophilic cream, non-ionic... | 6B150419  | 1       |
| Apomix/Gehe GUC            | Hydrophilic cream, non-ionic... | 11B220513 | 1       |
| apomix/Holdermann          | Hydrophilic cream, non-ionic... | 15B290615 | 1       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 20B291118 | 1       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 5B020419  | 1       |
| apomix/Kehr                | Hydrophilic cream, non-ionic... | 15B141019 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 14B120716 | 1       |
| Apomix/Kehr                | Hydrophilic cream, non-ionic... | 3B040220  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 3B140218  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 5B020419  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 3B260219  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 10B010719 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 12B130819 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 5B180220  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 9B110520  | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 13B200720 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 15B070920 | 1       |
| apomix/Noweda              | Hydrophilic cream, non-ionic... | 17B280920 | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 21B141013 | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 10B200415 | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 10B160517 | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 14B280617 | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 5B280318  | 1       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 8B290519  | 2       |
| Apomix/Noweda              | Hydrophilic cream, non-ionic... | 17B031219 | 1       |
| Apomix/NOWEDA              | Hydrophilic cream, non-ionic... | 13B310718 | 1       |
| Apomix/Phoenix             | Hydrophilic cream, non-ionic... | 12B120617 | 1       |
| Apomix/Phoenix             | Hydrophilic cream, non-ionic... | 22B201117 | 1       |
| Apomix/Phoenix             | Hydrophilic cream, non-ionic... | 7B150518  | 1       |

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| Supplier                | Substance                       | Batch       | Spectra |
|-------------------------|---------------------------------|-------------|---------|
| Apomix/Phoenix          | Hydrophilic cream, non-ionic... | 13B090919   | 1       |
| Apomix/Phoenix          | Hydrophilic cream, non-ionic... | 2B070120    | 1       |
| apomix/Phönix           | Hydrophilic cream, non-ionic... | 15B090713   | 2       |
| apomix/Phönix           | Hydrophilic cream, non-ionic... | 8B070414    | 1       |
| apomix/Phönix           | Hydrophilic cream, non-ionic... | 22B061114   | 1       |
| apomix/Phönix           | Hydrophilic cream, non-ionic... | 10B250618   | 1       |
| apomix/Phönix           | Hydrophilic cream, non-ionic... | 9B010719    | 1       |
| Apomix/Phönix           | Hydrophilic cream, non-ionic... | 25B161213   | 1       |
| Apomix/Phönix           | Hydrophilic cream, non-ionic... | 5B150317    | 1       |
| Apomix/PKH Halle/Phönix | Hydrophilic cream, non-ionic... | 13B310718   | 1       |
| Apomix/Sana             | Hydrophilic cream, non-ionic... | 25B081215   | 1       |
| Apomix/Sanacorp         | Hydrophilic cream, non-ionic... | 8B060416    | 1       |
| Apomix/Sanacorp         | Hydrophilic cream, non-ionic... | 1B090118    | 1       |
| Apomix/Sanacorp         | Hydrophilic cream, non-ionic... | 4B120318    | 1       |
| Apomix/Sanacorp         | Hydrophilic cream, non-ionic... | 8B290519    | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 12B130626   | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 307525      | 9       |
| Bombastus               | Hydrophilic cream, non-ionic... | 18001334    | 21      |
| Bombastus               | Hydrophilic cream, non-ionic... | 20002901    | 9       |
| Caelo                   | Hydrophilic cream, non-ionic... | 14063003    | 1       |
| Caelo                   | Hydrophilic cream, non-ionic... | 18050401    | 8       |
| Caelo                   | Hydrophilic cream, non-ionic... | 15155904    | 5       |
| Caelo                   | Hydrophilic cream, non-ionic... | 18002063    | 4       |
| Caelo                   | Hydrophilic cream, non-ionic... | 16290301    | 40      |
| Caelo                   | Hydrophilic cream, non-ionic... | 21B141116   | 1       |
| Caelo                   | Hydrophilic cream, non-ionic... | 2B310118    | 1       |
| Caelo                   | Hydrophilic cream, non-ionic... | 20002461003 | 4       |
| caesar&loretz GmbH      | Hydrophilic cream, non-ionic... | 18050401    | 2       |
| Euro OTC                | Hydrophilic cream, non-ionic... | 13B310718   | 2       |
| Euro OTC                | Hydrophilic cream, non-ionic... | 21B081117   | 1       |
| Fagron                  | Hydrophilic cream, non-ionic... | 15C04-M06   | 1       |
| Gehe                    | Hydrophilic cream, non-ionic... | 5B250213    | 1       |
| Gehe, 12.11.2019        | Hydrophilic cream, non-ionic... | 12B130819   | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 20001013    | 7       |
| Gehe/Apomix             | Hydrophilic cream, non-ionic... | 24B121216   | 1       |
| Bombastus               | Hydrophilic cream, non-ionic... | 20004273    | 1       |
| Henry Lamotte           | Hydrophilic cream, non-ionic... | 22B281013   | 1       |
| Holdermann              | Hydrophilic cream, non-ionic... | 1B140113    | 1       |
| Kehr/Apomix             | Hydrophilic cream, non-ionic... | 19B121118   | 1       |
| noweda                  | Hydrophilic cream, non-ionic... | 11B300620   | 1       |
| Noweda                  | Hydrophilic cream, non-ionic... | 1B070116    | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 5B280318    | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 12B100718   | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 7B140518    | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 4B190319    | 1       |
| Noweda/apomix           | Hydrophilic cream, non-ionic... | 14B240919   | 1       |
| Pharmachem              | Hydrophilic cream, non-ionic... | 6B150316    | 1       |
| Phoenix                 | Hydrophilic cream, non-ionic... | 6B150419    | 2       |
| Phönix                  | Hydrophilic cream, non-ionic... | 3B300117    | 1       |
| Phönix                  | Hydrophilic cream, non-ionic... | 1B090118    | 1       |
| Phönix / apomix         | Hydrophilic cream, non-ionic... | 24B271217   | 2       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 20B260612   | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 4B070213    | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 20B230913   | 2       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 21B141014   | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 10B200415   | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 12B211015   | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 10B250618   | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 9B010719    | 1       |
| Phönix Gotha            | Hydrophilic cream, non-ionic... | 15B141019   | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Phönix/ apomix             | Hydrophilic cream, non-ionic... | 6B150419   | 2       |
| Phönix/ Apomix             | Hydrophilic cream, non-ionic... | 2B160412   | 1       |
| Phönix/apomix PKH Halle    | Hydrophilic cream, non-ionic... | 6B230418   | 1       |
| Phönix/apomix PKH Halle    | Hydrophilic cream, non-ionic... | 14B200818  | 1       |
| Phönix/apomix PKH Halle    | Hydrophilic cream, non-ionic... | 17B011018  | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 2B110219   | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 12B1306161 | 1       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 21B141116  | 2       |
| PKH GmbH                   | Hydrophilic cream, non-ionic... | 7B030417   | 1       |
| PKH GmbH / GEHE            | Hydrophilic cream, non-ionic... | 19B031120  | 1       |
| PKH GmbH/ Alliance Heal... | Hydrophilic cream, non-ionic... | 18B291018  | 1       |
| PKH GmbH/ NOWEDA           | Hydrophilic cream, non-ionic... | 10B200415  | 1       |
| PKH GmbH/Noweda            | Hydrophilic cream, non-ionic... | 7B030417   | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 15B080816  | 1       |
| PKH Halle                  | Hydrophilic cream, non-ionic... | 11B310517  | 1       |
| PKH Halle (Apomix)         | Hydrophilic cream, non-ionic... | 12B100718  | 1       |
| PKH Halle apomix           | Hydrophilic cream, non-ionic... | 13B280617  | 1       |
| PKH Halle/ Alliance Hea... | Hydrophilic cream, non-ionic... | 4B120318   | 1       |
| PKH/Sanacorp               | Hydrophilic cream, non-ionic... | 4B180220   | 1       |
| Rabenapotheke              | Hydrophilic cream, non-ionic... | 20B290914  | 2       |
| Raben-Apotheke Mildenau    | Hydrophilic cream, non-ionic... | 12B210514  | 1       |
| Raben-Apotheke Mildenau    | Hydrophilic cream, non-ionic... | 4B100214   | 1       |
| Raben-Apotheke Mildenau    | Hydrophilic cream, non-ionic... | 18B020914  | 2       |
| Sanacorp                   | Hydrophilic cream, non-ionic... | 16054101   | 1       |
| Sanacorp/ apomix           | Hydrophilic cream, non-ionic... | 19B021017  | 1       |
| Apomix                     | Skin care ointment W/L SR       | 211112     | 1       |
| Apomix                     | Skin care ointment W/L SR       | 2A090114   | 1       |
| Apomix                     | Skin care ointment W/L SR       | 1A080114   | 1       |
| Apomix                     | Skin care ointment W/L SR       | 9A260213   | 1       |
| Apomix                     | Skin care ointment W/L SR       | 16A250314  | 2       |
| Apomix                     | Skin care ointment W/L SR       | 11A190214  | 1       |
| Apomix                     | Skin care ointment W/L SR       | 21A230414  | 1       |
| Apomix                     | Skin care ointment W/L SR       | 22A230414  | 1       |
| apomix / Phönix            | Skin care ointment W/L SR       | 11B270317  | 1       |
| apomix/ Anzag              | Skin care ointment W/L SR       | 3B020217   | 1       |
| Apomix/ Phönix             | Skin care ointment W/L SR       | 2A150119   | 1       |
| Apomix/Sanacorp            | Skin care ointment W/L SR       | 27B220818  | 1       |
| Caelo                      | Skin care ointment W/L SR       | 80115      | 1       |
| Euro OTC                   | Skin care ointment W/L SR       | 300316     | 1       |
| Noweda/Pharmachem          | Skin care ointment W/L SR       | 270715     | 1       |
| Noweda/Pharmachem          | Skin care ointment W/L SR       | 120416     | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 90216      | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 20316      | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 160418     | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 310718     | 2       |
| Pharmachem                 | Skin care ointment W/L SR       | 151118     | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 180619     | 1       |
| Pharmachem                 | Skin care ointment W/L SR       | 280210     | 1       |
| Pharmachem / Noweda        | Skin care ointment W/L SR       | 170815     | 1       |
| Pharmachem / Phönix        | Skin care ointment W/L SR       | 110319     | 1       |
| Pharmachem GmbH            | Skin care ointment W/L SR       | 220118     | 1       |
| Pharmachem GmbH & Co KG    | Skin care ointment W/L SR       | 120419     | 1       |
| Pharmachem GmbH & Co KG    | Skin care ointment W/L SR       | 180619     | 2       |
| Pharmachem GmbH & Co KG    | Skin care ointment W/L SR       | 280210     | 1       |
| Pharmachem GmbH Pößneck    | Skin care ointment W/L SR       | 81117      | 1       |
| Pharmachem Pößneck/Noweda  | Skin care ointment W/L SR       | 111016     | 1       |
| Pharmachem Pößneck         | Skin care ointment W/L SR       | 100516     | 1       |
| Pharmachem Pößneck         | Skin care ointment W/L SR       | 180619     | 1       |
| Pharmachem/ Noweda         | Skin care ointment W/L SR       | 260814     | 1       |
| Pharmachem/ Noweda         | Skin care ointment W/L SR       | 180914     | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Pharmachem/ Sanacorp       | Skin care ointment W/L SR       | 141015           | 1       |
| Pharmachem/ Sanacorp       | Skin care ointment W/L SR       | 170117           | 1       |
| Pharmachem/Gehe            | Skin care ointment W/L SR       | 100712           | 1       |
| Pharmachem/Noweda          | Skin care ointment W/L SR       | 110416           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 50718            | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 220118           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 170918           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 151118           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 170119           | 2       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 120419           | 2       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 110319           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 290419           | 1       |
| PharmaChem/Phönix          | Skin care ointment W/L SR       | 180619           | 1       |
| Pharmachem/Phönix 03.08... | Skin care ointment W/L SR       | 250418           | 1       |
| Pharmachemie/Phönix 30...  | Skin care ointment W/L SR       | 240418           | 2       |
| Sanacorp                   | Skin care ointment W/L SR       | 27C220818        | 1       |
| Sanacorp                   | Skin care ointment W/L SR       | 39B191218        | 1       |
| AEP GmbH                   | Skin care ointment W/L SR (w... | 16B170419        | 1       |
| AEP GmbH                   | Skin care ointment W/L SR (w... | 14B140319        | 1       |
| apomix                     | Skin care ointment W/L SR (w... | 31B130917        | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 3A220118         | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 4A220118         | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 9A0103318        | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 8A280218         | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 15A080518        | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 36B011117        | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 16A080518        | 1       |
| Apomix                     | Skin care ointment W/L SR (w... | 8A190220         | 1       |
| apomix/ Anzag              | Skin care ointment W/L SR (w... | 63B230916        | 1       |
| apomix/ Anzag 21.12.18     | Skin care ointment W/L SR (w... | 40A131118        | 1       |
| Apomix/ Sanacorp           | Skin care ointment W/L SR (w... | 41B200715        | 1       |
| Apomix/ Sanacorp           | Skin care ointment W/L SR (w... | 15B220216        | 1       |
| Apomix/ Sanacorp           | Skin care ointment W/L SR (w... | 41A281117        | 1       |
| Apomix/Alliance            | Skin care ointment W/L SR (w... | 23B280618        | 1       |
| Apomix/Alliance            | Skin care ointment W/L SR (w... | 3B230120         | 2       |
| Apomix/Alliance            | Skin care ointment W/L SR (w... | 15B170419        | 2       |
| Apomix/Anzag 16.11.19      | Skin care ointment W/L SR (w... | 36a170919        | 1       |
| apomix/direkt              | Skin care ointment W/L SR (w... | 36A170919        | 1       |
| apomix/phoenix             | Skin care ointment W/L SR (w... | 35A040919        | 1       |
| apomix/Phönix              | Skin care ointment W/L SR (w... | 21B270519        | 1       |
| apomix/Phönix              | Skin care ointment W/L SR (w... | 36A170919        | 1       |
| apomix/Phönix              | Skin care ointment W/L SR (w... | 88190220         | 1       |
| Apomix/Phönix              | Skin care ointment W/L SR (w... | 13B120418        | 1       |
| pkh gmbh                   | Skin care ointment W/L SR (w... | 49b171014        | 1       |
| PKH/Alliance               | Skin care ointment W/L SR (w... | 13B120418        | 1       |
| PKH/Alliance               | Skin care ointment W/L SR (w... | 10B270219        | 1       |
| PKH/Alliance               | Skin care ointment W/L SR (w... | 3B100119         | 1       |
| PKH/Alliance               | Skin care ointment W/L SR (w... | 21B270519        | 1       |
| PKH/Alliance               | Skin care ointment W/L SR (w... | 32B231020        | 1       |
| Euro OTC                   | Transdermal base cream          | 1507997          | 1       |
| Caelo                      | Transdermal base cream          | 1609813          | 1       |
| Caelo                      | Transdermal base cream          | 1504065          | 1       |
| Caelo                      | Transdermal base cream          | 1709950/2        | 1       |
| Euro OTC                   | Transdermal base cream          | 14J08-T12-016301 | 2       |
| Fagron                     | Transdermal base cream          | 12F19-U15-273303 | 1       |
| Fagron                     | Transdermal base cream          | 12H17-T02-005161 | 2       |
| Fagron                     | Transdermal base cream          | 13G17-T03-010523 | 1       |
| Fagron                     | Transdermal base cream          | 14B27-T01-010612 | 3       |
| Fagron                     | Transdermal base cream          | 13G17-T03-005497 | 1       |
| Fagron                     | Transdermal base cream          | 14C14-T03-011060 | 1       |

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| Supplier                  | Substance                              | Batch            | Spectra |
|---------------------------|----------------------------------------|------------------|---------|
| Fagron                    | Transdermal base cream                 | 14C14-T03        | 1       |
| Fagron                    | Transdermal base cream                 | 14H19-T07-014889 | 1       |
| Fagron                    | Transdermal base cream                 | 15A28-T08-018919 | 1       |
| Fagron                    | Transdermal base cream                 | 14B27-T010612    | 1       |
| Fagron                    | Transdermal base cream                 | 14B27-To1-010612 | 1       |
| Fagron                    | Transdermal base cream                 | 15D28-T06-02194  | 1       |
| Fagron                    | Transdermal base cream                 | 15D28-T06-021940 | 1       |
| Fagron                    | Transdermal base cream                 | 1602049          | 1       |
| Fagron                    | Transdermal base cream                 | 1504065          | 6       |
| Fagron                    | Transdermal base cream                 | 4315I-07039      | 1       |
| Fagron                    | Transdermal base cream                 | 247191-0003      | 2       |
| Fagron                    | Transdermal base cream                 | 1609813          | 4       |
| Fagron                    | Transdermal base cream                 | 18026502         | 1       |
| Fagron                    | Transdermal base cream                 | 1803958/2        | 5       |
| Fagron                    | Transdermal base cream                 | 1805581-1        | 1       |
| Fagron                    | Transdermal base cream                 | 1803958-1        | 1       |
| Fagron                    | Transdermal base cream                 | 1908978          | 3       |
| Fagron                    | Transdermal base cream                 | 2000102          | 1       |
| Fagron                    | Transdermal base cream                 | 180958/2         | 1       |
| Fagron                    | Transdermal base cream                 | 2001002          | 1       |
| Fagron                    | Transdermal base cream                 | 1507997          | 6       |
| Fagron                    | Transdermal base cream                 | 1607076          | 5       |
| Fagron                    | Transdermal base cream                 | 20001002         | 4       |
| Fagron                    | Transdermal base cream                 | 14K21-T03-017364 | 2       |
| Fagron                    | Transdermal base cream                 | 1802648/2        | 1       |
| Fagron                    | Transdermal base cream                 | 1802650/2        | 13      |
| Fagron                    | Transdermal base cream                 | 1709950/2        | 2       |
| Caelo                     | Transdermal base cream                 | 1805581/1        | 2       |
| PHÖNIX                    | Transdermal base cream                 | 1802650/2        | 2       |
| AHD                       | Wolff <sup>®</sup> base half-fat cream | 602290           | 1       |
| AHD/ DR Wolff             | Wolff <sup>®</sup> base half-fat cream | 609950           | 1       |
| AHL                       | Wolff <sup>®</sup> base half-fat cream | 608180           | 1       |
| ALH                       | Wolff <sup>®</sup> base half-fat cream | 602050           | 1       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 707370           | 1       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 705760           | 1       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 711250           | 2       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 805720           | 5       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 810201           | 1       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 810800           | 2       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 910460           | 5       |
| Alliance Healthcare       | Wolff <sup>®</sup> base half-fat cream | 7742             | 2       |
| Alliance Healthcare/Dr... | Wolff <sup>®</sup> base half-fat cream | 10680            | 1       |
| Alliance/Dr. Wolff        | Wolff <sup>®</sup> base half-fat cream | 501470           | 1       |
| Anzag/ Dr. Wolff          | Wolff <sup>®</sup> base half-fat cream | 339140           | 1       |
| Anzag/Dr. Wolff           | Wolff <sup>®</sup> base half-fat cream | 702500           | 1       |
| August Wolff GmbH         | Wolff <sup>®</sup> base half-fat cream | 711250           | 1       |
| August Wolff GmbH         | Wolff <sup>®</sup> base half-fat cream | 905120           | 1       |
| Bombastus                 | Wolff <sup>®</sup> base half-fat cream | 701080           | 2       |
| Bombastus                 | Wolff <sup>®</sup> base half-fat cream | 707370           | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 17169002         | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 235200           | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 703031           | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 71120            | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 31101811         | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 15121805         | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 805720           | 3       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 901930           | 1       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 702500           | 3       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 711250           | 2       |
| Caelo                     | Wolff <sup>®</sup> base half-fat cream | 801140           | 2       |

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| Supplier                   | Substance                              | Batch       | Spectra |
|----------------------------|----------------------------------------|-------------|---------|
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 707500      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 3258        | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 501470      | 6       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 431240      | 2       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 333930      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 807640      | 4       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 901920      | 4       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 909810      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 609950      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 807580      | 3       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 602050      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 602290      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 707370      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 711240      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 804080      | 2       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 7742        | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 238560      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 333620      | 3       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 434360      | 3       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 511420      | 3       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 705760      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 506361      | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 704050      | 3       |
| Caesar & Loretz GmbH       | Wolff <sup>®</sup> base half-fat cream | 810800      | 2       |
| Caesar & Loretz GmbH       | Wolff <sup>®</sup> base half-fat cream | 810201      | 2       |
| Cealo/Phönix               | Wolff <sup>®</sup> base half-fat cream | 339140      | 1       |
| Chiesi                     | Wolff <sup>®</sup> base half-fat cream | 601880      | 1       |
| Chiesi                     | Wolff <sup>®</sup> base half-fat cream | 71370A      | 1       |
| Chiesi                     | Wolff <sup>®</sup> base half-fat cream | 1455A       | 1       |
| Chiesi / Sanacorp/EK: 6... | Wolff <sup>®</sup> base half-fat cream | 506360      | 1       |
| Chiesi GmbH                | Wolff <sup>®</sup> base half-fat cream | 703031      | 1       |
| devesa/Phönix              | Wolff <sup>®</sup> base half-fat cream | 801140      | 6       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 501470      | 2       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 501080      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 48882171377 | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 410400      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 602050      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 510400      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 606050      | 3       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 610991      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 704220      | 1       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 901920      | 3       |
| Dr Wolff                   | Wolff <sup>®</sup> base half-fat cream | 909810      | 1       |
| Dr Wolff / Anzag           | Wolff <sup>®</sup> base half-fat cream | 608180      | 1       |
| Dr Wolff / Phönix          | Wolff <sup>®</sup> base half-fat cream | 801140      | 1       |
| Dr Wolff / Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 905120      | 2       |
| Dr Wolff Arzneimittel      | Wolff <sup>®</sup> base half-fat cream | 704050      | 1       |
| Dr Wolff Arzneimittel      | Wolff <sup>®</sup> base half-fat cream | 901920      | 1       |
| Dr Wolff/ Alliance         | Wolff <sup>®</sup> base half-fat cream | 904880      | 1       |
| Dr Wolff/ Gehe             | Wolff <sup>®</sup> base half-fat cream | 333930      | 1       |
| Dr Wolff/ Gehe             | Wolff <sup>®</sup> base half-fat cream | 234791      | 1       |
| Dr Wolff/ Sanacorp         | Wolff <sup>®</sup> base half-fat cream | 339140      | 1       |
| Dr Wolff/Noweda            | Wolff <sup>®</sup> base half-fat cream | 511420      | 3       |
| Dr, Wolff                  | Wolff <sup>®</sup> base half-fat cream | 3542        | 1       |
| Dr. A. Wolff GmbH & Co...  | Wolff <sup>®</sup> base half-fat cream | 905120      | 1       |
| Dr. A. Wolff/Kehr          | Wolff <sup>®</sup> base half-fat cream | 438340      | 2       |
| Dr. A.Wolff GmbH/Noweda    | Wolff <sup>®</sup> base half-fat cream | 608180      | 1       |
| Dr. August Wolf GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 807640      | 1       |
| Dr. August Wolf GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 901920      | 3       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 332040      | 5       |

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| Supplier                   | Substance                              | Batch            | Spectra |
|----------------------------|----------------------------------------|------------------|---------|
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 333930           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 501080           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 510400           | 4       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 602050           | 5       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 606050           | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 608180           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 609950           | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 7091713          | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 704050           | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 804080           | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 901140           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 904880           | 4       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 911220           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 906620           | 1       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 908620           | 4       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 909810           | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 3542             | 3       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 10550            | 2       |
| Dr. August Wolff           | Wolff <sup>®</sup> base half-fat cream | 141811           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 511420           | 2       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 506360           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 510400           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 602050           | 2       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 606050           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 703031           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 707500           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 805720           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 810800           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 905120           | 2       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 910460           | 3       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 911220           | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 1110             | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 6480             | 1       |
| Dr. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 140340           | 2       |
| DR. August Wolff GmbH      | Wolff <sup>®</sup> base half-fat cream | 235200           | 1       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 606050           | 1       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 711250           | 1       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 807640           | 2       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 170519WBC/610991 | 1       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 171113WBC/701451 | 1       |
| Dr. August Wolff GmbH &... | Wolff <sup>®</sup> base half-fat cream | 180312WB/705760  | 1       |
| Dr. August Wolff GmbH /... | Wolff <sup>®</sup> base half-fat cream | 7742             | 1       |
| Dr. August Wolff GmbH /... | Wolff <sup>®</sup> base half-fat cream | 801470           | 1       |
| Dr. August Wolff GmbH/...  | Wolff <sup>®</sup> base half-fat cream | 705760           | 2       |
| Dr. August Wolff GmbH/P... | Wolff <sup>®</sup> base half-fat cream | 10680            | 1       |
| Dr. August Wolff GmbH/S... | Wolff <sup>®</sup> base half-fat cream | 506361           | 1       |
| Dr. August Wolff/ Phönix   | Wolff <sup>®</sup> base half-fat cream | 807640           | 1       |
| Dr. August Wolff/Noweda    | Wolff <sup>®</sup> base half-fat cream | 904880           | 1       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 707500           | 1       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 711250           | 2       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 805720           | 5       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 810800           | 5       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 905120           | 2       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 910460           | 5       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 904880           | 1       |
| Dr. August Wolff/Phönix    | Wolff <sup>®</sup> base half-fat cream | 10680            | 6       |
| Dr. August Wolff/Sanaco... | Wolff <sup>®</sup> base half-fat cream | 337260           | 1       |
| Dr. August Wolff/Sanaco... | Wolff <sup>®</sup> base half-fat cream | 901920           | 1       |
| Dr. Augustus Wolff GmbH    | Wolff <sup>®</sup> base half-fat cream | 801140           | 1       |
| Dr. Wolf                   | Wolff <sup>®</sup> base half-fat cream | 331551           | 1       |

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| Supplier          | Substance                              | Batch     | Spectra |
|-------------------|----------------------------------------|-----------|---------|
| Dr. Wolf          | Wolff <sup>®</sup> base half-fat cream | 6480      | 1       |
| Dr. Wolf AHD      | Wolff <sup>®</sup> base half-fat cream | 438160    | 3       |
| Dr. Wolf/Phoenix  | Wolff <sup>®</sup> base half-fat cream | 704050    | 5       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 238560    | 3       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 238490    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 337260    | 4       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 333930    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 10112014F | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 430880    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 431240    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 501470    | 6       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 501082    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 506361    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 511420    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 501080    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 602050    | 3       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 510400    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 605551    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 605700    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 4051701   | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 10061711  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 608180    | 6       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 701080    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 23101701  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 701451    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 704050    | 9       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 704220    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 11121703  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 12051807  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 1061803   | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 801140    | 9       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 711240    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 23071801  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 1091802   | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 805720    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 807640    | 15      |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 19011903  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 19011904  | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 807580    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 901140    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 810201    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 901920    | 25      |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 901930    | 2       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 804080    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 909810    | 12      |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 910460    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 905120    | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 9098810   | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 11110     | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 1110      | 1       |
| Dr. Wolff         | Wolff <sup>®</sup> base half-fat cream | 9560      | 15      |
| DR. WOLFF         | Wolff <sup>®</sup> base half-fat cream | 337260    | 1       |
| DR. WOLFF         | Wolff <sup>®</sup> base half-fat cream | 609950    | 1       |
| Dr. Wolff / Anzag | Wolff <sup>®</sup> base half-fat cream | 601880    | 1       |
| Dr. Wolff / Gehe  | Wolff <sup>®</sup> base half-fat cream | 801140    | 2       |
| Dr. Wolff / Gehe  | Wolff <sup>®</sup> base half-fat cream | 807580    | 1       |
| Dr. Wolff / Gehe  | Wolff <sup>®</sup> base half-fat cream | 901140    | 1       |
| Dr. Wolff / Gehe  | Wolff <sup>®</sup> base half-fat cream | 904670    | 1       |
| Dr. Wolff / GEHE  | Wolff <sup>®</sup> base half-fat cream | 909810    | 1       |
| Dr. Wolff / Kehr  | Wolff <sup>®</sup> base half-fat cream | 438160    | 1       |

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| Supplier                   | Substance                              | Batch  | Spectra |
|----------------------------|----------------------------------------|--------|---------|
| Dr. Wolff / Kehr           | Wolff <sup>®</sup> base half-fat cream | 510621 | 1       |
| Dr. Wolff / Kehr           | Wolff <sup>®</sup> base half-fat cream | 602290 | 1       |
| Dr. Wolff / Kehr           | Wolff <sup>®</sup> base half-fat cream | 605700 | 3       |
| Dr. Wolff / Noweda         | Wolff <sup>®</sup> base half-fat cream | 810201 | 1       |
| Dr. Wolff / Noweda         | Wolff <sup>®</sup> base half-fat cream | 901930 | 1       |
| Dr. Wolff / Noweda         | Wolff <sup>®</sup> base half-fat cream | 901140 | 1       |
| Dr. Wolff / Noweda         | Wolff <sup>®</sup> base half-fat cream | 1110   | 1       |
| Dr. Wolff / OG             | Wolff <sup>®</sup> base half-fat cream | 608180 | 1       |
| Dr. Wolff / Phönix         | Wolff <sup>®</sup> base half-fat cream | 801140 | 1       |
| Dr. Wolff / Phönix         | Wolff <sup>®</sup> base half-fat cream | 3542   | 1       |
| Dr. Wolff / Sanacorp       | Wolff <sup>®</sup> base half-fat cream | 810800 | 3       |
| Dr. Wolff /Anzag           | Wolff <sup>®</sup> base half-fat cream | 232593 | 1       |
| Dr. Wolff /Anzag           | Wolff <sup>®</sup> base half-fat cream | 432611 | 1       |
| Dr. Wolff /Noweda          | Wolff <sup>®</sup> base half-fat cream | 601880 | 1       |
| Dr. Wolff GmbH             | Wolff <sup>®</sup> base half-fat cream | 501080 | 1       |
| Dr. Wolff GmbH             | Wolff <sup>®</sup> base half-fat cream | 506360 | 3       |
| Dr. Wolff GmbH             | Wolff <sup>®</sup> base half-fat cream | 909810 | 1       |
| Dr. Wolff GmbH/ Allianc... | Wolff <sup>®</sup> base half-fat cream | 506360 | 1       |
| Dr. Wolff GmbH/ Allianc... | Wolff <sup>®</sup> base half-fat cream | 810800 | 1       |
| Dr. Wolff GmbH/Fiebig      | Wolff <sup>®</sup> base half-fat cream | 807580 | 1       |
| Dr. Wolff GmbH/Phönix      | Wolff <sup>®</sup> base half-fat cream | 711250 | 6       |
| Dr. Wolff l/Noweda         | Wolff <sup>®</sup> base half-fat cream | 438340 | 2       |
| Dr. Wolff l/Noweda         | Wolff <sup>®</sup> base half-fat cream | 901140 | 1       |
| Dr. Wolff Spangro 26.08... | Wolff <sup>®</sup> base half-fat cream | 238560 | 1       |
| Dr. Wolff/ Alliance        | Wolff <sup>®</sup> base half-fat cream | 511420 | 1       |
| Dr. Wolff/ Alliance        | Wolff <sup>®</sup> base half-fat cream | 608180 | 1       |
| Dr. Wolff/ Fiebig          | Wolff <sup>®</sup> base half-fat cream | 701080 | 1       |
| Dr. Wolff/ Gehe            | Wolff <sup>®</sup> base half-fat cream | 430880 | 1       |
| Dr. Wolff/ Noweda          | Wolff <sup>®</sup> base half-fat cream | 605700 | 5       |
| Dr. Wolff/ Noweda          | Wolff <sup>®</sup> base half-fat cream | 901930 | 1       |
| Dr. Wolff/ Noweda          | Wolff <sup>®</sup> base half-fat cream | 904670 | 3       |
| Dr. Wolff/ Noweda          | Wolff <sup>®</sup> base half-fat cream | 904880 | 1       |
| Dr. Wolff/ Phoenix/ 25...  | Wolff <sup>®</sup> base half-fat cream | 140340 | 1       |
| Dr. Wolff/ Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 434360 | 1       |
| Dr. Wolff/AEP              | Wolff <sup>®</sup> base half-fat cream | 910460 | 1       |
| Dr. Wolff/AHD              | Wolff <sup>®</sup> base half-fat cream | 332040 | 4       |
| Dr. Wolff/Alliance         | Wolff <sup>®</sup> base half-fat cream | 511420 | 1       |
| Dr. Wolff/Alliance         | Wolff <sup>®</sup> base half-fat cream | 608180 | 1       |
| Dr. Wolff/Anzag            | Wolff <sup>®</sup> base half-fat cream | 810800 | 2       |
| Dr. Wolff/Anzag            | Wolff <sup>®</sup> base half-fat cream | 905120 | 2       |
| Dr. Wolff/Anzag            | Wolff <sup>®</sup> base half-fat cream | 910460 | 2       |
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream | 436750 | 1       |
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream | 608180 | 1       |
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream | 707370 | 1       |
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream | 810201 | 1       |
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream | 805720 | 1       |
| Dr. Wolff/Kehr             | Wolff <sup>®</sup> base half-fat cream | 609950 | 2       |
| Dr. Wolff/Kehr             | Wolff <sup>®</sup> base half-fat cream | 702500 | 3       |
| Dr. Wolff/Kehr             | Wolff <sup>®</sup> base half-fat cream | 707370 | 2       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 431240 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 332040 | 6       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 438160 | 10      |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 438340 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 438150 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 602290 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 705760 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 707500 | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream | 1110   | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 506360 | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 609950 | 1       |

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| Supplier                   | Substance                              | Batch     | Spectra |
|----------------------------|----------------------------------------|-----------|---------|
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 702500    | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 704220    | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 701080    | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 711250    | 21      |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 807640    | 2       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 901920    | 2       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 909810    | 1       |
| Dr. Wolff/Phoenix          | Wolff <sup>®</sup> base half-fat cream | 9560      | 2       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 501080    | 2       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 804080    | 1       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 805720    | 2       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 807580    | 1       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 904670    | 1       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 911220    | 1       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 6480      | 2       |
| Dr. Wolff/Sanacorp         | Wolff <sup>®</sup> base half-fat cream | 333620    | 4       |
| Dr. Wolff/Sanacorp         | Wolff <sup>®</sup> base half-fat cream | 801140    | 2       |
| Dr. Wolff/Sanacorp         | Wolff <sup>®</sup> base half-fat cream | 910460    | 3       |
| Dr. Wolff/V.d.L.           | Wolff <sup>®</sup> base half-fat cream | 430880    | 4       |
| DR. Wolff;VDL;20.4.16;4... | Wolff <sup>®</sup> base half-fat cream | 511420    | 3       |
| Dr. Wolff/Phönix           | Wolff <sup>®</sup> base half-fat cream | 510621    | 1       |
| Dr. Wolff                  | Wolff <sup>®</sup> base half-fat cream | 510400    | 1       |
| Dr.A. Wolff, Sanacorp      | Wolff <sup>®</sup> base half-fat cream | 511420    | 2       |
| Dr.A.Wolff                 | Wolff <sup>®</sup> base half-fat cream | 601880    | 1       |
| Dr.A.Wolff/Gehe            | Wolff <sup>®</sup> base half-fat cream | 602290    | 1       |
| Dr.A.Wolff/Phoenix         | Wolff <sup>®</sup> base half-fat cream | 10680     | 1       |
| Dr.A.Wolff/Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 801140    | 2       |
| Dr.A.Wolff/Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 807640    | 1       |
| Dr.A.Wolff/Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 301920    | 1       |
| Dr.A.Wolff/Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 901920    | 1       |
| Dr.A.Wolff/Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 909810    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 38800     | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 333620    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 430880    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 434360    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 511420    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 602050    | 2       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 605700    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 801140    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 807640    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 810201    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 901140    | 2       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 904880    | 4       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 909810    | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 3542      | 1       |
| Dr.August Wolff            | Wolff <sup>®</sup> base half-fat cream | 10550     | 1       |
| Dr.August Wolff / Phönix   | Wolff <sup>®</sup> base half-fat cream | 901140    | 1       |
| Dr.August Wolff / Phönix   | Wolff <sup>®</sup> base half-fat cream | 90512     | 1       |
| Dr.August Wolff /Anzag     | Wolff <sup>®</sup> base half-fat cream | 8(810800) | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 704050    | 2       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 904670    | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 911220    | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 1110      | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 6480      | 3       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 140340    | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 801140    | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 807640    | 1       |
| Dr.August Wolff GmbH&Co... | Wolff <sup>®</sup> base half-fat cream | 901920    | 1       |
| Dr.August Wolff/ Sanacorp  | Wolff <sup>®</sup> base half-fat cream | 807640    | 1       |
| Dr.August Wolff/AHD        | Wolff <sup>®</sup> base half-fat cream | 707370    | 1       |

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| Supplier                  | Substance                              | Batch              | Spectra |
|---------------------------|----------------------------------------|--------------------|---------|
| Dr. August Wolff/Alliance | Wolff <sup>®</sup> base half-fat cream | 9560               | 1       |
| Dr. August Wolff/Ebert    | Wolff <sup>®</sup> base half-fat cream | 511420             | 2       |
| Dr. August Wolff/Gehe     | Wolff <sup>®</sup> base half-fat cream | 704050             | 2       |
| Dr. August Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 602050             | 3       |
| Dr. August Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 901920             | 4       |
| Dr. August Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 905120             | 1       |
| Dr. August-Wolf/Kehr      | Wolff <sup>®</sup> base half-fat cream | 711250             | 2       |
| Dr. August-Wolff/Phoenix  | Wolff <sup>®</sup> base half-fat cream | 904880             | 1       |
| Dr. Wolf/Sanacorp         | Wolff <sup>®</sup> base half-fat cream | 711250             | 1       |
| Dr. wolff                 | Wolff <sup>®</sup> base half-fat cream | 432611             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 238560             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 236320             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 236420             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 332040             | 11      |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 333620             | 5       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 333930             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 339140             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 337260             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 431240             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 438160             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 434581             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 12081508           | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 501080             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 510400             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 506360             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 605551             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 606050             | 3       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 610991             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 608180             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 701451             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 609950-20170704Ma5 | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 701080             | 8       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 702500             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 704220             | 3       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 704050             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 7075020            | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 707500             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 801140             | 5       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 707370             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 711240             | 3       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 807640             | 5       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 810201             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 807580             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 901140             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 810800             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 904670             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 901920             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 905120             | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 910460             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 904880             | 1       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 909810             | 6       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 1110               | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 9560               | 2       |
| Dr. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 7741               | 1       |
| DR. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 910460             | 1       |
| DR. Wolff                 | Wolff <sup>®</sup> base half-fat cream | 10680              | 1       |
| Dr. Wolff / Gehe          | Wolff <sup>®</sup> base half-fat cream | 705760             | 2       |
| Dr. Wolff / Gehe          | Wolff <sup>®</sup> base half-fat cream | 905120             | 1       |
| Dr. Wolff / Gehe          | Wolff <sup>®</sup> base half-fat cream | 904880             | 1       |
| Dr. Wolff / Jenne         | Wolff <sup>®</sup> base half-fat cream | 905120             | 1       |

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| Supplier                    | Substance                              | Batch      | Spectra |
|-----------------------------|----------------------------------------|------------|---------|
| Dr. Wolff / Jenne           | Wolff <sup>®</sup> base half-fat cream | 901140     | 2       |
| Dr. Wolff / Jenne           | Wolff <sup>®</sup> base half-fat cream | 810201     | 1       |
| Dr. Wolff / Jenne           | Wolff <sup>®</sup> base half-fat cream | 904880     | 2       |
| Dr. Wolff / Jenne           | Wolff <sup>®</sup> base half-fat cream | 908620     | 4       |
| Dr. Wolff / Jenne           | Wolff <sup>®</sup> base half-fat cream | 3542       | 3       |
| Dr. Wolff / Phoenix         | Wolff <sup>®</sup> base half-fat cream | 805720     | 1       |
| Dr. Wolff / Phoenix         | Wolff <sup>®</sup> base half-fat cream | 810800     | 4       |
| Dr. Wolff / Phoenix         | Wolff <sup>®</sup> base half-fat cream | 905120     | 3       |
| Dr. Wolff / Phoenix         | Wolff <sup>®</sup> base half-fat cream | 910460     | 2       |
| Dr. Wolff / Phönix          | Wolff <sup>®</sup> base half-fat cream | 707370     | 2       |
| Dr. Wolff / Phönix          | Wolff <sup>®</sup> base half-fat cream | 711250     | 1       |
| Dr. Wolff / Sanacorp        | Wolff <sup>®</sup> base half-fat cream | 807640     | 2       |
| Dr. Wolff / Alliance        | Wolff <sup>®</sup> base half-fat cream | 801140     | 1       |
| Dr. Wolff / Gehe            | Wolff <sup>®</sup> base half-fat cream | 501870     | 1       |
| Dr. Wolff / Kehr            | Wolff <sup>®</sup> base half-fat cream | 810201     | 2       |
| Dr. Wolff GmbH & Co.KG A... | Wolff <sup>®</sup> base half-fat cream | 432611     | 1       |
| Dr. Wolff GmbH & Co.KG A... | Wolff <sup>®</sup> base half-fat cream | 434581     | 1       |
| Dr. Wolff GmbH & Co.KG A... | Wolff <sup>®</sup> base half-fat cream | 438160     | 1       |
| Dr. Wolff Phönix            | Wolff <sup>®</sup> base half-fat cream | 7742       | 1       |
| Dr. Wolff/                  | Wolff <sup>®</sup> base half-fat cream | 605700     | 1       |
| Dr. Wolff/ Noweda           | Wolff <sup>®</sup> base half-fat cream | 701451     | 2       |
| Dr. Wolff/ Anzag            | Wolff <sup>®</sup> base half-fat cream | 235200     | 1       |
| Dr. Wolff/ Jenne            | Wolff <sup>®</sup> base half-fat cream | 905120     | 1       |
| Dr. Wolff/ Noweda           | Wolff <sup>®</sup> base half-fat cream | 701080     | 1       |
| Dr. Wolff/ Noweda           | Wolff <sup>®</sup> base half-fat cream | 804080     | 1       |
| Dr. Wolff/ Noweda           | Wolff <sup>®</sup> base half-fat cream | 904670     | 1       |
| Dr. Wolff/ Noweda           | Wolff <sup>®</sup> base half-fat cream | 6480       | 1       |
| Dr. Wolff/ Phö              | Wolff <sup>®</sup> base half-fat cream | 801470     | 1       |
| Dr. Wolff/ Phö              | Wolff <sup>®</sup> base half-fat cream | 901140     | 1       |
| Dr. Wolff/ Phoenix          | Wolff <sup>®</sup> base half-fat cream | 501470     | 2       |
| Dr. Wolff/AEP               | Wolff <sup>®</sup> base half-fat cream | 711250     | 1       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 606050     | 1       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 704050     | 2       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 7 (702500) | 1       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 707500     | 1       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 804080     | 1       |
| Dr. Wolff/AHD               | Wolff <sup>®</sup> base half-fat cream | 901930     | 1       |
| Dr. Wolff/Alliance          | Wolff <sup>®</sup> base half-fat cream | 704050     | 4       |
| Dr. Wolff/Anzag             | Wolff <sup>®</sup> base half-fat cream | 608180     | 1       |
| Dr. Wolff/Ebert             | Wolff <sup>®</sup> base half-fat cream | 602290     | 1       |
| Dr. Wolff/Fiebig            | Wolff <sup>®</sup> base half-fat cream | 704050     | 1       |
| Dr. Wolff/Fiebig            | Wolff <sup>®</sup> base half-fat cream | 801140     | 1       |
| Dr. Wolff/Fiebig            | Wolff <sup>®</sup> base half-fat cream | 807640     | 2       |
| Dr. Wolff/Fiebig            | Wolff <sup>®</sup> base half-fat cream | 901920     | 3       |
| Dr. Wolff/Fiebig            | Wolff <sup>®</sup> base half-fat cream | 905120     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 238660     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 506360     | 2       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 602050     | 3       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 605551     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 608180     | 2       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 701451     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 705760     | 2       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 601140     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 810800     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 904880     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 908620     | 1       |
| Dr. Wolff/Gehe              | Wolff <sup>®</sup> base half-fat cream | 910460     | 1       |
| Dr. Wolff/Jenne             | Wolff <sup>®</sup> base half-fat cream | 810201     | 2       |
| Dr. Wolff/Jenne             | Wolff <sup>®</sup> base half-fat cream | 905120     | 1       |
| Dr. Wolff/Kehr              | Wolff <sup>®</sup> base half-fat cream | 707370     | 1       |

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| Supplier           | Substance                              | Batch            | Spectra |
|--------------------|----------------------------------------|------------------|---------|
| Dr. Wolff/NOW      | Wolff <sup>®</sup> base half-fat cream | 432611           | 1       |
| Dr. Wolff/NOW      | Wolff <sup>®</sup> base half-fat cream | 434581           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 234791           | 2       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 238660           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 333930           | 2       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 434360           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 506360           | 3       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 610991           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 170420WBC/605551 | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 170616WBC/610991 | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 170920WBC/610991 | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 705760           | 6       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 701080           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 704220           | 1       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 904670           | 3       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 909810           | 2       |
| Dr. Wolff/Noweda   | Wolff <sup>®</sup> base half-fat cream | 9560             | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 610991           | 5       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 6081800          | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 704050           | 2       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 707370           | 2       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 711250           | 3       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 801470           | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 807640           | 2       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 807580           | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 805720           | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 810800           | 2       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 901920           | 1       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 905120           | 3       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 910460           | 3       |
| Dr. Wolff/Phönix   | Wolff <sup>®</sup> base half-fat cream | 10680            | 1       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 333620           | 1       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 434360           | 1       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 608180           | 3       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 704050           | 4       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 807640           | 1       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 911220           | 1       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 1110             | 4       |
| Dr. Wolff/Sanacorp | Wolff <sup>®</sup> base half-fat cream | 909810           | 1       |
| Dr. Wolff/Spangro  | Wolff <sup>®</sup> base half-fat cream | 807640           | 1       |
| Euro OTC           | Wolff <sup>®</sup> base half-fat cream | 703031           | 3       |
| Euro OTC           | Wolff <sup>®</sup> base half-fat cream | 711240           | 1       |
| Euro OTC           | Wolff <sup>®</sup> base half-fat cream | 510400           | 1       |
| Euro/Gehe          | Wolff <sup>®</sup> base half-fat cream | 431050           | 1       |
| Fagron             | Wolff <sup>®</sup> base half-fat cream | 703031           | 1       |
| Fagron             | Wolff <sup>®</sup> base half-fat cream | 438160           | 1       |
| Fagron             | Wolff <sup>®</sup> base half-fat cream | 236320           | 3       |
| Fagron             | Wolff <sup>®</sup> base half-fat cream | 238560           | 2       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 605551           | 2       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 801140           | 1       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 807640           | 2       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 810201           | 1       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 901140           | 1       |
| Fiebig             | Wolff <sup>®</sup> base half-fat cream | 9560             | 1       |
| Fiebig/ Wolff      | Wolff <sup>®</sup> base half-fat cream | 701451           | 1       |
| Fiebig/DR.Wolf     | Wolff <sup>®</sup> base half-fat cream | 610991           | 3       |
| Fiebig/DR.Wolf     | Wolff <sup>®</sup> base half-fat cream | 707500           | 1       |
| Fiebig/DR.Wolf     | Wolff <sup>®</sup> base half-fat cream | 711240           | 4       |
| gehe               | Wolff <sup>®</sup> base half-fat cream | 807640           | 3       |
| Gehe               | Wolff <sup>®</sup> base half-fat cream | 331551           | 2       |

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| Supplier                   | Substance                              | Batch              | Spectra |
|----------------------------|----------------------------------------|--------------------|---------|
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 431050             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 601880             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 609952             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 702500             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 707370             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 805720             | 2       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 810800             | 5       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 801800             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 910460             | 1       |
| Gehe                       | Wolff <sup>®</sup> base half-fat cream | 143650             | 1       |
| GEHE                       | Wolff <sup>®</sup> base half-fat cream | 801140             | 2       |
| GEHE                       | Wolff <sup>®</sup> base half-fat cream | 807640             | 4       |
| GEHE                       | Wolff <sup>®</sup> base half-fat cream | 901920             | 2       |
| Gehe Chiesi                | Wolff <sup>®</sup> base half-fat cream | 506360-20160615Ma6 | 1       |
| Gehe, Wolff Pharma         | Wolff <sup>®</sup> base half-fat cream | 506360-20160615Ma8 | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 606050             | 1       |
| Gehe/ Wolff                | Wolff <sup>®</sup> base half-fat cream | 510400             | 1       |
| Caelo                      | Wolff <sup>®</sup> base half-fat cream | 601880             | 1       |
| Gehe/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 704050             | 1       |
| Gehe/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 801140             | 1       |
| Geibo                      | Wolff <sup>®</sup> base half-fat cream | 801140             | 1       |
| harn                       | Wolff <sup>®</sup> base half-fat cream | 707500             | 2       |
| harn                       | Wolff <sup>®</sup> base half-fat cream | 704050             | 1       |
| Hedinger/Noweda            | Wolff <sup>®</sup> base half-fat cream | 430880             | 2       |
| Hedinger/Sanacorp          | Wolff <sup>®</sup> base half-fat cream | 705760             | 1       |
| hepart                     | Wolff <sup>®</sup> base half-fat cream | 15001674           | 1       |
| Jenne                      | Wolff <sup>®</sup> base half-fat cream | 801470             | 4       |
| Jenne                      | Wolff <sup>®</sup> base half-fat cream | 908620             | 1       |
| Kehr/Dr. August Wolff      | Wolff <sup>®</sup> base half-fat cream | 705760             | 3       |
| Kehr/Dr. August Wolff      | Wolff <sup>®</sup> base half-fat cream | 801470             | 1       |
| Klosterring                | Wolff <sup>®</sup> base half-fat cream | 804080             | 1       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K0221              | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | 20210204-02K       | 1       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | 20210204K          | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | 202108K            | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K2111              | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K2122              | 1       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K2112              | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K162021            | 2       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K162021-01         | 1       |
| Kreuzäcker Apotheke        | Wolff <sup>®</sup> base half-fat cream | K172021            | 2       |
| Krieger                    | Wolff <sup>®</sup> base half-fat cream | 705760             | 1       |
| Löwen City-Apotheke Bar... | Wolff <sup>®</sup> base half-fat cream | 230200             | 1       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 702500             | 1       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 705760             | 3       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 711250             | 1       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 801470             | 3       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 805720             | 2       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 810201             | 2       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 810800             | 1       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 901140             | 3       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 905120             | 6       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 904880             | 4       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 910460             | 2       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 908620             | 2       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 3542               | 2       |
| Noweda                     | Wolff <sup>®</sup> base half-fat cream | 10550              | 2       |
| Noweda / Dr. August Wolff  | Wolff <sup>®</sup> base half-fat cream | 1110               | 1       |
| Noweda / Dr. August Wolff  | Wolff <sup>®</sup> base half-fat cream | 6480               | 1       |
| Noweda/Dr. August Wolf     | Wolff <sup>®</sup> base half-fat cream | 905120             | 1       |

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| Supplier                     | Substance                              | Batch  | Spectra |
|------------------------------|----------------------------------------|--------|---------|
| Noweda/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 501080 | 2       |
| Noweda/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 510400 | 2       |
| Noweda/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 606050 | 2       |
| Noweda/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 605700 | 1       |
| Noweda/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 7742   | 2       |
| Fagron                       | Wolff <sup>®</sup> base half-fat cream | 901920 | 4       |
| Noweda/Wolff GmbH            | Wolff <sup>®</sup> base half-fat cream | 602290 | 1       |
| Nowedwa/Dr. Wolff            | Wolff <sup>®</sup> base half-fat cream | 436750 | 2       |
| Nowedwa/Dr. Wolff            | Wolff <sup>®</sup> base half-fat cream | 901930 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 434360 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 511420 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 602050 | 3       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 702500 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 3225   | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 610991 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 810201 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 901140 | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 3421   | 1       |
| Phoenix                      | Wolff <sup>®</sup> base half-fat cream | 908620 | 3       |
| Phoenix/Dr. Wolff            | Wolff <sup>®</sup> base half-fat cream | 3542   | 1       |
| Phoenix/Wolff                | Wolff <sup>®</sup> base half-fat cream | 333930 | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 238560 | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 333620 | 2       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 3145   | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 3156   | 2       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 3183   | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 909810 | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 904880 | 1       |
| Phönix                       | Wolff <sup>®</sup> base half-fat cream | 7742   | 2       |
| PHÖNIX                       | Wolff <sup>®</sup> base half-fat cream | 704050 | 4       |
| Phönix / Dr. August Wolff    | Wolff <sup>®</sup> base half-fat cream | 711240 | 1       |
| Phönix / Dr. August Wolff    | Wolff <sup>®</sup> base half-fat cream | 807580 | 1       |
| Phönix / Dr. August Wolff    | Wolff <sup>®</sup> base half-fat cream | 901930 | 1       |
| Phönix / Dr. August Wolff    | Wolff <sup>®</sup> base half-fat cream | 904670 | 1       |
| Phönix / Dr. August Wolff    | Wolff <sup>®</sup> base half-fat cream | 911220 | 2       |
| Phönix /Dr. Wolff            | Wolff <sup>®</sup> base half-fat cream | 910460 | 1       |
| Phönix Gotha                 | Wolff <sup>®</sup> base half-fat cream | 134990 | 1       |
| Phönix Gotha                 | Wolff <sup>®</sup> base half-fat cream | 332040 | 2       |
| Phönix Gotha                 | Wolff <sup>®</sup> base half-fat cream | 801140 | 2       |
| Phönix Gotha                 | Wolff <sup>®</sup> base half-fat cream | 807640 | 2       |
| Phönix WE: 22.09.17 EK...    | Wolff <sup>®</sup> base half-fat cream | 702500 | 1       |
| Phönix, Dr. Wolff, 12.06.... | Wolff <sup>®</sup> base half-fat cream | 911220 | 1       |
| Phönix/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 807640 | 1       |
| Phönix/Dr. Wolff             | Wolff <sup>®</sup> base half-fat cream | 901920 | 2       |
| Euro OTC                     | Wolff <sup>®</sup> base half-fat cream | 602290 | 2       |
| PPL                          | Wolff <sup>®</sup> base half-fat cream | 701451 | 1       |
| PPL                          | Wolff <sup>®</sup> base half-fat cream | 705760 | 7       |
| PPL                          | Wolff <sup>®</sup> base half-fat cream | 601880 | 1       |
| PPL                          | Wolff <sup>®</sup> base half-fat cream | 901140 | 3       |
| PPL                          | Wolff <sup>®</sup> base half-fat cream | 3542   | 3       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 235200 | 2       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 609950 | 3       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 701080 | 1       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 702500 | 2       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 707370 | 4       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 705760 | 2       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 711250 | 11      |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 805720 | 7       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 801470 | 1       |
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 904880 | 3       |

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| Supplier                     | Substance                              | Batch     | Spectra |
|------------------------------|----------------------------------------|-----------|---------|
| Sanacorp                     | Wolff <sup>®</sup> base half-fat cream | 3542      | 1       |
| Sanacorp,                    | Wolff <sup>®</sup> base half-fat cream | 608180    | 2       |
| sanacorp, 43,56EUR , 10.0... | Wolff <sup>®</sup> base half-fat cream | 602050    | 4       |
| Sanacorp/                    | Wolff <sup>®</sup> base half-fat cream | 10550     | 1       |
| Sanacorp/Dr Wolf             | Wolff <sup>®</sup> base half-fat cream | 810800    | 1       |
| Sanacorp/Dr. Wolf            | Wolff <sup>®</sup> base half-fat cream | 704050    | 2       |
| Sanacorp/Dr.Wolff            | Wolff <sup>®</sup> base half-fat cream | 501082    | 1       |
| Sanacorp/Wolff               | Wolff <sup>®</sup> base half-fat cream | 801140    | 4       |
| Sanacorp/Wolff               | Wolff <sup>®</sup> base half-fat cream | 807640    | 2       |
| Sonnenapotheke               | Wolff <sup>®</sup> base half-fat cream | 810800    | 1       |
| SONSTIGE                     | Wolff <sup>®</sup> base half-fat cream | 910450    | 1       |
| SONSTIGE                     | Wolff <sup>®</sup> base half-fat cream | 910460    | 1       |
| Spangropharm                 | Wolff <sup>®</sup> base half-fat cream | 332040    | 1       |
| Spirig/Anzag                 | Wolff <sup>®</sup> base half-fat cream | 234791    | 1       |
| Taoasis                      | Wolff <sup>®</sup> base half-fat cream | 602050    | 1       |
| VDL 05.05.14 Fa.Wolff        | Wolff <sup>®</sup> base half-fat cream | 339140    | 1       |
| VDL;2.7.14                   | Wolff <sup>®</sup> base half-fat cream | 430880    | 3       |
| WE: Sanacorp 18.10.2016...   | Wolff <sup>®</sup> base half-fat cream | 601880    | 1       |
| WEPA/WEPA                    | Wolff <sup>®</sup> base half-fat cream | LOTAP0046 | 2       |
| Woff GmbH                    | Wolff <sup>®</sup> base half-fat cream | 501080    | 1       |
| Wolf                         | Wolff <sup>®</sup> base half-fat cream | 511420    | 1       |
| Wolf/Phönix                  | Wolff <sup>®</sup> base half-fat cream | 430880    | 2       |
| wolff                        | Wolff <sup>®</sup> base half-fat cream | 431050    | 1       |
| wolff                        | Wolff <sup>®</sup> base half-fat cream | 431240    | 1       |
| wolff                        | Wolff <sup>®</sup> base half-fat cream | 801140    | 2       |
| wolff                        | Wolff <sup>®</sup> base half-fat cream | 610991    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 238660    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 333930    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 430880    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 431240    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 436750    | 3       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 501080    | 3       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 501870    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 506360    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 601880    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 602290    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 606050    | 3       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 707500    | 4       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 801140    | 3       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 704050    | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 711240    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 901930    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 904670    | 2       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 911220    | 5       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 1110      | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 6480      | 3       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 7742      | 1       |
| Wolff                        | Wolff <sup>®</sup> base half-fat cream | 240249    | 1       |
| Wolff / Phönix               | Wolff <sup>®</sup> base half-fat cream | 910460    | 1       |
| Wolff Basis Creme            | Wolff <sup>®</sup> base half-fat cream | 602290    | 1       |
| Wolff Basiscreme             | Wolff <sup>®</sup> base half-fat cream | 707370    | 1       |
| Wolff GmbH                   | Wolff <sup>®</sup> base half-fat cream | 238560    | 1       |
| Wolff GmbH                   | Wolff <sup>®</sup> base half-fat cream | 230870    | 1       |
| Wolff GmbH / Noweda          | Wolff <sup>®</sup> base half-fat cream | 434360    | 3       |
| Wolff GmbH / Noweda          | Wolff <sup>®</sup> base half-fat cream | 501470    | 1       |
| wolff GmbH/AHD 21.09.2015    | Wolff <sup>®</sup> base half-fat cream | 438340    | 1       |
| Wolff GmbH/Sanacorp          | Wolff <sup>®</sup> base half-fat cream | 339140    | 1       |
| Wolff vdl 09.01.15           | Wolff <sup>®</sup> base half-fat cream | 434360    | 2       |
| Wolff/ Anzag                 | Wolff <sup>®</sup> base half-fat cream | 501470    | 1       |
| Wolff/ Anzag                 | Wolff <sup>®</sup> base half-fat cream | 807640    | 1       |

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| Supplier                   | Substance                              | Batch                | Spectra |
|----------------------------|----------------------------------------|----------------------|---------|
| Wolff/ Gehe                | Wolff <sup>®</sup> base half-fat cream | 434360               | 1       |
| Wolff/ Phönix              | Wolff <sup>®</sup> base half-fat cream | 430880               | 2       |
| Wolff/ Sanacorp            | Wolff <sup>®</sup> base half-fat cream | 810201               | 2       |
| Wolff/ Sanacorp            | Wolff <sup>®</sup> base half-fat cream | 901140               | 2       |
| Wolff/ Sanacorp            | Wolff <sup>®</sup> base half-fat cream | 909810               | 1       |
| Wolff/4                    | Wolff <sup>®</sup> base half-fat cream | 810800               | 1       |
| Wolff/AEP                  | Wolff <sup>®</sup> base half-fat cream | 805720               | 4       |
| Wolff/AEP                  | Wolff <sup>®</sup> base half-fat cream | 810800               | 4       |
| Wolff/AEP                  | Wolff <sup>®</sup> base half-fat cream | 905120               | 5       |
| Wolff/AHCA                 | Wolff <sup>®</sup> base half-fat cream | 702500               | 1       |
| Wolff/AHCA                 | Wolff <sup>®</sup> base half-fat cream | 707370               | 2       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 331551               | 8       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 332040               | 5       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 510621               | 1       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 701451               | 2       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 711250               | 1       |
| Wolff/AHD                  | Wolff <sup>®</sup> base half-fat cream | 810800               | 1       |
| Wolff/Alliance             | Wolff <sup>®</sup> base half-fat cream | 430880               | 1       |
| Wolff/Alliance             | Wolff <sup>®</sup> base half-fat cream | 436750               | 1       |
| Wolff/Alliance             | Wolff <sup>®</sup> base half-fat cream | 511420               | 1       |
| Wolff/Alliance             | Wolff <sup>®</sup> base half-fat cream | 608180               | 2       |
| Wolff/Anzag                | Wolff <sup>®</sup> base half-fat cream | 905120               | 2       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 236420               | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 609950-20171106Ma8   | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 705760-20171127Ma10  | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 609950-20171127Ma9   | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 705760               | 2       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 711250-W20190115Ma12 | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 807580               | 3       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 807640               | 1       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream | 901920               | 3       |
| Wolff/Gehe 8.11.17         | Wolff <sup>®</sup> base half-fat cream | 702500-20180619Ma9   | 1       |
| Wolff/Gehe 707370-20180... | Wolff <sup>®</sup> base half-fat cream | 707370-20180830Ma9   | 1       |
| Wolff/Jenne                | Wolff <sup>®</sup> base half-fat cream | 705760               | 2       |
| Wolff/Jenne                | Wolff <sup>®</sup> base half-fat cream | 801470               | 1       |
| Wolff/Krieger              | Wolff <sup>®</sup> base half-fat cream | 705760               | 1       |
| Wolff/Krieger              | Wolff <sup>®</sup> base half-fat cream | 810201               | 6       |
| Wolff/Noweda               | Wolff <sup>®</sup> base half-fat cream | 432611               | 2       |
| Wolff/Noweda               | Wolff <sup>®</sup> base half-fat cream | 511420               | 1       |
| Wolff/Noweda               | Wolff <sup>®</sup> base half-fat cream | 702500               | 1       |
| Wolff/Noweda               | Wolff <sup>®</sup> base half-fat cream | 901930               | 2       |
| Wolff/Noweda               | Wolff <sup>®</sup> base half-fat cream | 6480                 | 1       |
| Wolff/Phoenix              | Wolff <sup>®</sup> base half-fat cream | 4715E-03719          | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 501470               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 438160               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 608180               | 5       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 801140               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 711240               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 807640               | 9       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 805720               | 4       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 810800               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 807580               | 1       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 901920               | 3       |
| Wolff/Phönix               | Wolff <sup>®</sup> base half-fat cream | 3542                 | 1       |
| Wolff/SAnac                | Wolff <sup>®</sup> base half-fat cream | 7742                 | 1       |
| Wolff/SAnac                | Wolff <sup>®</sup> base half-fat cream | AP210311-04          | 1       |
| Wolff/Sanacorp             | Wolff <sup>®</sup> base half-fat cream | 238560               | 1       |
| Wolff/Sanacorp             | Wolff <sup>®</sup> base half-fat cream | 501470               | 1       |
| Wolff/Sanacorp             | Wolff <sup>®</sup> base half-fat cream | 602050               | 3       |
| Wolff/Sanacorp             | Wolff <sup>®</sup> base half-fat cream | 140340               | 2       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Wolff/Spangro              | Wolff® base half-fat cream      | 801140           | 1       |
| wolff/AHD                  | Wolff® base half-fat cream      | 431240           | 1       |
| wolff/AHD                  | Wolff® base half-fat cream      | 605551           | 1       |
|                            | Anionic hydrophilic cream DAB   | 293437           | 1       |
| AHD 12.5.14, Preis 6,00    | Anionic hydrophilic cream DAB   |                  | 1       |
| Bombastus                  | Anionic hydrophilic cream DAB   |                  | 6       |
| Caelo                      | Anionic hydrophilic cream DAB   |                  | 38      |
| Caelo                      | Anionic hydrophilic cream DAB   | 14138901         | 7       |
| Caelo                      | Anionic hydrophilic cream DAB   | 154009           | 1       |
|                            | Anionic hydrophilic cream DAB   | 285597           | 1       |
|                            | Anionic hydrophilic cream SR... | 277637           | 2       |
|                            | Anionic hydrophilic cream SR... | 110913           | 1       |
| Euro OTC                   | Anionic hydrophilic cream SR... |                  | 3       |
| Apomix Halle               | Anionic hydrophilic cream SR... |                  | 1       |
| Bombastus                  | Anionic hydrophilic cream SR... | 280574           | 4       |
| Bombastus                  | Anionic hydrophilic cream SR... | 19000650         | 7       |
| Bombastus                  | Anionic hydrophilic cream SR... | 288882           | 5       |
| BOMBATUS                   | Anionic hydrophilic cream SR... |                  | 1       |
|                            | Anionic hydrophilic cream SR... | 14182102         | 1       |
| Caelo                      | Anionic hydrophilic cream SR... | 14063303         | 2       |
| Sanacorp                   | Anionic hydrophilic cream SR... |                  | 4       |
| Caelo                      | Anionic hydrophilic cream wi... | 12221002         | 7       |
| Caelo                      | Anionic hydrophilic cream wi... | 13244401         | 14      |
| Caelo                      | Anionic hydrophilic cream wi... | 13343401         | 22      |
| Caelo                      | Anionic hydrophilic cream wi... | 14030701         | 27      |
| Caelo                      | Anionic hydrophilic cream wi... | 15048501         | 18      |
|                            | Base cream, hydrophobic DAC     | 141318           | 1       |
| Caelo                      | Base cream, hydrophobic DAC     | 15221202         | 24      |
|                            | Base cream, hydrophobic DAC     | 16293901         | 1       |
|                            | Base cream, hydrophobic DAC     | 12229302         | 2       |
| Caelo                      | Base cream, hydrophobic DAC     | 12151602         | 6       |
| Caelo                      | Base cream, hydrophobic DAC     | 12308102         | 4       |
| Caelo                      | Base cream, hydrophobic DAC     | 13085601         | 13      |
| Caelo                      | Base cream, hydrophobic DAC     | 14028101         | 23      |
| Fagron                     | Base cream, hydrophobic DAC     | 17C06-T08-042287 | 16      |
| Fagron                     | Base cream, hydrophobic DAC     | 18L18-T09-062847 | 2       |
| Fiebig infectopharm        | Base cream, hydrophobic DAC     |                  | 1       |
| infectopharm               | Base cream, hydrophobic DAC     |                  | 2       |
|                            | Base cream, hydrophobic DAC     | 160825           | 1       |
|                            | Base cream, hydrophobic DAC     | 162169           | 1       |
| Pharmachem                 | Base cream, hydrophobic DAC     | 150404           | 3       |
| Pharmachem                 | Base cream, hydrophobic DAC     | 160825           | 11      |
| Phönix / InfectoPharm      | Base cream, hydrophobic DAC     |                  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 12A160419        | 1       |
| Caelo                      | Hydrophilic cream, non-ionic... | 14304902         | 7       |
| Caesar &Loretz GmbH        | Hydrophilic cream, non-ionic... |                  | 1       |
| Fagron                     | Hydrophilic cream, non-ionic... | 15A110619        | 2       |
| Hedinger/Fiebig            | Hydrophilic cream, non-ionic... |                  | 1       |
| Phönix                     | Hydrophilic cream, non-ionic... |                  | 1       |
| apomix                     | Hydrophilic cream, non-ionic... | 25B081215        | 1       |
| Fagron                     | Transdermal base cream          | 12H17-T02-000281 | 1       |
| Fagron                     | Transdermal base cream          | 15A28-T10-018922 | 3       |
| Fagron                     | Transdermal base cream          | 1805581/1        | 7       |
| Fagron                     | Transdermal base cream          | 20003335         | 4       |
| Fagron                     | Transdermal base cream          | 20003334         | 3       |
| Dr. August Wolff GmbH &... | Wolff® base half-fat cream      |                  | 1       |
| Dr. August Wolff GmbH &... | Wolff® base half-fat cream      |                  | 1       |
| Dr. Wolff                  | Wolff® base half-fat cream      | 331551           | 2       |
| Dr. Wolff                  | Wolff® base half-fat cream      | 432611           | 1       |
| Dr. Wolff                  | Wolff® base half-fat cream      |                  | 1       |

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| Supplier                   | Substance                              | Batch | Spectra |
|----------------------------|----------------------------------------|-------|---------|
| Dr. Wolff/Gehe             | Wolff <sup>®</sup> base half-fat cream |       | 1       |
| Dr. Wolff/Noweda           | Wolff <sup>®</sup> base half-fat cream |       | 1       |
| VDL 28.04.2014;Preis:45... | Wolff <sup>®</sup> base half-fat cream |       | 1       |
| Wolff,Gehe                 | Wolff <sup>®</sup> base half-fat cream |       | 2       |
| Wolff/Gehe                 | Wolff <sup>®</sup> base half-fat cream |       | 1       |

- 213 712 spectra from 1119 *Apo-Ident* customers from a total of 41 848 batches from a further 331 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Hydrophilic ointments* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Hydrophilic ointments* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 5870          | 0              | 58 069        |
| <b>Type B</b> | 0              | 15 623        | 0              | 75 630        |
| <b>Type C</b> | 0              | 27 481        | 170            | 213 568       |

The substance/substance group *Hydrophilic ointments* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9796 %) | 100.0000 % (> 99.8978 %) |
| <b>Type B</b> | 100.0000 % (> 99.9657 %) | 100.0000 % (> 99.9616 %) |
| <b>Type C</b> | 100.0000 % (> 99.6931 %) | 99.3852 % (> 99.3743 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Hydrophilic ointments* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Non-ionic hydrophil ointment              | 9.96                      | —                                 |
| Lanette® ointment (conserved)             | 15.85                     | —                                 |
| Glycolic acid 70%                         | 24.36                     | —                                 |
| Psorisol base cream Audor®                | 28.21                     | —                                 |
| Base cream DAC                            | 31.69                     | —                                 |
| Hydrated liniment SR/DAC (NRF p.40)       | 33.92                     | —                                 |
| Non-ionic hydrous liniment SR/DAC (NRF... | 35.58                     | —                                 |
| Gel Cordes®                               | 41.49                     | —                                 |
| Lotio Cordes®                             | 43.52                     | —                                 |
| Sodium laureth sulfate solution 27%       | 44.04                     | —                                 |
| Potash soap DAC                           | 44.91                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Hydrophilic ointments* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30631     | 30837                  | 9.02                            | 34.75                              |
| 30758     | 31907                  | 6.51                            | 37.21                              |
| 30769     | 30769                  | 0.00                            | 25.80                              |
| 30837     | 30837                  | 0.00                            | 33.66                              |
| 30880     | 31741                  | 6.54                            | 31.28                              |
| 30895     | 32387                  | 5.78                            | 32.24                              |
| 30931     | 31478                  | 10.73                           | 32.47                              |
| 31002     | 31907                  | 3.12                            | 35.55                              |
| 31008     | 31008                  | 0.00                            | 21.03                              |
| 31039     | 31039                  | 0.00                            | 29.37                              |
| 31040     | 31503                  | 4.93                            | 28.60                              |
| 31042     | 31008                  | 9.34                            | 23.19                              |
| 31054     | 31054                  | 0.00                            | 30.42                              |
| 31086     | 30837                  | 13.12                           | 31.93                              |
| 31188     | 31188                  | 0.00                            | 26.10                              |
| 31231     | 31231                  | 0.00                            | 35.01                              |
| 31241     | 31741                  | 3.47                            | 37.87                              |
| 31440     | 31440                  | 0.00                            | 27.14                              |
| 31450     | 32115                  | 3.03                            | 24.57                              |
| 31470     | 32131                  | 2.25                            | 35.56                              |
| 31477     | 31188                  | 3.31                            | 24.95                              |
| 31478     | 31478                  | 0.00                            | 29.92                              |
| 31487     | 30837                  | 19.99                           | 31.14                              |
| 31500     | 31500                  | 0.00                            | 27.96                              |
| 31503     | 31503                  | 0.00                            | 31.08                              |
| 31515     | 31515                  | 0.00                            | 39.01                              |
| 31516     | 32387                  | 11.80                           | 34.45                              |
| 31537     | 31537                  | 0.00                            | 33.08                              |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31565            | 35617                      | 5.99                                | 29.18                                  |
| 31568            | 30769                      | 4.80                                | 25.82                                  |
| 31591            | 32124                      | 5.30                                | 24.82                                  |
| 31593            | 31996                      | 3.58                                | 26.27                                  |
| 31599            | 31188                      | 2.57                                | 25.84                                  |
| 31600            | 31039                      | 7.38                                | 30.55                                  |
| 31644            | 31799                      | 3.33                                | 36.81                                  |
| 31661            | 32126                      | 6.94                                | 36.48                                  |
| 31741            | 31741                      | 0.00                                | 34.30                                  |
| 31799            | 31799                      | 0.00                                | 36.56                                  |
| 31906            | 31906                      | 0.00                                | 34.20                                  |
| 31907            | 31907                      | 0.00                                | 35.02                                  |
| 31962            | 32029                      | 11.54                               | 33.83                                  |
| 31996            | 31996                      | 0.00                                | 26.57                                  |
| 32022            | 32022                      | 0.00                                | 28.97                                  |
| 32023            | 32023                      | 0.00                                | 29.20                                  |
| 32024            | 32024                      | 0.00                                | 30.32                                  |
| 32025            | 32025                      | 0.00                                | 30.40                                  |
| 32026            | 32026                      | 0.00                                | 29.37                                  |
| 32027            | 32027                      | 0.00                                | 30.34                                  |
| 32028            | 32028                      | 0.00                                | 28.96                                  |
| 32029            | 32029                      | 0.00                                | 30.52                                  |
| 32030            | 32030                      | 0.00                                | 30.52                                  |
| 32031            | 32031                      | 0.00                                | 29.11                                  |
| 32032            | 32032                      | 0.00                                | 29.68                                  |
| 32038            | 32038                      | 0.00                                | 30.58                                  |
| 32039            | 32039                      | 0.00                                | 21.44                                  |
| 32052            | 32052                      | 0.00                                | 28.53                                  |
| 32053            | 32053                      | 0.00                                | 28.62                                  |
| 32115            | 32115                      | 0.00                                | 24.50                                  |
| 32116            | 32116                      | 0.00                                | 24.44                                  |
| 32123            | 32123                      | 0.00                                | 26.74                                  |
| 32124            | 32124                      | 0.00                                | 26.10                                  |
| 32125            | 32125                      | 0.00                                | 25.32                                  |
| 32126            | 32126                      | 0.00                                | 26.76                                  |
| 32127            | 32127                      | 0.00                                | 25.61                                  |
| 32128            | 32128                      | 0.00                                | 25.52                                  |
| 32129            | 32129                      | 0.00                                | 37.15                                  |
| 32130            | 32130                      | 0.00                                | 26.39                                  |
| 32131            | 32131                      | 0.00                                | 36.15                                  |
| 32132            | 32132                      | 0.00                                | 31.77                                  |
| 32141            | 32141                      | 0.00                                | 35.62                                  |
| 32142            | 32142                      | 0.00                                | 20.56                                  |
| 32225            | 32225                      | 0.00                                | 25.12                                  |
| 32303            | 31799                      | 2.27                                | 34.51                                  |
| 32346            | 31008                      | 5.48                                | 21.66                                  |
| 32386            | 32386                      | 0.00                                | 25.77                                  |
| 32387            | 32387                      | 0.00                                | 27.24                                  |
| 32435            | 32435                      | 0.00                                | 27.52                                  |
| 32436            | 32436                      | 0.00                                | 28.97                                  |
| 32620            | 32620                      | 0.00                                | 41.28                                  |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32621            | 32621                      | 0.00                                | 25.80                                  |
| 32882            | 32882                      | 0.00                                | 40.82                                  |
| 33295            | 31503                      | 5.58                                | 27.72                                  |
| 33354            | 33354                      | 0.00                                | 37.00                                  |
| 33595            | 33595                      | 0.00                                | 36.95                                  |
| 33641            | 32053                      | 10.08                               | 31.13                                  |
| 33964            | 31799                      | 8.71                                | 39.08                                  |
| 34267            | 34267                      | 0.00                                | 35.76                                  |
| 34506            | 32115                      | 2.52                                | 26.47                                  |
| 34507            | 32115                      | 1.99                                | 26.35                                  |
| 34508            | 31996                      | 4.28                                | 27.15                                  |
| 34525            | 35617                      | 4.58                                | 25.76                                  |
| 34544            | 34544                      | 0.00                                | 33.08                                  |
| 34598            | 31907                      | 3.77                                | 34.73                                  |
| 34680            | 31039                      | 7.41                                | 30.58                                  |
| 34681            | 32115                      | 1.49                                | 24.43                                  |
| 34683            | 35617                      | 3.27                                | 26.06                                  |
| 34689            | 30837                      | 12.52                               | 31.41                                  |
| 34763            | 32032                      | 8.10                                | 26.99                                  |
| 34791            | 34791                      | 0.00                                | 32.76                                  |
| 34822            | 34822                      | 0.00                                | 35.00                                  |
| 34850            | 34850                      | 0.00                                | 37.82                                  |
| 35086            | 32032                      | 8.94                                | 23.25                                  |
| 35092            | 35092                      | 0.00                                | 40.66                                  |
| 35096            | 35096                      | 0.00                                | 28.51                                  |
| 35099            | 35099                      | 0.00                                | 41.78                                  |
| 35169            | 35169                      | 0.00                                | 42.12                                  |
| 35170            | 35170                      | 0.00                                | 43.05                                  |
| 35291            | 32029                      | 12.57                               | 33.84                                  |
| 35292            | 31799                      | 11.36                               | 35.35                                  |
| 35367            | 35367                      | 0.00                                | 40.61                                  |
| 35368            | 35368                      | 0.00                                | 40.05                                  |
| 35383            | 35383                      | 0.00                                | 35.09                                  |
| 35384            | 35384                      | 0.00                                | 34.46                                  |
| 35385            | 35385                      | 0.00                                | 34.05                                  |
| 35386            | 35386                      | 0.00                                | 34.76                                  |
| 35389            | 35389                      | 0.00                                | 35.16                                  |
| 35390            | 35390                      | 0.00                                | 33.06                                  |
| 35393            | 35393                      | 0.00                                | 33.66                                  |
| 35394            | 35394                      | 0.00                                | 33.00                                  |
| 35397            | 35397                      | 0.00                                | 33.79                                  |
| 35398            | 35398                      | 0.00                                | 35.57                                  |
| 35399            | 35399                      | 0.00                                | 32.96                                  |
| 35461            | 32032                      | 6.89                                | 24.76                                  |
| 35531            | 35531                      | 0.00                                | 31.09                                  |
| 35535            | 35535                      | 0.00                                | 30.97                                  |
| 35564            | 35564                      | 0.00                                | 31.14                                  |
| 35614            | 35614                      | 0.00                                | 27.68                                  |
| 35617            | 35617                      | 0.00                                | 27.22                                  |
| 35640            | 35640                      | 0.00                                | 36.64                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Hydroxyethyl salicylate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30638-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Hydroxyethyl salicylate; Hydroxyethylis salicylas

### Special notes

When selecting the *Hydroxyethyl salicylate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Hydroxyethyl salicylate   | 5      | 3      | 13     |



## Second-stage model

For differentiation of the substance/substance group *Hydroxyethyl salicylate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Hydroxyethyl salicylate*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Hydroxyethyl sal... | 12049001 | 30638     | 40      | 1402192     |
| Caelo    | Hydroxyethyl sal... | 13285709 | 31339     | 40      | 20130918    |
| Caelo    | Hydroxyethyl sal... | 191112   | 34651     | 40      | 20190606*   |
| Caelo    | Hydroxyethyl sal... | 20003330 | 35719     | 50      | 20201203*   |
| Caelo    | Hydroxyethyl sal... | 20003489 | 35721     | 50      | 20201203*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Hydroxyethyl salicylate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Hydroxyethyl salicylate*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance               | Batch    | Sample ID | Spectra |
|----------|-------------------------|----------|-----------|---------|
| Caelo    | Hydroxyethyl salicylate | 16131002 | 32588     | 40      |
| Caelo    | Hydroxyethyl salicylate | 16131009 | 33241     | 40      |
| Caelo    | Hydroxyethyl salicylate | 172740   | 34226     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 18 spectra from 13 *Apo-Ident* customers from 13 batches from the substance/substance group *Hydroxyethyl salicylate*.
- Among them are spectra of independent samples from 13 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance               | Batch     | Spectra |
|----------------------|-------------------------|-----------|---------|
| Caelo                | Hydroxyethyl salicylate | 2091302   | 1       |
| Caelo                | Hydroxyethyl salicylate | 13285702  | 2       |
| Caelo                | Hydroxyethyl salicylate | 15414906  | 2       |
| Caelo                | Hydroxyethyl salicylate | 19111205  | 1       |
| Caelo                | Hydroxyethyl salicylate | 16131002  | 1       |
| Caelo                | Hydroxyethyl salicylate | 15004301  | 1       |
| Caelo                | Hydroxyethyl salicylate | 16131011  | 1       |
| Caelo                | Hydroxyethyl salicylate | 19111202  | 2       |
| Caelo                | Hydroxyethyl salicylate | 16131006  | 1       |
| Caelo                | Hydroxyethyl salicylate | 1727407   | 1       |
| Caesar & Loretz GmbH | Hydroxyethyl salicylate | 193088004 | 1       |
| caleo                | Hydroxyethyl salicylate | 193088004 | 1       |
| Fiebig               | Hydroxyethyl salicylate | 16131009  | 1       |
| Fiebig               | Hydroxyethyl salicylate | 17274002  | 1       |
| Phönix/CaesarLoretz  | Hydroxyethyl salicylate | 17274002  | 1       |

- 241 345 spectra from 1121 *Apo-Ident* customers from a total of 46 994 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Hydroxyethyl salicylate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Hydroxyethyl salicylate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 220           | 0              | 63 719        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 18            | 0              | 241 345       |

The substance/substance group *Hydroxyethyl salicylate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6854 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Hydroxyethyl salicylate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance      | Distance in main model | Distance in second-stage model |
|----------------|------------------------|--------------------------------|
| Phenoxyethanol | 59.77                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Hydroxyethyl salicylate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30638     | 30638               | 0.00                         | 71.49                           |
| 31339     | 35721               | 5.75                         | 64.71                           |
| 34651     | 34651               | 0.00                         | 65.75                           |
| 35719     | 35719               | 0.00                         | 68.33                           |
| 35721     | 35721               | 0.00                         | 70.02                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at

least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Isopropyl alcohol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30759-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Isopropyl alcohol; Alcohol isopropylicus

### Special notes

When selecting the *Isopropyl alcohol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Isopropyl alcohol         | 6      | 3      | 1342   |

## Second-stage model

For differentiation of the substance/substance group *Isopropyl alcohol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Isopropyl alcohol*:

| Supplier | Substance         | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------------|----------|-----------|---------|-------------|
| apomix   | Isopropyl alcohol | 4103112  | 31517     | 60      | 1505476     |
| Caelo    | Isopropyl alcohol | 12321002 | 30759     | 40      | 20121102    |
| Caelo    | Isopropyl alcohol | 13249425 | 31232     | 40      | 20130726    |
| Caelo    | Isopropyl alcohol | 14051031 | 31386     | 40      | 20140214    |
| Hedinger | Isopropyl alcohol | 070835B  | 32817     | 40      | 20160712    |
| Hedinger | Isopropyl alcohol | 070922B  | 33256     | 40      | 20170307    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 260 spectra of 6 reference samples from the substance/substance group *Isopropyl alcohol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 679 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Isopropyl alcohol*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier | Substance         | Batch       | Sample ID | Spectra |
|----------|-------------------|-------------|-----------|---------|
| Caelo    | Isopropyl alcohol | 17300401    | 33938     | 40      |
| Caelo    | Isopropyl alcohol | 20001912017 | 35090     | 40      |
| Caelo    | Isopropyl alcohol | 20003673    | 35250     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3890 spectra from 791 *Apo-Ident* customers from 1372 batches from the substance/substance group *Isopropyl alcohol*.
- Among them are spectra of independent samples from 1340 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance         | Batch       | Spectra |
|----------------------------|-------------------|-------------|---------|
| 070879B                    | Isopropyl alcohol | 70879B      | 1       |
| 17189301                   | Isopropyl alcohol | 17300430    | 1       |
| A. Hedinger / Kehr         | Isopropyl alcohol | 70614B      | 1       |
| A. Hedinger / Kehr         | Isopropyl alcohol | 707158      | 1       |
| A. Hedinger / Kehr         | Isopropyl alcohol | 708358      | 1       |
| A. Hedinger / Noweda       | Isopropyl alcohol | 706598      | 2       |
| A. Hedinger/Kehr           | Isopropyl alcohol | 709088      | 1       |
| A.Hedinger / Kehr          | Isopropyl alcohol | 70659B      | 1       |
| A.Hedinger/Sana            | Isopropyl alcohol | 701020B     | 1       |
| AEP                        | Isopropyl alcohol | 701054B     | 1       |
| AH/Hedinger                | Isopropyl alcohol | 70889B      | 1       |
| AHD                        | Isopropyl alcohol | 70614B      | 1       |
| AHD                        | Isopropyl alcohol | 70643B      | 1       |
| AHD                        | Isopropyl alcohol | 70892B      | 1       |
| AHD                        | Isopropyl alcohol | 70898B      | 1       |
| AHD                        | Isopropyl alcohol | 70994B      | 1       |
| AHD                        | Isopropyl alcohol | 7011148     | 1       |
| AHD                        | Isopropyl alcohol | 71145B      | 1       |
| AHD                        | Isopropyl alcohol | 20001179012 | 1       |
| AHD                        | Isopropyl alcohol | 192098001   | 1       |
| AHD /Hedinger              | Isopropyl alcohol | 70666B      | 1       |
| AHD Hedinger 2.3.20 EK:... | Isopropyl alcohol | 701173B     | 1       |
| AHD/Hedinger               | Isopropyl alcohol | 70763B      | 1       |
| AHD/Hedinger               | Isopropyl alcohol | 70994B      | 1       |
| AHD/Hedinger               | Isopropyl alcohol | 701156B     | 1       |
| AHD/Hedinger               | Isopropyl alcohol | 701173B     | 2       |
| AHL                        | Isopropyl alcohol | 70835B      | 1       |
| AHL                        | Isopropyl alcohol | 709558      | 1       |
| Alkoholvertrieb Süd        | Isopropyl alcohol | Sorte702    | 1       |
| Allianc. Health. / Hedi... | Isopropyl alcohol | 70762B      | 1       |
| Allianc. Healthc. / Hed... | Isopropyl alcohol | 70730B      | 1       |
| Allianc. Healthc. / Hed... | Isopropyl alcohol | 70837B      | 1       |
| Alliance Healthcare        | Isopropyl alcohol | 701065B     | 1       |
| Alliance Healthcare        | Isopropyl alcohol | 701139B     | 1       |
| Alliance Healthcare        | Isopropyl alcohol | 701158B     | 2       |

*continued on the next page*

*continued from previous page*

| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Alliance Healthcare        | Isopropyl alcohol | 701173B      | 2              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 70536B       | 1              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 70577B       | 1              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 70578B       | 1              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 70627B       | 1              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 70680B       | 1              |
| Alliance Healthcare/Hed... | Isopropyl alcohol | 701031B      | 1              |
| Caelo                      | Isopropyl alcohol | 14219204     | 2              |
| Caelo                      | Isopropyl alcohol | 20001179031  | 1              |
| Allianz Healthcare         | Isopropyl alcohol | 70896b       | 1              |
| Angaz/Caesar & Loretz G... | Isopropyl alcohol | 19059532     | 1              |
| Anzag                      | Isopropyl alcohol | 70471B       | 1              |
| Anzag                      | Isopropyl alcohol | 70459B       | 1              |
| Anzag                      | Isopropyl alcohol | 70495B       | 1              |
| Anzag                      | Isopropyl alcohol | 7059B        | 1              |
| Anzag                      | Isopropyl alcohol | 70578B       | 2              |
| Anzag                      | Isopropyl alcohol | 14716        | 1              |
| Anzag                      | Isopropyl alcohol | 14717        | 1              |
| Anzag                      | Isopropyl alcohol | 70720B       | 1              |
| Anzag                      | Isopropyl alcohol | 70835B       | 1              |
| Anzag                      | Isopropyl alcohol | 701020B      | 1              |
| Anzag                      | Isopropyl alcohol | 701099B      | 1              |
| Anzag                      | Isopropyl alcohol | 190595625    | 2              |
| Anzag                      | Isopropyl alcohol | 701156B      | 1              |
| anzag / fischer            | Isopropyl alcohol | 1000031      | 1              |
| Anzag 08.02.2013           | Isopropyl alcohol | 70500B       | 1              |
| Caelo                      | Isopropyl alcohol | 12179311     | 1              |
| Caelo                      | Isopropyl alcohol | 12321023     | 1              |
| Caelo                      | Isopropyl alcohol | 6324064      | 1              |
| Caelo                      | Isopropyl alcohol | 17189329     | 1              |
| Caelo                      | Isopropyl alcohol | 19209811     | 2              |
| Anzag/Hedinger             | Isopropyl alcohol | 70495B       | 1              |
| Anzag/Hedinger             | Isopropyl alcohol | 70562B       | 1              |
| Anzag/Hedinger             | Isopropyl alcohol | 70592B       | 1              |
| Anzag/Hedinger             | Isopropyl alcohol | 70835B       | 1              |
| Anzag/Hedinger 07.05.20    | Isopropyl alcohol | 701201B      | 2              |
| Anzag/Seeger               | Isopropyl alcohol | 70527B       | 1              |
| Apot.Elisabeth Bartel      | Isopropyl alcohol | 701258B      | 1              |
| Apoth.E.Bartel             | Isopropyl alcohol | 70545B       | 2              |
| Audor Pharma               | Isopropyl alcohol | 70720B       | 2              |
| Aug. Hedinger GmbH         | Isopropyl alcohol | 701105B      | 1              |
| Aug. Hedinger GmbH & Co... | Isopropyl alcohol | 501114B      | 1              |
| Aug. Hedinger GmbH & Co... | Isopropyl alcohol | 70768B       | 1              |
| Aug. Hedinger GmbH & Co... | Isopropyl alcohol | 70671B       | 1              |
| Aug. Hedinger GmbH & Co... | Isopropyl alcohol | 701123B      | 1              |
| Aug. hedinger/N/PZN:074... | Isopropyl alcohol | 70659B       | 1              |
| AUG.HEDINGER GMBH          | Isopropyl alcohol | 70994B       | 1              |
| Aug.Hedinger/Anzag         | Isopropyl alcohol | 701031B      | 1              |
| Aug.Hedinger/Noweda        | Isopropyl alcohol | 70488B       | 1              |
| Aug.Hedinger/Noweda        | Isopropyl alcohol | 7010718      | 1              |
| August Hed./Sanacorp       | Isopropyl alcohol | 701031B      | 1              |
| August Hedinger            | Isopropyl alcohol | 70675B       | 1              |
| August Hedinger            | Isopropyl alcohol | 701011B      | 1              |
| August Hedinger            | Isopropyl alcohol | 70923B       | 1              |
| August Hedinger/Sanacorp   | Isopropyl alcohol | 701136B      | 1              |
| Azur GmbH                  | Isopropyl alcohol | 170126       | 1              |
| Bahnhof-Apothek/Bahnhof... | Isopropyl alcohol | 701052B      | 1              |
| Bartel/Gehe                | Isopropyl alcohol | 70788B       | 2              |
| BCD/Walter-CMP             | Isopropyl alcohol | 986640       | 1              |
| Bergchemie                 | Isopropyl alcohol | 14134711     | 1              |

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| <b>Supplier</b>    | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-------------------|--------------|----------------|
| Berkel Ahk         | Isopropyl alcohol | 190220/IPA   | 1              |
| Berkel AHK         | Isopropyl alcohol | 190220/IPA   | 1              |
| Berkel AHK         | Isopropyl alcohol | 250320/IPA   | 1              |
| Berkel AHK         | Isopropyl alcohol | 80420/IPA    | 1              |
| Berkel AHK Berlin  | Isopropyl alcohol | 190220/IPA   | 2              |
| Berkel-AHK         | Isopropyl alcohol | 30420/IPA    | 1              |
| Besselmann Service | Isopropyl alcohol | 900170854    | 1              |
| Besselmann Service | Isopropyl alcohol | L20004671    | 1              |
| Bombastus          | Isopropyl alcohol | 70767B       | 1              |
| Bombastus          | Isopropyl alcohol | 7474936      | 1              |
| Cae                | Isopropyl alcohol | 18178229     | 1              |
| Caelo              | Isopropyl alcohol | 7411         | 1              |
| Caelo              | Isopropyl alcohol | 7776         | 1              |
| Caelo              | Isopropyl alcohol | 543892       | 1              |
| Caelo              | Isopropyl alcohol | 13050904     | 1              |
| Caelo              | Isopropyl alcohol | 70541b       | 1              |
| Caelo              | Isopropyl alcohol | 13249435     | 3              |
| Caelo              | Isopropyl alcohol | 15300910     | 1              |
| Caelo              | Isopropyl alcohol | 14369312     | 2              |
| Caelo              | Isopropyl alcohol | 15057511     | 2              |
| Caelo              | Isopropyl alcohol | 70889B       | 2              |
| Caelo              | Isopropyl alcohol | 17189313     | 2              |
| Caelo              | Isopropyl alcohol | 15031801     | 1              |
| Caelo              | Isopropyl alcohol | 18178230     | 3              |
| Caelo              | Isopropyl alcohol | 11371204     | 1              |
| Caelo              | Isopropyl alcohol | 11311602     | 1              |
| Caelo              | Isopropyl alcohol | 29051202     | 1              |
| Caelo              | Isopropyl alcohol | 25061201     | 1              |
| Caelo              | Isopropyl alcohol | 6071201      | 1              |
| Caelo              | Isopropyl alcohol | 12112204     | 1              |
| Caelo              | Isopropyl alcohol | 24071201     | 1              |
| Caelo              | Isopropyl alcohol | 6081204      | 1              |
| Caelo              | Isopropyl alcohol | 11371212     | 1              |
| Caelo              | Isopropyl alcohol | 20081204     | 1              |
| Caelo              | Isopropyl alcohol | 4091201      | 1              |
| Caelo              | Isopropyl alcohol | 12179317     | 2              |
| Caelo              | Isopropyl alcohol | 22091203     | 1              |
| Caelo              | Isopropyl alcohol | 31101204     | 1              |
| Caelo              | Isopropyl alcohol | 22111204     | 1              |
| Caelo              | Isopropyl alcohol | 12254708     | 1              |
| Caelo              | Isopropyl alcohol | 12254727     | 2              |
| Caelo              | Isopropyl alcohol | 12254703     | 1              |
| Caelo              | Isopropyl alcohol | 70492B       | 2              |
| Caelo              | Isopropyl alcohol | 22121201     | 1              |
| Caelo              | Isopropyl alcohol | 20060912-4   | 1              |
| Caelo              | Isopropyl alcohol | 12254722     | 1              |
| Caelo              | Isopropyl alcohol | 12254729     | 1              |
| Caelo              | Isopropyl alcohol | 2201201301   | 1              |
| Caelo              | Isopropyl alcohol | 22011302     | 1              |
| Caelo              | Isopropyl alcohol | 12321030     | 2              |
| Caelo              | Isopropyl alcohol | 11371217     | 1              |
| Caelo              | Isopropyl alcohol | 12254702     | 1              |
| Caelo              | Isopropyl alcohol | 12321031     | 1              |
| Caelo              | Isopropyl alcohol | 12254724     | 1              |
| Caelo              | Isopropyl alcohol | 713Q-01079   | 1              |
| Caelo              | Isopropyl alcohol | 12254719     | 1              |
| Caelo              | Isopropyl alcohol | 12379526     | 3              |
| Caelo              | Isopropyl alcohol | 21021311     | 1              |
| Caelo              | Isopropyl alcohol | 12379525     | 2              |
| Caelo              | Isopropyl alcohol | 12379504     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 5031303      | 1              |
| Caelo           | Isopropyl alcohol | 28021316     | 1              |
| Caelo           | Isopropyl alcohol | 12379520     | 2              |
| Caelo           | Isopropyl alcohol | 18041306     | 1              |
| Caelo           | Isopropyl alcohol | 12379518     | 2              |
| Caelo           | Isopropyl alcohol | 10051302     | 1              |
| Caelo           | Isopropyl alcohol | 13050914     | 2              |
| Caelo           | Isopropyl alcohol | 13050925     | 2              |
| Caelo           | Isopropyl alcohol | 6061320      | 1              |
| Caelo           | Isopropyl alcohol | 750520B      | 1              |
| Caelo           | Isopropyl alcohol | 1305019      | 1              |
| Caelo           | Isopropyl alcohol | 13050928     | 1              |
| Caelo           | Isopropyl alcohol | 1071301      | 1              |
| Caelo           | Isopropyl alcohol | 13050917     | 2              |
| Caelo           | Isopropyl alcohol | 705408       | 1              |
| Caelo           | Isopropyl alcohol | 13071304     | 1              |
| Caelo           | Isopropyl alcohol | 13050922     | 1              |
| Caelo           | Isopropyl alcohol | 13050927     | 1              |
| Caelo           | Isopropyl alcohol | 13050929     | 1              |
| Caelo           | Isopropyl alcohol | 6081303      | 1              |
| Caelo           | Isopropyl alcohol | 28081302     | 1              |
| Caelo           | Isopropyl alcohol | 13148021     | 1              |
| Caelo           | Isopropyl alcohol | 12091305     | 1              |
| Caelo           | Isopropyl alcohol | 13249407     | 1              |
| Caelo           | Isopropyl alcohol | 13249429     | 2              |
| Caelo           | Isopropyl alcohol | 13249404     | 1              |
| Caelo           | Isopropyl alcohol | 9101314      | 1              |
| Caelo           | Isopropyl alcohol | 13249420     | 1              |
| Caelo           | Isopropyl alcohol | 13050911     | 1              |
| Caelo           | Isopropyl alcohol | 13249423     | 1              |
| Caelo           | Isopropyl alcohol | 13249427     | 1              |
| Caelo           | Isopropyl alcohol | 705538       | 2              |
| Caelo           | Isopropyl alcohol | 29101304     | 1              |
| Caelo           | Isopropyl alcohol | 13249416     | 1              |
| Caelo           | Isopropyl alcohol | 13249405     | 1              |
| Caelo           | Isopropyl alcohol | 13336911     | 1              |
| Caelo           | Isopropyl alcohol | 13336924     | 1              |
| Caelo           | Isopropyl alcohol | 30111303     | 1              |
| Caelo           | Isopropyl alcohol | 13249432     | 1              |
| Caelo           | Isopropyl alcohol | 10121304     | 1              |
| Caelo           | Isopropyl alcohol | 13336914     | 1              |
| Caelo           | Isopropyl alcohol | 13336939     | 2              |
| Caelo           | Isopropyl alcohol | 13336938     | 3              |
| Caelo           | Isopropyl alcohol | 2011403      | 1              |
| Caelo           | Isopropyl alcohol | 13397304     | 2              |
| Caelo           | Isopropyl alcohol | 8012014E     | 1              |
| Caelo           | Isopropyl alcohol | 13336941     | 2              |
| Caelo           | Isopropyl alcohol | 16011406     | 1              |
| Caelo           | Isopropyl alcohol | 13336945     | 1              |
| Caelo           | Isopropyl alcohol | 30011401     | 1              |
| Caelo           | Isopropyl alcohol | 13397305     | 1              |
| Caelo           | Isopropyl alcohol | 13397316     | 2              |
| Caelo           | Isopropyl alcohol | 13021409     | 1              |
| Caelo           | Isopropyl alcohol | 13336913     | 1              |
| Caelo           | Isopropyl alcohol | 13397312     | 2              |
| Caelo           | Isopropyl alcohol | 13397323     | 1              |
| Caelo           | Isopropyl alcohol | 4031405      | 1              |
| Caelo           | Isopropyl alcohol | 13397327     | 2              |
| Caelo           | Isopropyl alcohol | 13397330     | 6              |
| Caelo           | Isopropyl alcohol | 13397332     | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 12041402     | 1              |
| Caelo           | Isopropyl alcohol | 7051401      | 1              |
| Caelo           | Isopropyl alcohol | 13336927     | 1              |
| Caelo           | Isopropyl alcohol | 14051012     | 3              |
| Caelo           | Isopropyl alcohol | 19051405     | 1              |
| Caelo           | Isopropyl alcohol | 4061401      | 1              |
| Caelo           | Isopropyl alcohol | 5061415      | 1              |
| Caelo           | Isopropyl alcohol | 6061402      | 1              |
| Caelo           | Isopropyl alcohol | 140510265    | 1              |
| Caelo           | Isopropyl alcohol | 14051019     | 1              |
| Caelo           | Isopropyl alcohol | 29071401     | 1              |
| Caelo           | Isopropyl alcohol | 8082014C     | 1              |
| Caelo           | Isopropyl alcohol | 14051036     | 1              |
| Caelo           | Isopropyl alcohol | 14219202     | 1              |
| Caelo           | Isopropyl alcohol | 11091401     | 1              |
| Caelo           | Isopropyl alcohol | 14219212     | 2              |
| Caelo           | Isopropyl alcohol | 27091401     | 1              |
| Caelo           | Isopropyl alcohol | 10101403     | 1              |
| Caelo           | Isopropyl alcohol | 70573B       | 1              |
| Caelo           | Isopropyl alcohol | 14219206     | 2              |
| Caelo           | Isopropyl alcohol | 14219215     | 2              |
| Caelo           | Isopropyl alcohol | 15111401     | 1              |
| Caelo           | Isopropyl alcohol | 14219229     | 1              |
| Caelo           | Isopropyl alcohol | 21111402     | 1              |
| Caelo           | Isopropyl alcohol | 14219218     | 1              |
| Caelo           | Isopropyl alcohol | 14219222     | 3              |
| Caelo           | Isopropyl alcohol | 14278923     | 4              |
| Caelo           | Isopropyl alcohol | 13121401     | 1              |
| Caelo           | Isopropyl alcohol | 10011502     | 1              |
| Caelo           | Isopropyl alcohol | 29011505     | 1              |
| Caelo           | Isopropyl alcohol | 15057505     | 2              |
| Caelo           | Isopropyl alcohol | 14369370     | 1              |
| Caelo           | Isopropyl alcohol | 15057508     | 1              |
| Caelo           | Isopropyl alcohol | 70701B       | 1              |
| Caelo           | Isopropyl alcohol | 15171314     | 2              |
| Caelo           | Isopropyl alcohol | 15171315     | 1              |
| Caelo           | Isopropyl alcohol | 15171303     | 6              |
| Caelo           | Isopropyl alcohol | 15171333     | 2              |
| Caelo           | Isopropyl alcohol | 15300904     | 2              |
| Caelo           | Isopropyl alcohol | 15300918     | 1              |
| Caelo           | Isopropyl alcohol | 15300926     | 1              |
| Caelo           | Isopropyl alcohol | 15300930     | 1              |
| Caelo           | Isopropyl alcohol | 15398813     | 1              |
| Caelo           | Isopropyl alcohol | 15398806     | 3              |
| Caelo           | Isopropyl alcohol | 16039903     | 1              |
| Caelo           | Isopropyl alcohol | 16039913     | 1              |
| Caelo           | Isopropyl alcohol | 16039919     | 1              |
| Caelo           | Isopropyl alcohol | 16137322     | 3              |
| Caelo           | Isopropyl alcohol | 16234002     | 4              |
| Caelo           | Isopropyl alcohol | 16137326     | 1              |
| Caelo           | Isopropyl alcohol | 16234001     | 3              |
| Caelo           | Isopropyl alcohol | 16234004     | 5              |
| Caelo           | Isopropyl alcohol | 16137334     | 1              |
| Caelo           | Isopropyl alcohol | 16234031     | 1              |
| Caelo           | Isopropyl alcohol | 17044001     | 1              |
| Caelo           | Isopropyl alcohol | 70957B       | 1              |
| Caelo           | Isopropyl alcohol | 21091702     | 1              |
| Caelo           | Isopropyl alcohol | 6101704      | 1              |
| Caelo           | Isopropyl alcohol | 19101702     | 1              |
| Caelo           | Isopropyl alcohol | 13407304     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 14219233     | 1              |
| Caelo           | Isopropyl alcohol | 70663B       | 1              |
| Caelo           | Isopropyl alcohol | 25021501     | 1              |
| Caelo           | Isopropyl alcohol | 14369325     | 1              |
| Caelo           | Isopropyl alcohol | 14031501     | 1              |
| Caelo           | Isopropyl alcohol | 27031502     | 1              |
| Caelo           | Isopropyl alcohol | 30041508     | 1              |
| Caelo           | Isopropyl alcohol | 14369319     | 1              |
| Caelo           | Isopropyl alcohol | 15057519     | 1              |
| Caelo           | Isopropyl alcohol | 19051503     | 1              |
| Caelo           | Isopropyl alcohol | 15057528     | 2              |
| Caelo           | Isopropyl alcohol | 10061507     | 1              |
| Caelo           | Isopropyl alcohol | 15057503     | 1              |
| Caelo           | Isopropyl alcohol | 15171304     | 2              |
| Caelo           | Isopropyl alcohol | 15171306     | 1              |
| Caelo           | Isopropyl alcohol | 15057514     | 1              |
| Caelo           | Isopropyl alcohol | 14134721     | 1              |
| Caelo           | Isopropyl alcohol | 15171327     | 1              |
| Caelo           | Isopropyl alcohol | 12081505     | 1              |
| Caelo           | Isopropyl alcohol | 15171308     | 1              |
| Caelo           | Isopropyl alcohol | 31081501     | 1              |
| Caelo           | Isopropyl alcohol | 15171341     | 3              |
| Caelo           | Isopropyl alcohol | 14219216     | 1              |
| Caelo           | Isopropyl alcohol | 15171307     | 1              |
| Caelo           | Isopropyl alcohol | 15057525     | 1              |
| Caelo           | Isopropyl alcohol | 15057513     | 1              |
| Caelo           | Isopropyl alcohol | 15300931     | 2              |
| Caelo           | Isopropyl alcohol | 15300902     | 1              |
| Caelo           | Isopropyl alcohol | 15171332     | 1              |
| Caelo           | Isopropyl alcohol | 70726B       | 1              |
| Caelo           | Isopropyl alcohol | 15398808     | 2              |
| Caelo           | Isopropyl alcohol | 15300923     | 1              |
| Caelo           | Isopropyl alcohol | 15398823     | 3              |
| Caelo           | Isopropyl alcohol | 16039912     | 3              |
| Caelo           | Isopropyl alcohol | 15398804     | 3              |
| Caelo           | Isopropyl alcohol | 16039904     | 3              |
| Caelo           | Isopropyl alcohol | 70768b       | 1              |
| Caelo           | Isopropyl alcohol | 707998       | 1              |
| Caelo           | Isopropyl alcohol | 883588       | 1              |
| Caelo           | Isopropyl alcohol | 16039907     | 2              |
| Caelo           | Isopropyl alcohol | 15398812     | 1              |
| Caelo           | Isopropyl alcohol | 16039935     | 1              |
| Caelo           | Isopropyl alcohol | 16039906     | 2              |
| Caelo           | Isopropyl alcohol | 16039924     | 1              |
| Caelo           | Isopropyl alcohol | 707838       | 1              |
| Caelo           | Isopropyl alcohol | 16039936     | 2              |
| Caelo           | Isopropyl alcohol | 16137308     | 3              |
| Caelo           | Isopropyl alcohol | 16137302     | 4              |
| Caelo           | Isopropyl alcohol | 70799B       | 1              |
| Caelo           | Isopropyl alcohol | 1603997      | 1              |
| Caelo           | Isopropyl alcohol | 16137304     | 3              |
| Caelo           | Isopropyl alcohol | 70609B       | 1              |
| Caelo           | Isopropyl alcohol | 16137311     | 1              |
| Caelo           | Isopropyl alcohol | 16137329     | 3              |
| Caelo           | Isopropyl alcohol | 16137336     | 4              |
| Caelo           | Isopropyl alcohol | 16234009     | 1              |
| Caelo           | Isopropyl alcohol | 16137305     | 4              |
| Caelo           | Isopropyl alcohol | 16137332     | 2              |
| Caelo           | Isopropyl alcohol | 6137305      | 1              |
| Caelo           | Isopropyl alcohol | 16234023     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|-------------------|-------------------|----------------|
| Caelo           | Isopropyl alcohol | 16137330          | 1              |
| Caelo           | Isopropyl alcohol | 706588            | 1              |
| Caelo           | Isopropyl alcohol | 16234025          | 3              |
| Caelo           | Isopropyl alcohol | 16137325/161123AI | 1              |
| Caelo           | Isopropyl alcohol | 16234013          | 1              |
| Caelo           | Isopropyl alcohol | 16234033          | 2              |
| Caelo           | Isopropyl alcohol | 16310609          | 2              |
| Caelo           | Isopropyl alcohol | 20011703          | 1              |
| Caelo           | Isopropyl alcohol | 16234018          | 1              |
| Caelo           | Isopropyl alcohol | 16310604          | 1              |
| Caelo           | Isopropyl alcohol | 16234011          | 1              |
| Caelo           | Isopropyl alcohol | 16310614          | 2              |
| Caelo           | Isopropyl alcohol | 16310601          | 1              |
| Caelo           | Isopropyl alcohol | 16310623          | 2              |
| Caelo           | Isopropyl alcohol | 14031701          | 1              |
| Caelo           | Isopropyl alcohol | 16310622          | 4              |
| Caelo           | Isopropyl alcohol | 9041704           | 1              |
| Caelo           | Isopropyl alcohol | 16310607          | 3              |
| Caelo           | Isopropyl alcohol | 16310611          | 1              |
| Caelo           | Isopropyl alcohol | 17044009          | 1              |
| Caelo           | Isopropyl alcohol | 2051704           | 1              |
| Caelo           | Isopropyl alcohol | 26051704          | 1              |
| Caelo           | Isopropyl alcohol | nichtvorhanden    | 1              |
| Caelo           | Isopropyl alcohol | 170440015277      | 1              |
| Caelo           | Isopropyl alcohol | 17061706          | 1              |
| Caelo           | Isopropyl alcohol | 17044029          | 2              |
| Caelo           | Isopropyl alcohol | 17044028          | 4              |
| Caelo           | Isopropyl alcohol | 17044007          | 1              |
| Caelo           | Isopropyl alcohol | 3071718           | 1              |
| Caelo           | Isopropyl alcohol | 17044025          | 1              |
| Caelo           | Isopropyl alcohol | 27071712          | 1              |
| Caelo           | Isopropyl alcohol | 17044019          | 3              |
| Caelo           | Isopropyl alcohol | 17044033          | 2              |
| Caelo           | Isopropyl alcohol | 17189301          | 3              |
| Caelo           | Isopropyl alcohol | 26081710          | 1              |
| Caelo           | Isopropyl alcohol | 17044035          | 2              |
| Caelo           | Isopropyl alcohol | 70959B            | 2              |
| Caelo           | Isopropyl alcohol | 17189317          | 3              |
| Caelo           | Isopropyl alcohol | 17189316          | 2              |
| Caelo           | Isopropyl alcohol | 70959b            | 1              |
| Caelo           | Isopropyl alcohol | 17044023          | 1              |
| Caelo           | Isopropyl alcohol | 17189321          | 2              |
| Caelo           | Isopropyl alcohol | 15111740          | 1              |
| Caelo           | Isopropyl alcohol | 17189323          | 1              |
| Caelo           | Isopropyl alcohol | 2121705           | 1              |
| Caelo           | Isopropyl alcohol | 1007031           | 1              |
| Caelo           | Isopropyl alcohol | 17189312          | 1              |
| Caelo           | Isopropyl alcohol | 17189332          | 2              |
| Caelo           | Isopropyl alcohol | 17189322          | 1              |
| Caelo           | Isopropyl alcohol | 27121702          | 1              |
| Caelo           | Isopropyl alcohol | 17300409          | 1              |
| Caelo           | Isopropyl alcohol | 70977B            | 1              |
| Caelo           | Isopropyl alcohol | 17300405          | 2              |
| Caelo           | Isopropyl alcohol | 171893045391      | 1              |
| Caelo           | Isopropyl alcohol | 70983B            | 2              |
| Caelo           | Isopropyl alcohol | 17189334          | 2              |
| Caelo           | Isopropyl alcohol | 17189336          | 3              |
| Caelo           | Isopropyl alcohol | 13011808          | 1              |
| Caelo           | Isopropyl alcohol | 17300406          | 3              |
| Caelo           | Isopropyl alcohol | 17300418          | 4              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 17300414     | 2              |
| Caelo           | Isopropyl alcohol | 19021807     | 1              |
| Caelo           | Isopropyl alcohol | 17300433     | 1              |
| Caelo           | Isopropyl alcohol | 17300429     | 5              |
| Caelo           | Isopropyl alcohol | 1017410092   | 2              |
| Caelo           | Isopropyl alcohol | 701011B      | 1              |
| Caelo           | Isopropyl alcohol | 17300431     | 3              |
| Caelo           | Isopropyl alcohol | 7041802      | 1              |
| Caelo           | Isopropyl alcohol | 18065402     | 4              |
| Caelo           | Isopropyl alcohol | 25041802     | 1              |
| Caelo           | Isopropyl alcohol | 17300434     | 1              |
| Caelo           | Isopropyl alcohol | 18065412     | 5              |
| Caelo           | Isopropyl alcohol | 18065414     | 2              |
| Caelo           | Isopropyl alcohol | 18065404     | 2              |
| Caelo           | Isopropyl alcohol | 17051802     | 1              |
| Caelo           | Isopropyl alcohol | 25051802     | 1              |
| Caelo           | Isopropyl alcohol | 18065408     | 1              |
| Caelo           | Isopropyl alcohol | 17300423     | 2              |
| Caelo           | Isopropyl alcohol | 9061812      | 1              |
| Caelo           | Isopropyl alcohol | 18065418     | 1              |
| Caelo           | Isopropyl alcohol | 16061804     | 1              |
| Caelo           | Isopropyl alcohol | 701035B      | 1              |
| Caelo           | Isopropyl alcohol | 9071802      | 1              |
| Caelo           | Isopropyl alcohol | 1865430      | 1              |
| Caelo           | Isopropyl alcohol | 701043B      | 4              |
| Caelo           | Isopropyl alcohol | 18065432     | 2              |
| Caelo           | Isopropyl alcohol | 18065425     | 3              |
| Caelo           | Isopropyl alcohol | 18178201     | 2              |
| Caelo           | Isopropyl alcohol | 16081810     | 1              |
| Caelo           | Isopropyl alcohol | 3091801      | 1              |
| Caelo           | Isopropyl alcohol | 13091802     | 1              |
| Caelo           | Isopropyl alcohol | 18178204     | 2              |
| Caelo           | Isopropyl alcohol | 29091801     | 1              |
| Caelo           | Isopropyl alcohol | 13101801     | 1              |
| Caelo           | Isopropyl alcohol | 18065422     | 1              |
| Caelo           | Isopropyl alcohol | 7111802      | 1              |
| Caelo           | Isopropyl alcohol | 18178225     | 3              |
| Caelo           | Isopropyl alcohol | 18178220     | 1              |
| Caelo           | Isopropyl alcohol | 18178215     | 1              |
| Caelo           | Isopropyl alcohol | 28111806     | 1              |
| Caelo           | Isopropyl alcohol | 4121802      | 1              |
| Caelo           | Isopropyl alcohol | 19121805     | 1              |
| Caelo           | Isopropyl alcohol | 19121806     | 1              |
| Caelo           | Isopropyl alcohol | 18178234     | 6              |
| Caelo           | Isopropyl alcohol | 18178231     | 1              |
| Caelo           | Isopropyl alcohol | 18178216     | 1              |
| Caelo           | Isopropyl alcohol | 18291712     | 1              |
| Caelo           | Isopropyl alcohol | 701073B      | 1              |
| Caelo           | Isopropyl alcohol | 18291705     | 3              |
| Caelo           | Isopropyl alcohol | 18291703     | 2              |
| Caelo           | Isopropyl alcohol | 701081B      | 1              |
| Caelo           | Isopropyl alcohol | 19059502     | 1              |
| Caelo           | Isopropyl alcohol | 19059507     | 1              |
| Caelo           | Isopropyl alcohol | 18291721     | 1              |
| Caelo           | Isopropyl alcohol | 19059508     | 3              |
| Caelo           | Isopropyl alcohol | 18291717     | 2              |
| Caelo           | Isopropyl alcohol | 18291736     | 3              |
| Caelo           | Isopropyl alcohol | 701105B      | 2              |
| Caelo           | Isopropyl alcohol | 18291728     | 1              |
| Caelo           | Isopropyl alcohol | 19059529     | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 19209808     | 1              |
| Caelo           | Isopropyl alcohol | 19209804     | 1              |
| Caelo           | Isopropyl alcohol | 19059526     | 2              |
| Caelo           | Isopropyl alcohol | 19209823     | 2              |
| Caelo           | Isopropyl alcohol | 19209815     | 1              |
| Caelo           | Isopropyl alcohol | 192098001    | 1              |
| Caelo           | Isopropyl alcohol | 192098007    | 1              |
| Caelo           | Isopropyl alcohol | 192098011    | 2              |
| Caelo           | Isopropyl alcohol | 192098010    | 2              |
| Caelo           | Isopropyl alcohol | 20001179029  | 1              |
| Caelo           | Isopropyl alcohol | 20001179028  | 1              |
| Caelo           | Isopropyl alcohol | 20001179006  | 1              |
| Caelo           | Isopropyl alcohol | 20001557009  | 1              |
| Caelo           | Isopropyl alcohol | 20001557007  | 2              |
| Caelo           | Isopropyl alcohol | 20001557006  | 2              |
| Caelo           | Isopropyl alcohol | 20001557015  | 1              |
| Caelo           | Isopropyl alcohol | 20001179018  | 1              |
| Caelo           | Isopropyl alcohol | 20001557026  | 2              |
| Caelo           | Isopropyl alcohol | Caelo        | 1              |
| Caelo           | Isopropyl alcohol | 20001557030  | 1              |
| Caelo           | Isopropyl alcohol | 20001912007  | 1              |
| Caelo           | Isopropyl alcohol | 20001912010  | 1              |
| Caelo           | Isopropyl alcohol | 20001912021  | 1              |
| Caelo           | Isopropyl alcohol | 1557015      | 1              |
| Caelo           | Isopropyl alcohol | 20001912039  | 2              |
| Caelo           | Isopropyl alcohol | 16137323     | 2              |
| Caelo           | Isopropyl alcohol | 19059525     | 2              |
| Caelo           | Isopropyl alcohol | 19209827     | 5              |
| Caelo           | Isopropyl alcohol | 14369311     | 1              |
| Caelo           | Isopropyl alcohol | 15171329     | 2              |
| Caelo           | Isopropyl alcohol | 14051016     | 1              |
| Caelo           | Isopropyl alcohol | 18065429     | 1              |
| Caelo           | Isopropyl alcohol | 14051017     | 3              |
| Caelo           | Isopropyl alcohol | 15057502     | 1              |
| Caelo           | Isopropyl alcohol | 12031106     | 1              |
| Caelo           | Isopropyl alcohol | 12112224     | 3              |
| Caelo           | Isopropyl alcohol | 70936B       | 1              |
| Caelo           | Isopropyl alcohol | 13148012     | 1              |
| Caelo           | Isopropyl alcohol | 14134716     | 3              |
| Caelo           | Isopropyl alcohol | 14219213     | 3              |
| Caelo           | Isopropyl alcohol | 13148019     | 3              |
| Caelo           | Isopropyl alcohol | 70584B       | 1              |
| Caelo           | Isopropyl alcohol | 14051018     | 1              |
| Caelo           | Isopropyl alcohol | 14134705     | 2              |
| Caelo           | Isopropyl alcohol | 17300416     | 2              |
| Caelo           | Isopropyl alcohol | 4217E-01079  | 1              |
| Caelo           | Isopropyl alcohol | 14369303     | 1              |
| Caelo           | Isopropyl alcohol | 70598b       | 1              |
| Caelo           | Isopropyl alcohol | 19059513     | 5              |
| Caelo           | Isopropyl alcohol | 20003673029  | 1              |
| Caelo           | Isopropyl alcohol | 14369306     | 1              |
| Caelo           | Isopropyl alcohol | 13148024     | 1              |
| Caelo           | Isopropyl alcohol | 13336943     | 2              |
| Caelo           | Isopropyl alcohol | 14051026     | 1              |
| Caelo           | Isopropyl alcohol | 13336916     | 1              |
| Caelo           | Isopropyl alcohol | 70656B       | 1              |
| Caelo           | Isopropyl alcohol | 14278905     | 2              |
| Caelo           | Isopropyl alcohol | 16234005     | 2              |
| Caelo           | Isopropyl alcohol | 20001179025  | 1              |
| Caelo           | Isopropyl alcohol | 20003673005  | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|-------------------|---------------|----------------|
| Caelo           | Isopropyl alcohol | 19059518      | 2              |
| Caelo           | Isopropyl alcohol | 16039905      | 1              |
| Caelo           | Isopropyl alcohol | 16310625      | 1              |
| Caelo           | Isopropyl alcohol | 12379515      | 2              |
| Caelo           | Isopropyl alcohol | 13148028      | 1              |
| Caelo           | Isopropyl alcohol | 13249413      | 2              |
| Caelo           | Isopropyl alcohol | 13249414      | 2              |
| Caelo           | Isopropyl alcohol | 13249424      | 1              |
| Caelo           | Isopropyl alcohol | 701031B       | 3              |
| Caelo           | Isopropyl alcohol | 192098008     | 1              |
| Caelo           | Isopropyl alcohol | 12321016      | 1              |
| Caelo           | Isopropyl alcohol | 12379501      | 1              |
| Caelo           | Isopropyl alcohol | 13249430      | 1              |
| Caelo           | Isopropyl alcohol | 13050920      | 1              |
| Caelo           | Isopropyl alcohol | 15398828      | 1              |
| Caelo           | Isopropyl alcohol | 18291702      | 2              |
| Caelo           | Isopropyl alcohol | 16039921      | 1              |
| Caelo           | Isopropyl alcohol | 1329423       | 1              |
| Caelo           | Isopropyl alcohol | 14219228      | 2              |
| Caelo           | Isopropyl alcohol | 15300921      | 1              |
| Caelo           | Isopropyl alcohol | 13249401      | 1              |
| Caelo           | Isopropyl alcohol | 16137303      | 1              |
| Caelo           | Isopropyl alcohol | 14219224      | 1              |
| Caelo           | Isopropyl alcohol | 14369317      | 2              |
| Caelo           | Isopropyl alcohol | 15498831      | 1              |
| Caelo           | Isopropyl alcohol | 12379506      | 1              |
| Caelo           | Isopropyl alcohol | 12379502      | 2              |
| Caelo           | Isopropyl alcohol | 12321032      | 1              |
| Caelo           | Isopropyl alcohol | 13148004      | 1              |
| Caelo           | Isopropyl alcohol | 13249434      | 1              |
| Caelo           | Isopropyl alcohol | 15171301      | 1              |
| Caelo           | Isopropyl alcohol | 12321020      | 1              |
| Caelo           | Isopropyl alcohol | 14219209      | 1              |
| Caelo           | Isopropyl alcohol | 15171311      | 2              |
| Caelo           | Isopropyl alcohol | 17044015      | 1              |
| Caelo           | Isopropyl alcohol | 708188        | 1              |
| Caelo           | Isopropyl alcohol | 70953B        | 1              |
| Caelo           | Isopropyl alcohol | 1517308       | 1              |
| Caelo           | Isopropyl alcohol | 152(18065412) | 1              |
| Caelo           | Isopropyl alcohol | 153(18291713) | 1              |
| Caelo           | Isopropyl alcohol | 20001912014   | 1              |
| Caelo           | Isopropyl alcohol | 18178207      | 1              |
| Caelo           | Isopropyl alcohol | 18065413      | 2              |
| Caelo           | Isopropyl alcohol | 16310610      | 3              |
| Caelo           | Isopropyl alcohol | 18291723      | 2              |
| Caelo           | Isopropyl alcohol | 13249403      | 1              |
| Caelo           | Isopropyl alcohol | 13397311      | 1              |
| Caelo           | Isopropyl alcohol | 16039922      | 2              |
| Caelo           | Isopropyl alcohol | 12321022      | 1              |
| Caelo           | Isopropyl alcohol | 13249415      | 2              |
| Caelo           | Isopropyl alcohol | 70564B        | 1              |
| Caelo           | Isopropyl alcohol | 16137307      | 1              |
| Caelo           | Isopropyl alcohol | 17189330      | 8              |
| Caelo           | Isopropyl alcohol | 18178224      | 2              |
| Caelo           | Isopropyl alcohol | 20001179012   | 1              |
| Caelo           | Isopropyl alcohol | 20001179002   | 1              |
| Caelo           | Isopropyl alcohol | 18291733      | 2              |
| Caelo           | Isopropyl alcohol | 3300          | 1              |
| Caelo           | Isopropyl alcohol | 3326          | 1              |
| Caelo           | Isopropyl alcohol | 14051022      | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 13148006     | 1              |
| Caelo           | Isopropyl alcohol | 15398820     | 2              |
| Caelo           | Isopropyl alcohol | 181788225    | 1              |
| Caelo           | Isopropyl alcohol | 20001179015  | 2              |
| Caelo           | Isopropyl alcohol | 70555B       | 1              |
| Caelo           | Isopropyl alcohol | 14134701     | 1              |
| Caelo           | Isopropyl alcohol | 14134708     | 1              |
| Caelo           | Isopropyl alcohol | 16137318     | 1              |
| Caelo           | Isopropyl alcohol | 16234021     | 1              |
| Caelo           | Isopropyl alcohol | 16234020     | 2              |
| Caelo           | Isopropyl alcohol | 17300422     | 2              |
| Caelo           | Isopropyl alcohol | 17300404     | 1              |
| Caelo           | Isopropyl alcohol | 18291710     | 2              |
| Caelo           | Isopropyl alcohol | 19059514     | 1              |
| Caelo           | Isopropyl alcohol | 19059506     | 2              |
| Caelo           | Isopropyl alcohol | 20001179020  | 3              |
| Caelo           | Isopropyl alcohol | 20001912002  | 2              |
| Caelo           | Isopropyl alcohol | 18178223     | 1              |
| Caelo           | Isopropyl alcohol | 17189309     | 2              |
| Caelo           | Isopropyl alcohol | 18178209     | 2              |
| Caelo           | Isopropyl alcohol | 15057507     | 2              |
| Caelo           | Isopropyl alcohol | 17044032     | 1              |
| Caelo           | Isopropyl alcohol | 70755B       | 2              |
| Caelo           | Isopropyl alcohol | 70748B       | 2              |
| Caelo           | Isopropyl alcohol | 18291701     | 2              |
| Caelo           | Isopropyl alcohol | 12179321     | 1              |
| Caelo           | Isopropyl alcohol | 16137317     | 2              |
| Caelo           | Isopropyl alcohol | 17044020     | 2              |
| Caelo           | Isopropyl alcohol | 180654035690 | 1              |
| Caelo           | Isopropyl alcohol | 18065416     | 1              |
| Caelo           | Isopropyl alcohol | 19209824     | 2              |
| Caelo           | Isopropyl alcohol | 192098005    | 1              |
| Caelo           | Isopropyl alcohol | 14278926     | 4              |
| Caelo           | Isopropyl alcohol | 15057526     | 1              |
| Caelo           | Isopropyl alcohol | 15398803     | 2              |
| Caelo           | Isopropyl alcohol | 17044006     | 2              |
| Caelo           | Isopropyl alcohol | 18065415     | 4              |
| Caelo           | Isopropyl alcohol | 18178238     | 3              |
| Caelo           | Isopropyl alcohol | 19059512     | 2              |
| Caelo           | Isopropyl alcohol | 19209805     | 3              |
| Caelo           | Isopropyl alcohol | 1925590047   | 1              |
| Caelo           | Isopropyl alcohol | 14278914     | 1              |
| Caelo           | Isopropyl alcohol | 17189305     | 3              |
| Caelo           | Isopropyl alcohol | 17300424     | 2              |
| Caelo           | Isopropyl alcohol | 12112209     | 1              |
| Caelo           | Isopropyl alcohol | 14278909     | 1              |
| Caelo           | Isopropyl alcohol | 12254714     | 1              |
| Caelo           | Isopropyl alcohol | 13050902     | 1              |
| Caelo           | Isopropyl alcohol | 14051015     | 1              |
| Caelo           | Isopropyl alcohol | 14219227     | 3              |
| Caelo           | Isopropyl alcohol | 14369329     | 1              |
| Caelo           | Isopropyl alcohol | 16310613     | 1              |
| Caelo           | Isopropyl alcohol | 70881B       | 2              |
| Caelo           | Isopropyl alcohol | 162334019    | 1              |
| Caelo           | Isopropyl alcohol | 17189303     | 2              |
| Caelo           | Isopropyl alcohol | 17300417     | 1              |
| Caelo           | Isopropyl alcohol | 18065405     | 2              |
| Caelo           | Isopropyl alcohol | 18065419     | 5              |
| Caelo           | Isopropyl alcohol | 701071B      | 2              |
| Caelo           | Isopropyl alcohol | 18291707     | 3              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 16310602     | 2              |
| Caelo           | Isopropyl alcohol | 12379517     | 1              |
| Caelo           | Isopropyl alcohol | 16310626     | 1              |
| Caelo           | Isopropyl alcohol | 16310628     | 1              |
| Caelo           | Isopropyl alcohol | 14051004     | 1              |
| Caelo           | Isopropyl alcohol | 15057531     | 1              |
| Caelo           | Isopropyl alcohol | 18178210     | 2              |
| Caelo           | Isopropyl alcohol | 18178233     | 1              |
| Caelo           | Isopropyl alcohol | 18178232     | 3              |
| Caelo           | Isopropyl alcohol | 20001179004  | 1              |
| Caelo           | Isopropyl alcohol | 12112220     | 1              |
| Caelo           | Isopropyl alcohol | 13050907     | 1              |
| Caelo           | Isopropyl alcohol | 15171328     | 2              |
| Caelo           | Isopropyl alcohol | 15171312     | 2              |
| Caelo           | Isopropyl alcohol | 16039915     | 1              |
| Caelo           | Isopropyl alcohol | 7272262      | 1              |
| Caelo           | Isopropyl alcohol | 13148029     | 1              |
| Caelo           | Isopropyl alcohol | 13336922     | 1              |
| Caelo           | Isopropyl alcohol | 13336933     | 1              |
| Caelo           | Isopropyl alcohol | 13336934     | 1              |
| Caelo           | Isopropyl alcohol | 13397326     | 3              |
| Caelo           | Isopropyl alcohol | 14219211     | 1              |
| Caelo           | Isopropyl alcohol | 14134719     | 1              |
| Caelo           | Isopropyl alcohol | 70650B       | 1              |
| Caelo           | Isopropyl alcohol | 15171335     | 1              |
| Caelo           | Isopropyl alcohol | 16137328     | 1              |
| Caelo           | Isopropyl alcohol | 70858B       | 2              |
| Caelo           | Isopropyl alcohol | 16/255/i     | 1              |
| Caelo           | Isopropyl alcohol | 16234007     | 2              |
| Caelo           | Isopropyl alcohol | 70870B       | 2              |
| Caelo           | Isopropyl alcohol | 17044002     | 2              |
| Caelo           | Isopropyl alcohol | 17044017     | 1              |
| Caelo           | Isopropyl alcohol | 17044027     | 2              |
| Caelo           | Isopropyl alcohol | 17189307     | 2              |
| Caelo           | Isopropyl alcohol | 17189333     | 2              |
| Caelo           | Isopropyl alcohol | 18065417     | 1              |
| Caelo           | Isopropyl alcohol | 701054B      | 1              |
| Caelo           | Isopropyl alcohol | 18178270     | 1              |
| Caelo           | Isopropyl alcohol | 18291719     | 3              |
| Caelo           | Isopropyl alcohol | 19059520     | 1              |
| Caelo           | Isopropyl alcohol | 19059528     | 1              |
| Caelo           | Isopropyl alcohol | 19209809     | 1              |
| Caelo           | Isopropyl alcohol | 192098006    | 1              |
| Caelo           | Isopropyl alcohol | 20000450021  | 1              |
| Caelo           | Isopropyl alcohol | 20001557003  | 2              |
| Caelo           | Isopropyl alcohol | 20001557021  | 1              |
| Caelo           | Isopropyl alcohol | 70439B       | 1              |
| Caelo           | Isopropyl alcohol | 13397318     | 2              |
| Caelo           | Isopropyl alcohol | 14051028     | 1              |
| Caelo           | Isopropyl alcohol | 14219205     | 1              |
| Caelo           | Isopropyl alcohol | 14369301     | 5              |
| Caelo           | Isopropyl alcohol | 15057506     | 1              |
| Caelo           | Isopropyl alcohol | 17300436     | 3              |
| Caelo           | Isopropyl alcohol | 18065427     | 1              |
| Caelo           | Isopropyl alcohol | 17044034     | 1              |
| Caelo           | Isopropyl alcohol | 18178212     | 1              |
| Caelo           | Isopropyl alcohol | 18178217     | 7              |
| Caelo           | Isopropyl alcohol | 18291725     | 4              |
| Caelo           | Isopropyl alcohol | 20001179011  | 1              |
| Caelo           | Isopropyl alcohol | 17189304     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|-------------------|-------------------|----------------|
| Caelo           | Isopropyl alcohol | 701061B           | 1              |
| Caelo           | Isopropyl alcohol | 701093B           | 2              |
| Caelo           | Isopropyl alcohol | 108073            | 1              |
| Caelo           | Isopropyl alcohol | 13249412          | 2              |
| Caelo           | Isopropyl alcohol | 70545B            | 1              |
| Caelo           | Isopropyl alcohol | 13336930          | 1              |
| Caelo           | Isopropyl alcohol | 15171331          | 1              |
| Caelo           | Isopropyl alcohol | 151 (17189323)    | 1              |
| Caelo           | Isopropyl alcohol | 19059511          | 5              |
| Caelo           | Isopropyl alcohol | 20000450012       | 2              |
| Caelo           | Isopropyl alcohol | 70565B            | 1              |
| Caelo           | Isopropyl alcohol | 17300437          | 5              |
| Caelo           | Isopropyl alcohol | 17300403          | 1              |
| Caelo           | Isopropyl alcohol | 70481B            | 2              |
| Caelo           | Isopropyl alcohol | 13249437          | 1              |
| Caelo           | Isopropyl alcohol | 18065420          | 3              |
| Caelo           | Isopropyl alcohol | 1231012           | 1              |
| Caelo           | Isopropyl alcohol | 12379510          | 3              |
| Caelo           | Isopropyl alcohol | 13148015          | 3              |
| Caelo           | Isopropyl alcohol | 13249418          | 1              |
| Caelo           | Isopropyl alcohol | 13397303          | 2              |
| Caelo           | Isopropyl alcohol | 13336944          | 1              |
| Caelo           | Isopropyl alcohol | 14134706          | 1              |
| Caelo           | Isopropyl alcohol | 14219214          | 3              |
| Caelo           | Isopropyl alcohol | 14369313          | 4              |
| Caelo           | Isopropyl alcohol | 14369326          | 3              |
| Caelo           | Isopropyl alcohol | 15057520          | 2              |
| Caelo           | Isopropyl alcohol | 15057501          | 2              |
| Caelo           | Isopropyl alcohol | 14369334          | 1              |
| Caelo           | Isopropyl alcohol | 15057517          | 1              |
| Caelo           | Isopropyl alcohol | 15171342          | 2              |
| Caelo           | Isopropyl alcohol | 15171305          | 1              |
| Caelo           | Isopropyl alcohol | 15398814          | 3              |
| Caelo           | Isopropyl alcohol | 15300932          | 1              |
| Caelo           | Isopropyl alcohol | 16039901          | 4              |
| Caelo           | Isopropyl alcohol | 15398826          | 2              |
| Caelo           | Isopropyl alcohol | 70788B            | 1              |
| Caelo           | Isopropyl alcohol | 16039926          | 2              |
| Caelo           | Isopropyl alcohol | 16039931          | 1              |
| Caelo           | Isopropyl alcohol | 53380             | 1              |
| Caelo           | Isopropyl alcohol | 16137327          | 3              |
| Caelo           | Isopropyl alcohol | 70835B            | 2              |
| Caelo           | Isopropyl alcohol | 163234002         | 1              |
| Caelo           | Isopropyl alcohol | 16137333          | 1              |
| Caelo           | Isopropyl alcohol | 16234029          | 1              |
| Caelo           | Isopropyl alcohol | 16310612          | 3              |
| Caelo           | Isopropyl alcohol | 16234032          | 1              |
| Caelo           | Isopropyl alcohol | 16310634          | 1              |
| Caelo           | Isopropyl alcohol | 16310606          | 1              |
| Caelo           | Isopropyl alcohol | 1630607           | 1              |
| Caelo           | Isopropyl alcohol | 17044008          | 2              |
| Caelo           | Isopropyl alcohol | 1630606           | 1              |
| Caelo           | Isopropyl alcohol | 17044031          | 3              |
| Caelo           | Isopropyl alcohol | 17189308          | 1              |
| Caelo           | Isopropyl alcohol | 17189324          | 4              |
| Caelo           | Isopropyl alcohol | 17300408          | 1              |
| Caelo           | Isopropyl alcohol | 180109AI/17189332 | 1              |
| Caelo           | Isopropyl alcohol | 17189310          | 1              |
| Caelo           | Isopropyl alcohol | 701006B           | 2              |
| Caelo           | Isopropyl alcohol | 17300415          | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 17300432     | 1              |
| Caelo           | Isopropyl alcohol | 17300425     | 1              |
| Caelo           | Isopropyl alcohol | 17300430     | 1              |
| Caelo           | Isopropyl alcohol | 27012017     | 1              |
| Caelo           | Isopropyl alcohol | 18178203     | 3              |
| Caelo           | Isopropyl alcohol | 18178226     | 3              |
| Caelo           | Isopropyl alcohol | 18178235     | 2              |
| Caelo           | Isopropyl alcohol | 18178240     | 1              |
| Caelo           | Isopropyl alcohol | 18178239     | 1              |
| Caelo           | Isopropyl alcohol | 18178237     | 2              |
| Caelo           | Isopropyl alcohol | 18291722     | 3              |
| Caelo           | Isopropyl alcohol | 18291724     | 1              |
| Caelo           | Isopropyl alcohol | 19059504     | 2              |
| Caelo           | Isopropyl alcohol | 19059532     | 1              |
| Caelo           | Isopropyl alcohol | 19059519     | 1              |
| Caelo           | Isopropyl alcohol | 19209819     | 2              |
| Caelo           | Isopropyl alcohol | 19209813     | 3              |
| Caelo           | Isopropyl alcohol | 192098002    | 5              |
| Caelo           | Isopropyl alcohol | 19209816     | 1              |
| Caelo           | Isopropyl alcohol | 20000450025  | 1              |
| Caelo           | Isopropyl alcohol | 192098004    | 1              |
| Caelo           | Isopropyl alcohol | 20001912001  | 1              |
| Caelo           | Isopropyl alcohol | 20001912029  | 1              |
| Caelo           | Isopropyl alcohol | 1329421      | 1              |
| Caelo           | Isopropyl alcohol | 14219220     | 1              |
| Caelo           | Isopropyl alcohol | 14278927     | 2              |
| Caelo           | Isopropyl alcohol | 70638B       | 1              |
| Caelo           | Isopropyl alcohol | 70707B       | 1              |
| Caelo           | Isopropyl alcohol | 16039902     | 1              |
| Caelo           | Isopropyl alcohol | 16137301     | 4              |
| Caelo           | Isopropyl alcohol | 17044016     | 2              |
| Caelo           | Isopropyl alcohol | 7010208      | 1              |
| Caelo           | Isopropyl alcohol | 701107B      | 1              |
| Caelo           | Isopropyl alcohol | 20001912018  | 2              |
| Caelo           | Isopropyl alcohol | 17300412     | 5              |
| Caelo           | Isopropyl alcohol | 12179326     | 1              |
| Caelo           | Isopropyl alcohol | 13050901     | 1              |
| Caelo           | Isopropyl alcohol | 13336942     | 1              |
| Caelo           | Isopropyl alcohol | 70598B       | 1              |
| Caelo           | Isopropyl alcohol | 15057518     | 1              |
| Caelo           | Isopropyl alcohol | 70690B       | 1              |
| Caelo           | Isopropyl alcohol | 15300929     | 1              |
| Caelo           | Isopropyl alcohol | 16039925     | 3              |
| Caelo           | Isopropyl alcohol | 16310605     | 2              |
| Caelo           | Isopropyl alcohol | 16234003     | 1              |
| Caelo           | Isopropyl alcohol | 16234008     | 1              |
| Caelo           | Isopropyl alcohol | 17044030     | 5              |
| Caelo           | Isopropyl alcohol | 17044022     | 2              |
| Caelo           | Isopropyl alcohol | 17189302     | 4              |
| Caelo           | Isopropyl alcohol | 70991B       | 1              |
| Caelo           | Isopropyl alcohol | 70969B       | 1              |
| Caelo           | Isopropyl alcohol | 1920812      | 1              |
| Caelo           | Isopropyl alcohol | 701212B      | 1              |
| Caelo           | Isopropyl alcohol | 20001912031  | 1              |
| Caelo           | Isopropyl alcohol | 701244B      | 1              |
| Caelo           | Isopropyl alcohol | 20001912023  | 1              |
| Caelo           | Isopropyl alcohol | 14051002     | 2              |
| Caelo           | Isopropyl alcohol | 18178236     | 1              |
| Caelo           | Isopropyl alcohol | 15300927     | 2              |
| Caelo           | Isopropyl alcohol | 17189306     | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Caelo           | Isopropyl alcohol | 19059527     | 3              |
| Caelo           | Isopropyl alcohol | 180654025691 | 1              |
| Caelo           | Isopropyl alcohol | 70478B       | 1              |
| Caelo           | Isopropyl alcohol | 13050916     | 3              |
| Caelo           | Isopropyl alcohol | 13050913     | 2              |
| Caelo           | Isopropyl alcohol | 13148001     | 2              |
| Caelo           | Isopropyl alcohol | 70541B       | 2              |
| Caelo           | Isopropyl alcohol | 13148003     | 1              |
| Caelo           | Isopropyl alcohol | 13249406     | 1              |
| Caelo           | Isopropyl alcohol | 70553B       | 1              |
| Caelo           | Isopropyl alcohol | 13336915     | 1              |
| Caelo           | Isopropyl alcohol | 13336931     | 1              |
| Caelo           | Isopropyl alcohol | 132494       | 1              |
| Caelo           | Isopropyl alcohol | 13336912     | 2              |
| Caelo           | Isopropyl alcohol | 14051009     | 2              |
| Caelo           | Isopropyl alcohol | 13336921     | 1              |
| Caelo           | Isopropyl alcohol | 13397317     | 1              |
| Caelo           | Isopropyl alcohol | 14134710     | 1              |
| Caelo           | Isopropyl alcohol | 14051021     | 1              |
| Caelo           | Isopropyl alcohol | 14051013     | 1              |
| Caelo           | Isopropyl alcohol | 14134724     | 1              |
| Caelo           | Isopropyl alcohol | 70643B       | 2              |
| Caelo           | Isopropyl alcohol | 14278901     | 3              |
| Caelo           | Isopropyl alcohol | 14278921     | 1              |
| Caelo           | Isopropyl alcohol | 14278925     | 2              |
| Caelo           | Isopropyl alcohol | 14369304     | 1              |
| Caelo           | Isopropyl alcohol | 14278903     | 1              |
| Caelo           | Isopropyl alcohol | 14278929     | 1              |
| Caelo           | Isopropyl alcohol | 70685B       | 2              |
| Caelo           | Isopropyl alcohol | 14369316     | 2              |
| Caelo           | Isopropyl alcohol | 14369333     | 1              |
| Caelo           | Isopropyl alcohol | 14369310     | 1              |
| Caelo           | Isopropyl alcohol | 14369337     | 1              |
| Caelo           | Isopropyl alcohol | 15057524     | 1              |
| Caelo           | Isopropyl alcohol | 15057510     | 1              |
| Caelo           | Isopropyl alcohol | 15057515     | 1              |
| Caelo           | Isopropyl alcohol | 15171340     | 1              |
| Caelo           | Isopropyl alcohol | 70742B       | 1              |
| Caelo           | Isopropyl alcohol | 15300913     | 1              |
| Caelo           | Isopropyl alcohol | 70739B       | 1              |
| Caelo           | Isopropyl alcohol | 15300915     | 1              |
| Caelo           | Isopropyl alcohol | 15398819     | 1              |
| Caelo           | Isopropyl alcohol | 15398831     | 3              |
| Caelo           | Isopropyl alcohol | 15300912     | 1              |
| Caelo           | Isopropyl alcohol | 15398810     | 1              |
| Caelo           | Isopropyl alcohol | 15398827     | 2              |
| Caelo           | Isopropyl alcohol | 16039932     | 1              |
| Caelo           | Isopropyl alcohol | 16039930     | 1              |
| Caelo           | Isopropyl alcohol | 16137312     | 2              |
| Caelo           | Isopropyl alcohol | 16137325     | 2              |
| Caelo           | Isopropyl alcohol | 16234010     | 4              |
| Caelo           | Isopropyl alcohol | 16234019     | 2              |
| Caelo           | Isopropyl alcohol | 17044003     | 1              |
| Caelo           | Isopropyl alcohol | 141/AKD16    | 1              |
| Caelo           | Isopropyl alcohol | 16310621     | 1              |
| Caelo           | Isopropyl alcohol | 17189325     | 1              |
| Caelo           | Isopropyl alcohol | 70994B       | 4              |
| Caelo           | Isopropyl alcohol | 18065401     | 4              |
| Caelo           | Isopropyl alcohol | 701020B      | 1              |
| Caelo           | Isopropyl alcohol | 18065406     | 3              |

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| <b>Supplier</b>      | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------|-------------------|--------------|----------------|
| Caelo                | Isopropyl alcohol | 701078B      | 1              |
| Caelo                | Isopropyl alcohol | 18291726     | 1              |
| Caelo                | Isopropyl alcohol | 19209801     | 2              |
| Caelo                | Isopropyl alcohol | 18291708     | 1              |
| Caelo                | Isopropyl alcohol | 701186B      | 1              |
| Caelo                | Isopropyl alcohol | 20001179008  | 1              |
| Caelo                | Isopropyl alcohol | 20001557017  | 2              |
| Caelo                | Isopropyl alcohol | 2000179029   | 1              |
| Caelo                | Isopropyl alcohol | 20001912017  | 2              |
| Caelo                | Isopropyl alcohol | 20001557013  | 1              |
| Caelo                | Isopropyl alcohol | 20000450009  | 1              |
| Caelo                | Isopropyl alcohol | 701065B      | 5              |
| Caelo                | Isopropyl alcohol | 16234014     | 2              |
| Caelo                | Isopropyl alcohol | 17189320     | 4              |
| Caelo                | Isopropyl alcohol | 4817A-01079  | 1              |
| Caelo                | Isopropyl alcohol | 12179307     | 3              |
| Caelo                | Isopropyl alcohol | 705988       | 1              |
| Caelo                | Isopropyl alcohol | 15300925     | 1              |
| Caelo                | Isopropyl alcohol | 16234017     | 3              |
| Caelo                | Isopropyl alcohol | 17044013     | 3              |
| Caelo                | Isopropyl alcohol | 17189326     | 1              |
| Caelo                | Isopropyl alcohol | 17300426     | 1              |
| Caelo                | Isopropyl alcohol | 19209821     | 1              |
| Caelo                | Isopropyl alcohol | 2000045009   | 1              |
| Caelo                | Isopropyl alcohol | 16039923     | 3              |
| Caelo                | Isopropyl alcohol | 16039911     | 2              |
| Caelo                | Isopropyl alcohol | 709948       | 1              |
| Caelo                | Isopropyl alcohol | 1789304      | 1              |
| Caelo                | Isopropyl alcohol | 15300917     | 1              |
| Caelo/Phönix         | Isopropyl alcohol | 19059513     | 1              |
| Caelo                | Isopropyl alcohol | 19059531     | 6              |
| Caelo                | Isopropyl alcohol | 20001912003  | 1              |
| Caelo                | Isopropyl alcohol | 20003673017  | 2              |
| Caesar & Loretz      | Isopropyl alcohol | 17189320     | 1              |
| Caesar & Loretz      | Isopropyl alcohol | 18065420     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18178231     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291701     | 2              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291710     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291703     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291717     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291715     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18178226     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291722     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291727     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291733     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059502     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291705     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059503     | 2              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291719     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291730     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059511     | 2              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18178234     | 2              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291726     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059514     | 2              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059505     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059516     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059504     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 18291728     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059525     | 1              |
| Caesar & Loretz GmbH | Isopropyl alcohol | 19059527     | 2              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059528     | 3              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 18178224     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059530     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059526     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059533     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209804     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059520     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19059531     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209805     | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209802     | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209801     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209819     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209826     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209822     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 17189327     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209812     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209820     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209813     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209809     | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 19209816     | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20000450002  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20000450017  | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20000450021  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20000450024  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20000450009  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179005  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179010  | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179017  | 4              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179001  | 3              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179020  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 2001557021   | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179015  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179023  | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001557005  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 200001557003 | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 701201B      | 7              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001557013  | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001912004  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179006  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001912023  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001912022  | 2              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001912017  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179011  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20001179029  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673016  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673018  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673010  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673022  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673008  | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 20003673029  | 1              |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol | 18291732     | 1              |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol | 20001179022  | 1              |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol | 20001179001  | 2              |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol | 20001179028  | 1              |
| Caesar & Loretz GmbH, P... | Isopropyl alcohol | 1007091      | 1              |
| Caesar & Loretz GmbH/ S... | Isopropyl alcohol | 20001179001  | 1              |
| Caesar & Loretz GmbH/AHD   | Isopropyl alcohol | 18291728     | 1              |
| Caesar & Loretz GmbH/AHD   | Isopropyl alcohol | 19059502     | 1              |
| Caesar & Loretz GmbH/AHD   | Isopropyl alcohol | 19209809     | 1              |
| Caesar & Loretz GmbH/An... | Isopropyl alcohol | 19059529     | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Caesar & Loretz GmbH/An... | Isopropyl alcohol | 19209811     | 1              |
| Caesar & Loretz GmbH/An... | Isopropyl alcohol | 192098008    | 1              |
| Caesar & Loretz GmbH/Je... | Isopropyl alcohol | 19059512     | 1              |
| Caesar & Loretz GmbH/Je... | Isopropyl alcohol | 19209824     | 1              |
| Caesar & Loretz GmbH/Je... | Isopropyl alcohol | 20000450012  | 5              |
| Caesar & Loretz GmbH/Je... | Isopropyl alcohol | 20001179020  | 1              |
| Caesar & Loretz GmbH/Je... | Isopropyl alcohol | 20001179011  | 1              |
| Caesar & Loretz GmbH/Ph... | Isopropyl alcohol | 19059502     | 1              |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol | 19209815     | 2              |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol | 19059525     | 1              |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol | 19209811     | 1              |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol | 19209818     | 1              |
| Caesar & Loretz/Gehe       | Isopropyl alcohol | 19209815     | 1              |
| Caesar & Loretz/Gehe       | Isopropyl alcohol | 20000450013  | 1              |
| Caesar & Loretz/Noweda     | Isopropyl alcohol | 17044009     | 1              |
| Caesar & LoretzGehe        | Isopropyl alcohol | 19209816     | 1              |
| Caesar & Loretz GmbH       | Isopropyl alcohol | 70503B       | 1              |
| Caesar /phönix             | Isopropyl alcohol | 16310603     | 1              |
| Caesar&Lorenz / Gehe       | Isopropyl alcohol | 19059525     | 1              |
| Caesar&Loretz GmbH         | Isopropyl alcohol | 20001912019  | 1              |
| Caesar&Loretz/Noweda       | Isopropyl alcohol | 15398808     | 1              |
| Caesar/Loretz GmbH / P...  | Isopropyl alcohol | 20001912002  | 1              |
| Caesar/Loretz GmbH / P...  | Isopropyl alcohol | 20001912009  | 1              |
| Caesar/Loretz GmbH Anzag   | Isopropyl alcohol | 20001179     | 1              |
| Caesar/Loretz GmbH Anzag   | Isopropyl alcohol | 701199B      | 1              |
| Caesar/Loretz GmbH Anzag   | Isopropyl alcohol | 20001557030  | 1              |
| Caeser und Loretz GmbH     | Isopropyl alcohol | 18291723     | 1              |
| Caeser und Loretz GmbH     | Isopropyl alcohol | 19209822     | 1              |
| Caldic/ Nanoprotect        | Isopropyl alcohol | 90021901     | 1              |
| Carl Roth                  | Isopropyl alcohol | 120294894    | 1              |
| Carl Roth GmbH             | Isopropyl alcohol | 110294624    | 1              |
| Carl Roth GmbH             | Isopropyl alcohol | 120294894    | 1              |
| Carl Roth GmbH             | Isopropyl alcohol | 701214B      | 2              |
| cealo                      | Isopropyl alcohol | 13336936     | 1              |
| Cealo                      | Isopropyl alcohol | 19059526     | 1              |
| Cealo                      | Isopropyl alcohol | 192098007    | 1              |
| Cealo                      | Isopropyl alcohol | 20000450006  | 1              |
| Cealo/Sanacorp             | Isopropyl alcohol | 192098009    | 1              |
| celo                       | Isopropyl alcohol | 17300430     | 2              |
| Celo                       | Isopropyl alcohol | 16039925     | 1              |
| Celo                       | Isopropyl alcohol | 16039937     | 1              |
| Chem.Fabrik/Kehr           | Isopropyl alcohol | 2011         | 1              |
| Chem.Pharm.Labor.Dr.See... | Isopropyl alcohol | 70577B       | 1              |
| Chemievertrieb Hannover    | Isopropyl alcohol | 2011         | 1              |
| CVH/Kehr                   | Isopropyl alcohol | 2011         | 1              |
| Dankwart                   | Isopropyl alcohol | N9360450-001 | 1              |
| Dr. Seeger GmbH /Noweda    | Isopropyl alcohol | 70577B       | 2              |
| Dr.Seeger GmbH             | Isopropyl alcohol | 70475B       | 1              |
| Dr.Seeger GmbH             | Isopropyl alcohol | 70519B       | 1              |
| Dr.Seeger GmbH             | Isopropyl alcohol | 70527B       | 1              |
| Dr.Seeger GmbH             | Isopropyl alcohol | 70553B       | 2              |
| Druckchemie                | Isopropyl alcohol | 20035016     | 1              |
| Ebert & Jacobi 28.7.16     | Isopropyl alcohol | 16137317     | 1              |
| Eckige Flasche             | Isopropyl alcohol | 70162320     | 1              |
| Eigen                      | Isopropyl alcohol | 70701B       | 1              |
| Euro OTC                   | Isopropyl alcohol | 13249405     | 1              |
| Euro OTC                   | Isopropyl alcohol | 70858B       | 1              |
| Euro OTC                   | Isopropyl alcohol | 70771B       | 1              |
| Euro OTC                   | Isopropyl alcohol | 18291704     | 1              |
| Euro OTC                   | Isopropyl alcohol | L1805017-03  | 1              |

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| <b>Supplier</b>          | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|-------------------|--------------|----------------|
| Euro OTC                 | Isopropyl alcohol | 70578B       | 1              |
| Europharm / Gehe         | Isopropyl alcohol | 18065401     | 1              |
| Caelo                    | Isopropyl alcohol | 701052B      | 1              |
| Fagron                   | Isopropyl alcohol | 70685B       | 1              |
| Fagron                   | Isopropyl alcohol | 70936B       | 1              |
| Fagron                   | Isopropyl alcohol | 13111701     | 1              |
| Fagron                   | Isopropyl alcohol | 701065B      | 1              |
| Fagron                   | Isopropyl alcohol | 70541        | 1              |
| Fagron                   | Isopropyl alcohol | 701071B      | 1              |
| Fagron                   | Isopropyl alcohol | 17189307     | 1              |
| Fagron                   | Isopropyl alcohol | 701068B      | 1              |
| Fiebig                   | Isopropyl alcohol | 17300401     | 1              |
| Fiebig                   | Isopropyl alcohol | 17300416     | 1              |
| Fiebig                   | Isopropyl alcohol | 18065412     | 2              |
| Fiebig                   | Isopropyl alcohol | 701043B      | 1              |
| Fiebig                   | Isopropyl alcohol | 701026B      | 1              |
| Fiebig                   | Isopropyl alcohol | 701052B      | 2              |
| Fiebig                   | Isopropyl alcohol | 18291704     | 1              |
| Fiebig                   | Isopropyl alcohol | 701099B      | 1              |
| Fiebig                   | Isopropyl alcohol | 701107B      | 1              |
| Fiebig                   | Isopropyl alcohol | 701199B      | 1              |
| Fiebig                   | Isopropyl alcohol | 701244B      | 1              |
| Fiebig 09.11.12 EK28,33  | Isopropyl alcohol | 704758       | 1              |
| Fiebig/Aug.Hedinger GmbH | Isopropyl alcohol | 701020B      | 1              |
| Fiebig/Hedinger          | Isopropyl alcohol | 70680B       | 1              |
| Fiebig/Hedinger          | Isopropyl alcohol | 70959B       | 1              |
| Fiebig/Hedinger          | Isopropyl alcohol | 701081B      | 2              |
| Fiebig/Hedinger          | Isopropyl alcohol | 701149B      | 1              |
| Fiebig/Hedinger          | Isopropyl alcohol | 701201B      | 1              |
| FiebigHedinger           | Isopropyl alcohol | 701139B      | 1              |
| fischar                  | Isopropyl alcohol | 3346271      | 1              |
| Fischar                  | Isopropyl alcohol | 4100111      | 1              |
| Fischar                  | Isopropyl alcohol | 4102084      | 2              |
| Fischar                  | Isopropyl alcohol | 70553B       | 1              |
| Fischar                  | Isopropyl alcohol | 1005101      | 1              |
| Fischar                  | Isopropyl alcohol | 4105042      | 1              |
| Fischar                  | Isopropyl alcohol | 1007011      | 1              |
| Fischar                  | Isopropyl alcohol | 4105104      | 1              |
| Fischar                  | Isopropyl alcohol | 4108024      | 1              |
| Fischar                  | Isopropyl alcohol | 1008011      | 1              |
| Fischar                  | Isopropyl alcohol | 8081         | 1              |
| Fischar                  | Isopropyl alcohol | 4108114      | 1              |
| Fischar                  | Isopropyl alcohol | 1009011      | 1              |
| Fischar                  | Isopropyl alcohol | 1009101      | 1              |
| Fischar                  | Isopropyl alcohol | 410003G      | 1              |
| Fischar GmbH             | Isopropyl alcohol | 4105104      | 1              |
| Fischar/ GEHE            | Isopropyl alcohol | 1008011      | 1              |
| Fischar/ Noweda          | Isopropyl alcohol | 1009011      | 1              |
| Fischar/ Noweda          | Isopropyl alcohol | 1009012      | 2              |
| Fischar/Phönix           | Isopropyl alcohol | 4103112      | 1              |
| Fischar/Phönix           | Isopropyl alcohol | 4100032      | 1              |
| fischer / Anzag          | Isopropyl alcohol | 1009012      | 1              |
| Fischer/Phönix           | Isopropyl alcohol | 4103014      | 1              |
| Fisher Chemical          | Isopropyl alcohol | 2034478      | 1              |
| Flasche mit Auswölbung   | Isopropyl alcohol | 31472        | 1              |
| Folgt                    | Isopropyl alcohol | Folgt        | 1              |
| FurthChemie              | Isopropyl alcohol | 3C210010     | 1              |
| Gatt-Koller              | Isopropyl alcohol | KNC0691J8    | 1              |
| gehe                     | Isopropyl alcohol | 14219228     | 1              |
| gehe                     | Isopropyl alcohol | 20001557005  | 2              |

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| <b>Supplier</b>    | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-------------------|--------------|----------------|
| Gehe               | Isopropyl alcohol | 70382B       | 1              |
| Gehe               | Isopropyl alcohol | 70448B       | 1              |
| Gehe               | Isopropyl alcohol | 704098       | 1              |
| Gehe               | Isopropyl alcohol | 12031105     | 1              |
| Gehe               | Isopropyl alcohol | 12254718     | 1              |
| Gehe               | Isopropyl alcohol | 13050927     | 1              |
| Gehe               | Isopropyl alcohol | 70507B       | 1              |
| Gehe               | Isopropyl alcohol | 70541B       | 1              |
| Gehe               | Isopropyl alcohol | 13249403     | 1              |
| Gehe               | Isopropyl alcohol | 70680B       | 1              |
| Gehe               | Isopropyl alcohol | 15057517     | 1              |
| Gehe               | Isopropyl alcohol | 15398802     | 1              |
| Gehe               | Isopropyl alcohol | 16039926     | 1              |
| Gehe               | Isopropyl alcohol | 70685B       | 1              |
| Gehe               | Isopropyl alcohol | 70835B       | 1              |
| Gehe               | Isopropyl alcohol | 16234003     | 1              |
| Gehe               | Isopropyl alcohol | 70892B       | 1              |
| Gehe               | Isopropyl alcohol | 17044002     | 1              |
| Gehe               | Isopropyl alcohol | 70908B       | 1              |
| Gehe               | Isopropyl alcohol | 70994B       | 1              |
| Gehe               | Isopropyl alcohol | 701035B      | 2              |
| Gehe               | Isopropyl alcohol | 701052B      | 1              |
| Gehe               | Isopropyl alcohol | 18291709     | 1              |
| Gehe               | Isopropyl alcohol | 701107B      | 1              |
| Gehe               | Isopropyl alcohol | 701136B      | 1              |
| Gehe               | Isopropyl alcohol | 701139B      | 1              |
| Gehe               | Isopropyl alcohol | 19059503     | 1              |
| Gehe               | Isopropyl alcohol | 701145B      | 2              |
| Gehe               | Isopropyl alcohol | 701156B      | 1              |
| Gehe               | Isopropyl alcohol | 701158B      | 1              |
| Gehe               | Isopropyl alcohol | 701169B      | 1              |
| GEHE               | Isopropyl alcohol | 70461B       | 1              |
| GEHE               | Isopropyl alcohol | 70882B       | 1              |
| GEHE               | Isopropyl alcohol | 70896B       | 1              |
| GEHE               | Isopropyl alcohol | 17300433     | 1              |
| GEHE               | Isopropyl alcohol | 18065406     | 1              |
| GEHE               | Isopropyl alcohol | 70994B       | 1              |
| GEHE               | Isopropyl alcohol | 701043B      | 1              |
| GEHE               | Isopropyl alcohol | 701065B      | 2              |
| GEHE               | Isopropyl alcohol | 18291727     | 1              |
| GEHE               | Isopropyl alcohol | 701099B      | 1              |
| Gehe - Hedinger    | Isopropyl alcohol | 70607B       | 1              |
| GEHE 08.05.2014    | Isopropyl alcohol | 70598B       | 1              |
| Gehe am 07.03.14   | Isopropyl alcohol | 70573B       | 1              |
| Gehe am 17.12.2013 | Isopropyl alcohol | 70578B       | 1              |
| Caelo              | Isopropyl alcohol | 18178202     | 3              |
| GEHE Kassel        | Isopropyl alcohol | 701081B      | 1              |
| Caelo              | Isopropyl alcohol | 15171337     | 1              |
| Gehe/AEP           | Isopropyl alcohol | 701123B      | 1              |
| Caelo              | Isopropyl alcohol | 12179310     | 1              |
| Caelo              | Isopropyl alcohol | 14134712     | 1              |
| Caelo              | Isopropyl alcohol | 16310633     | 4              |
| Caelo              | Isopropyl alcohol | 1100317      | 1              |
| Euro OTC           | Isopropyl alcohol | 70638        | 1              |
| Gehe/Fischar       | Isopropyl alcohol | 1005101      | 2              |
| Gehe/Hedinger      | Isopropyl alcohol | 70540B       | 1              |
| Gehe/Hedinger      | Isopropyl alcohol | 70802B       | 1              |
| Gehe/Hedinger      | Isopropyl alcohol | 709188       | 1              |
| Gehe/Hedinger      | Isopropyl alcohol | 701006B      | 1              |
| Gehe/Hedinger      | Isopropyl alcohol | 701078B      | 1              |

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| <b>Supplier</b>      | <b>Substance</b>  | <b>Batch</b>      | <b>Spectra</b> |
|----------------------|-------------------|-------------------|----------------|
| Gehe/Hedinger        | Isopropyl alcohol | 701114B           | 1              |
| Gehe/Hedinger        | Isopropyl alcohol | 701133B           | 1              |
| Gehe/Hedinger        | Isopropyl alcohol | 701139b           | 2              |
| Gehe/Hedinger        | Isopropyl alcohol | 701123B           | 1              |
| Gehe/Hedinger        | Isopropyl alcohol | 701193B           | 2              |
| Gehe/Hedinger        | Isopropyl alcohol | 701214B           | 1              |
| Gehe/Hedinger        | Isopropyl alcohol | 701201B           | 1              |
| Gehe/Spinnrad GmbH   | Isopropyl alcohol | 519410092         | 1              |
| Caelo                | Isopropyl alcohol | 15398816          | 4              |
| Gehe-Hedinger        | Isopropyl alcohol | 70675B            | 1              |
| Geibo/Hedinger       | Isopropyl alcohol | 70983             | 1              |
| Geibo/Hedinger       | Isopropyl alcohol | 701043B           | 1              |
| Geibo/Noweda         | Isopropyl alcohol | 17300401          | 1              |
| Grüssing             | Isopropyl alcohol | B191546/OR2001439 | 1              |
| Gutenberg-Apotheke   | Isopropyl alcohol | 70607B            | 1              |
| Haedinger/Sanacorp   | Isopropyl alcohol | 701065B           | 3              |
| Heddinger/Noweda     | Isopropyl alcohol | 701145B           | 1              |
| Hediger GmbH / Anzag | Isopropyl alcohol | 701204B           | 2              |
| Hediger/ Noweda      | Isopropyl alcohol | 70675B            | 1              |
| Hediger/Sanacorp     | Isopropyl alcohol | 70736B            | 1              |
| Hedin/Gehe           | Isopropyl alcohol | 701113B           | 1              |
| Hedin/Spangro        | Isopropyl alcohol | 70994B            | 1              |
| Hediner/Noweda       | Isopropyl alcohol | 70908B            | 1              |
| Hediner/Noweda       | Isopropyl alcohol | 70977B            | 1              |
| Hediner/Noweda       | Isopropyl alcohol | 701031B           | 1              |
| hedinger             | Isopropyl alcohol | 105208            | 1              |
| hedinger             | Isopropyl alcohol | 70584B            | 1              |
| hedinger             | Isopropyl alcohol | 70643B            | 1              |
| hedinger             | Isopropyl alcohol | 70663B            | 1              |
| hedinger             | Isopropyl alcohol | 70675B            | 1              |
| hedinger             | Isopropyl alcohol | 70726B            | 2              |
| hedinger             | Isopropyl alcohol | 70818B            | 1              |
| hedinger             | Isopropyl alcohol | 70947B            | 1              |
| hedinger             | Isopropyl alcohol | 70994B            | 2              |
| hedinger             | Isopropyl alcohol | 70991B            | 1              |
| hedinger             | Isopropyl alcohol | 701011b           | 1              |
| hedinger             | Isopropyl alcohol | 70105B            | 1              |
| hedinger             | Isopropyl alcohol | 701035B           | 1              |
| hedinger             | Isopropyl alcohol | 701071B           | 1              |
| hedinger             | Isopropyl alcohol | 701105B           | 1              |
| hedinger             | Isopropyl alcohol | 701081B           | 1              |
| hedinger             | Isopropyl alcohol | 70881B            | 1              |
| hedinger             | Isopropyl alcohol | 701156B           | 1              |
| hedinger             | Isopropyl alcohol | 701181B           | 1              |
| hedinger             | Isopropyl alcohol | 701193B           | 2              |
| hedinger             | Isopropyl alcohol | 701194B           | 2              |
| hedinger             | Isopropyl alcohol | 701209B           | 7              |
| hedinger             | Isopropyl alcohol | 701123B           | 1              |
| hedinger             | Isopropyl alcohol | 701212B           | 4              |
| hedinger             | Isopropyl alcohol | 701214B           | 2              |
| hedinger             | Isopropyl alcohol | 701210B           | 2              |
| Hedinger             | Isopropyl alcohol | 402211079         | 1              |
| Hedinger             | Isopropyl alcohol | 70439B            | 1              |
| Hedinger             | Isopropyl alcohol | 70447B            | 2              |
| Hedinger             | Isopropyl alcohol | 406211079         | 1              |
| Hedinger             | Isopropyl alcohol | 70444B            | 1              |
| Hedinger             | Isopropyl alcohol | 1207211079        | 1              |
| Hedinger             | Isopropyl alcohol | 70457B            | 1              |
| Hedinger             | Isopropyl alcohol | 70461B            | 3              |
| Hedinger             | Isopropyl alcohol | 70463B            | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol | 70471B       | 2              |
| Hedinger        | Isopropyl alcohol | 704638       | 1              |
| Hedinger        | Isopropyl alcohol | 70465B       | 1              |
| Hedinger        | Isopropyl alcohol | 70478B       | 5              |
| Hedinger        | Isopropyl alcohol | 2x070461B    | 1              |
| Hedinger        | Isopropyl alcohol | 2310211079   | 1              |
| Hedinger        | Isopropyl alcohol | 7474942      | 1              |
| Hedinger        | Isopropyl alcohol | 704888       | 1              |
| Hedinger        | Isopropyl alcohol | 1512211079   | 1              |
| Hedinger        | Isopropyl alcohol | 1601311079   | 1              |
| Hedinger        | Isopropyl alcohol | 70498B       | 1              |
| Hedinger        | Isopropyl alcohol | 50700B       | 1              |
| Hedinger        | Isopropyl alcohol | 70497B       | 1              |
| Hedinger        | Isopropyl alcohol | 70501B       | 4              |
| Hedinger        | Isopropyl alcohol | 70500B       | 1              |
| Hedinger        | Isopropyl alcohol | 70507B       | 6              |
| Hedinger        | Isopropyl alcohol | 70511B       | 3              |
| Hedinger        | Isopropyl alcohol | 70495B       | 1              |
| Hedinger        | Isopropyl alcohol | 70488B       | 2              |
| Hedinger        | Isopropyl alcohol | 70519B       | 1              |
| Hedinger        | Isopropyl alcohol | 70527B       | 5              |
| Hedinger        | Isopropyl alcohol | 70530B       | 2              |
| Hedinger        | Isopropyl alcohol | 705258       | 1              |
| Hedinger        | Isopropyl alcohol | 70532B       | 3              |
| Hedinger        | Isopropyl alcohol | 705540B      | 1              |
| Hedinger        | Isopropyl alcohol | 231307       | 1              |
| Hedinger        | Isopropyl alcohol | 3013E1079    | 1              |
| Hedinger        | Isopropyl alcohol | 70536B       | 3              |
| Hedinger        | Isopropyl alcohol | 70481B       | 1              |
| Hedinger        | Isopropyl alcohol | 70540B       | 1              |
| Hedinger        | Isopropyl alcohol | 70545B       | 4              |
| Hedinger        | Isopropyl alcohol | 70541B       | 4              |
| Hedinger        | Isopropyl alcohol | 70422B       | 1              |
| Hedinger        | Isopropyl alcohol | 70559B       | 1              |
| Hedinger        | Isopropyl alcohol | 705728       | 2              |
| Hedinger        | Isopropyl alcohol | 70572B       | 5              |
| Hedinger        | Isopropyl alcohol | 70553B       | 5              |
| Hedinger        | Isopropyl alcohol | 70578        | 1              |
| Hedinger        | Isopropyl alcohol | 70574B       | 3              |
| Hedinger        | Isopropyl alcohol | 70555B       | 4              |
| Hedinger        | Isopropyl alcohol | 70573B       | 1              |
| Hedinger        | Isopropyl alcohol | 70564B       | 2              |
| Hedinger        | Isopropyl alcohol | 705738       | 2              |
| Hedinger        | Isopropyl alcohol | 70219B       | 1              |
| Hedinger        | Isopropyl alcohol | 70577B       | 1              |
| Hedinger        | Isopropyl alcohol | 70581B       | 1              |
| Hedinger        | Isopropyl alcohol | 70578B       | 2              |
| Hedinger        | Isopropyl alcohol | 70584B       | 3              |
| Hedinger        | Isopropyl alcohol | 70587B       | 2              |
| Hedinger        | Isopropyl alcohol | 70595B       | 1              |
| Hedinger        | Isopropyl alcohol | 70562B       | 3              |
| Hedinger        | Isopropyl alcohol | 70592B       | 1              |
| Hedinger        | Isopropyl alcohol | 70598B       | 9              |
| Hedinger        | Isopropyl alcohol | 70593B       | 3              |
| Hedinger        | Isopropyl alcohol | 7060B        | 1              |
| Hedinger        | Isopropyl alcohol | 70603B       | 6              |
| Hedinger        | Isopropyl alcohol | 70607B       | 3              |
| Hedinger        | Isopropyl alcohol | 70614B       | 1              |
| Hedinger        | Isopropyl alcohol | 70620B       | 6              |
| Hedinger        | Isopropyl alcohol | 70627B       | 5              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol | 70638B       | 3              |
| Hedinger        | Isopropyl alcohol | 70643B       | 8              |
| Hedinger        | Isopropyl alcohol | 70636B       | 2              |
| Hedinger        | Isopropyl alcohol | 70623B       | 1              |
| Hedinger        | Isopropyl alcohol | 70627b       | 1              |
| Hedinger        | Isopropyl alcohol | 7638B        | 1              |
| Hedinger        | Isopropyl alcohol | 70650B       | 5              |
| Hedinger        | Isopropyl alcohol | 70659B       | 4              |
| Hedinger        | Isopropyl alcohol | 70663B       | 3              |
| Hedinger        | Isopropyl alcohol | 70730B       | 2              |
| Hedinger        | Isopropyl alcohol | 70668B       | 1              |
| Hedinger        | Isopropyl alcohol | 70656B       | 1              |
| Hedinger        | Isopropyl alcohol | 70666B       | 1              |
| Hedinger        | Isopropyl alcohol | 2022015D     | 1              |
| Hedinger        | Isopropyl alcohol | 70675B       | 3              |
| Hedinger        | Isopropyl alcohol | 70671B       | 2              |
| Hedinger        | Isopropyl alcohol | 70680B       | 2              |
| Hedinger        | Isopropyl alcohol | 70685B       | 6              |
| Hedinger        | Isopropyl alcohol | 70693B       | 2              |
| Hedinger        | Isopropyl alcohol | 70690B       | 3              |
| Hedinger        | Isopropyl alcohol | 70703B       | 3              |
| Hedinger        | Isopropyl alcohol | 70695B       | 1              |
| Hedinger        | Isopropyl alcohol | 70707B       | 6              |
| Hedinger        | Isopropyl alcohol | 70704B       | 1              |
| Hedinger        | Isopropyl alcohol | 2072015A     | 1              |
| Hedinger        | Isopropyl alcohol | 70701B       | 2              |
| Hedinger        | Isopropyl alcohol | 70720B       | 4              |
| Hedinger        | Isopropyl alcohol | 70715B       | 5              |
| Hedinger        | Isopropyl alcohol | 70630B       | 1              |
| Hedinger        | Isopropyl alcohol | 70708B       | 2              |
| Hedinger        | Isopropyl alcohol | 707158       | 1              |
| Hedinger        | Isopropyl alcohol | 70722B       | 3              |
| Hedinger        | Isopropyl alcohol | 70723B       | 1              |
| Hedinger        | Isopropyl alcohol | 70736B       | 3              |
| Hedinger        | Isopropyl alcohol | 31115-88     | 1              |
| Hedinger        | Isopropyl alcohol | 70737B       | 4              |
| Hedinger        | Isopropyl alcohol | 70742B       | 2              |
| Hedinger        | Isopropyl alcohol | 70748B       | 8              |
| Hedinger        | Isopropyl alcohol | 70755B       | 2              |
| Hedinger        | Isopropyl alcohol | 70715b       | 1              |
| Hedinger        | Isopropyl alcohol | 70767B       | 3              |
| Hedinger        | Isopropyl alcohol | 4103014      | 1              |
| Hedinger        | Isopropyl alcohol | 70771B       | 6              |
| Hedinger        | Isopropyl alcohol | 70768B       | 5              |
| Hedinger        | Isopropyl alcohol | 70739B       | 1              |
| Hedinger        | Isopropyl alcohol | 70788B       | 3              |
| Hedinger        | Isopropyl alcohol | 70794B       | 3              |
| Hedinger        | Isopropyl alcohol | 70783B       | 4              |
| Hedinger        | Isopropyl alcohol | 70763B       | 1              |
| Hedinger        | Isopropyl alcohol | 70802B       | 1              |
| Hedinger        | Isopropyl alcohol | 70796B       | 2              |
| Hedinger        | Isopropyl alcohol | 70809B       | 6              |
| Hedinger        | Isopropyl alcohol | 70799B       | 5              |
| Hedinger        | Isopropyl alcohol | 707088       | 1              |
| Hedinger        | Isopropyl alcohol | 70808B       | 3              |
| Hedinger        | Isopropyl alcohol | 708188       | 1              |
| Hedinger        | Isopropyl alcohol | 70818B       | 2              |
| Hedinger        | Isopropyl alcohol | 70825B       | 4              |
| Hedinger        | Isopropyl alcohol | 7089B        | 1              |
| Hedinger        | Isopropyl alcohol | 708258       | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol | 70837B       | 2              |
| Hedinger        | Isopropyl alcohol | 70835B       | 4              |
| Hedinger        | Isopropyl alcohol | 70816B       | 1              |
| Hedinger        | Isopropyl alcohol | 70855B       | 2              |
| Hedinger        | Isopropyl alcohol | 70858b       | 1              |
| Hedinger        | Isopropyl alcohol | 70809        | 1              |
| Hedinger        | Isopropyl alcohol | 70862B       | 1              |
| Hedinger        | Isopropyl alcohol | 70858B       | 9              |
| Hedinger        | Isopropyl alcohol | 70853B       | 1              |
| Hedinger        | Isopropyl alcohol | 70380        | 1              |
| Hedinger        | Isopropyl alcohol | 70879B       | 5              |
| Hedinger        | Isopropyl alcohol | 70881B       | 2              |
| Hedinger        | Isopropyl alcohol | 70882B       | 5              |
| Hedinger        | Isopropyl alcohol | 70898B       | 4              |
| Hedinger        | Isopropyl alcohol | 70870B       | 1              |
| Hedinger        | Isopropyl alcohol | 70889B       | 2              |
| Hedinger        | Isopropyl alcohol | 70896B       | 1              |
| Hedinger        | Isopropyl alcohol | 70906B       | 4              |
| Hedinger        | Isopropyl alcohol | 70908B       | 2              |
| Hedinger        | Isopropyl alcohol | 70884B       | 1              |
| Hedinger        | Isopropyl alcohol | 70915B       | 2              |
| Hedinger        | Isopropyl alcohol | 708828       | 1              |
| Hedinger        | Isopropyl alcohol | 70922B       | 5              |
| Hedinger        | Isopropyl alcohol | 70900B       | 1              |
| Hedinger        | Isopropyl alcohol | 70931B       | 5              |
| Hedinger        | Isopropyl alcohol | 70918B       | 1              |
| Hedinger        | Isopropyl alcohol | 70923B       | 2              |
| Hedinger        | Isopropyl alcohol | 70936B       | 6              |
| Hedinger        | Isopropyl alcohol | 70947B       | 6              |
| Hedinger        | Isopropyl alcohol | 20170160     | 1              |
| Hedinger        | Isopropyl alcohol | 70957B       | 2              |
| Hedinger        | Isopropyl alcohol | 70959B       | 5              |
| Hedinger        | Isopropyl alcohol | 70969B       | 2              |
| Hedinger        | Isopropyl alcohol | 70941B       | 2              |
| Hedinger        | Isopropyl alcohol | 70943B       | 2              |
| Hedinger        | Isopropyl alcohol | Q101012      | 2              |
| Hedinger        | Isopropyl alcohol | 70969        | 1              |
| Hedinger        | Isopropyl alcohol | 9709838      | 1              |
| Hedinger        | Isopropyl alcohol | 70977B       | 9              |
| Hedinger        | Isopropyl alcohol | 70983B       | 7              |
| Hedinger        | Isopropyl alcohol | 70973B       | 2              |
| Hedinger        | Isopropyl alcohol | 70982B       | 1              |
| Hedinger        | Isopropyl alcohol | 70991B       | 3              |
| Hedinger        | Isopropyl alcohol | 70994B       | 17             |
| Hedinger        | Isopropyl alcohol | 70973        | 1              |
| Hedinger        | Isopropyl alcohol | 709738       | 1              |
| Hedinger        | Isopropyl alcohol | 709948       | 1              |
| Hedinger        | Isopropyl alcohol | 171893205489 | 1              |
| Hedinger        | Isopropyl alcohol | 701006B      | 1              |
| Hedinger        | Isopropyl alcohol | 701011B      | 3              |
| Hedinger        | Isopropyl alcohol | 701026B      | 8              |
| Hedinger        | Isopropyl alcohol | 701015B      | 1              |
| Hedinger        | Isopropyl alcohol | 7010318      | 1              |
| Hedinger        | Isopropyl alcohol | 701043B      | 15             |
| Hedinger        | Isopropyl alcohol | 70993B       | 2              |
| Hedinger        | Isopropyl alcohol | P2018/109    | 1              |
| Hedinger        | Isopropyl alcohol | 701031B      | 5              |
| Hedinger        | Isopropyl alcohol | 701035B      | 3              |
| Hedinger        | Isopropyl alcohol | 701052b      | 1              |
| Hedinger        | Isopropyl alcohol | 701054B      | 2              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol | 7010658      | 1              |
| Hedinger        | Isopropyl alcohol | 701065B      | 7              |
| Hedinger        | Isopropyl alcohol | 701068B      | 3              |
| Hedinger        | Isopropyl alcohol | 7010688      | 1              |
| Hedinger        | Isopropyl alcohol | 701071B      | 2              |
| Hedinger        | Isopropyl alcohol | 701073B      | 2              |
| Hedinger        | Isopropyl alcohol | 701052B      | 1              |
| Hedinger        | Isopropyl alcohol | 70165B       | 1              |
| Hedinger        | Isopropyl alcohol | 701078B      | 4              |
| Hedinger        | Isopropyl alcohol | 7010938      | 1              |
| Hedinger        | Isopropyl alcohol | 2315B-01079  | 1              |
| Hedinger        | Isopropyl alcohol | 701061B      | 4              |
| Hedinger        | Isopropyl alcohol | 701099B      | 5              |
| Hedinger        | Isopropyl alcohol | 701093B      | 2              |
| Hedinger        | Isopropyl alcohol | 701105B      | 3              |
| Hedinger        | Isopropyl alcohol | 701081B      | 3              |
| Hedinger        | Isopropyl alcohol | 701113B      | 2              |
| Hedinger        | Isopropyl alcohol | 701114B      | 13             |
| Hedinger        | Isopropyl alcohol | 7011138      | 1              |
| Hedinger        | Isopropyl alcohol | 701123B      | 7              |
| Hedinger        | Isopropyl alcohol | 701136B      | 3              |
| Hedinger        | Isopropyl alcohol | 7011148      | 1              |
| Hedinger        | Isopropyl alcohol | 701107B      | 1              |
| Hedinger        | Isopropyl alcohol | 701117B      | 1              |
| Hedinger        | Isopropyl alcohol | 3397         | 1              |
| Hedinger        | Isopropyl alcohol | 701133B      | 6              |
| Hedinger        | Isopropyl alcohol | 701139B      | 4              |
| Hedinger        | Isopropyl alcohol | 701145B      | 7              |
| Hedinger        | Isopropyl alcohol | 7011048B     | 1              |
| Hedinger        | Isopropyl alcohol | 701148B      | 2              |
| Hedinger        | Isopropyl alcohol | 701156B      | 5              |
| Hedinger        | Isopropyl alcohol | 701073b      | 1              |
| Hedinger        | Isopropyl alcohol | 701145b      | 1              |
| Hedinger        | Isopropyl alcohol | 701139b      | 3              |
| Hedinger        | Isopropyl alcohol | 701149B      | 1              |
| Hedinger        | Isopropyl alcohol | 701164B      | 1              |
| Hedinger        | Isopropyl alcohol | 701169B      | 4              |
| Hedinger        | Isopropyl alcohol | 701158B      | 1              |
| Hedinger        | Isopropyl alcohol | 701173B      | 12             |
| Hedinger        | Isopropyl alcohol | 701188B      | 5              |
| Hedinger        | Isopropyl alcohol | 701189B      | 6              |
| Hedinger        | Isopropyl alcohol | 701175B      | 2              |
| Hedinger        | Isopropyl alcohol | 70145B       | 1              |
| Hedinger        | Isopropyl alcohol | 701182B      | 1              |
| Hedinger        | Isopropyl alcohol | 7011898      | 1              |
| Hedinger        | Isopropyl alcohol | 701199B      | 3              |
| Hedinger        | Isopropyl alcohol | 701194B      | 2              |
| Hedinger        | Isopropyl alcohol | 701201B      | 5              |
| Hedinger        | Isopropyl alcohol | 701212B      | 7              |
| Hedinger        | Isopropyl alcohol | 701214B      | 5              |
| Hedinger        | Isopropyl alcohol | 701220B      | 3              |
| Hedinger        | Isopropyl alcohol | 701186B      | 1              |
| Hedinger        | Isopropyl alcohol | 701204B      | 1              |
| Hedinger        | Isopropyl alcohol | 701218B      | 1              |
| Hedinger        | Isopropyl alcohol | 701214b      | 1              |
| Hedinger        | Isopropyl alcohol | 701231B      | 1              |
| Hedinger        | Isopropyl alcohol | 701196B      | 1              |
| Hedinger        | Isopropyl alcohol | 701244B      | 1              |
| Hedinger        | Isopropyl alcohol | 7012038      | 1              |
| HEDINGER        | Isopropyl alcohol | 701035B      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Hedinger vdL               | Isopropyl alcohol | 70715B       | 1              |
| Hedinger Phönix            | Isopropyl alcohol | 701073B      | 1              |
| Hedinger vdL               | Isopropyl alcohol | 70748B       | 1              |
| Hedinger vdL               | Isopropyl alcohol | 70853B       | 1              |
| Hedinger vdL               | Isopropyl alcohol | 70889B       | 1              |
| Hedinger , Noweda          | Isopropyl alcohol | 70490B       | 1              |
| Hedinger , Stuttgart       | Isopropyl alcohol | 70565B       | 1              |
| Hedinger , Stuttgart       | Isopropyl alcohol | 70545B       | 1              |
| Hedinger , Stuttgart       | Isopropyl alcohol | 70620B       | 1              |
| Hedinger / Anzag           | Isopropyl alcohol | 701043B      | 1              |
| Hedinger / Anzag           | Isopropyl alcohol | 701107B      | 1              |
| Hedinger / Noveda          | Isopropyl alcohol | 70977B       | 1              |
| Hedinger / Noveda          | Isopropyl alcohol | 701065B      | 1              |
| HEDINGER / 20              | Isopropyl alcohol | 70573B       | 1              |
| HEDINGER / 20              | Isopropyl alcohol | 70614B       | 1              |
| HEDINGER / 20              | Isopropyl alcohol | 70638B       | 1              |
| HEDINGER / 20              | Isopropyl alcohol | 70726B       | 1              |
| Hedinger / 30              | Isopropyl alcohol | 70768B       | 1              |
| Hedinger / 41              | Isopropyl alcohol | 701194B      | 1              |
| Hedinger / AHC             | Isopropyl alcohol | 701073B      | 1              |
| Hedinger / AHD 21.4.15     | Isopropyl alcohol | 70693B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70983B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70969B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 701054B      | 2              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70796B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70858B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70875B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70936B       | 1              |
| Hedinger / Alliance Hea... | Isopropyl alcohol | 70991B       | 1              |
| Hedinger / Anzag           | Isopropyl alcohol | 701081B      | 1              |
| Hedinger / Anzag           | Isopropyl alcohol | 701123B      | 1              |
| Hedinger / Apotheke E.B... | Isopropyl alcohol | 70461B       | 1              |
| Hedinger / Apotheke E.B... | Isopropyl alcohol | 70448B       | 1              |
| Hedinger / Apotheke E.B... | Isopropyl alcohol | 70541B       | 1              |
| Hedinger / Apotheke E.B... | Isopropyl alcohol | 70587B       | 1              |
| Hedinger / Apotheke E.B... | Isopropyl alcohol | 70643B       | 1              |
| Hedinger / Fiebig          | Isopropyl alcohol | 770994B      | 1              |
| Hedinger / Fiebig          | Isopropyl alcohol | 701139B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 70581B       | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 70742B       | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 70802B       | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 70809B       | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 70889B       | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701006B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701078B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701099B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701113B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701156B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701212B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701231B      | 1              |
| Hedinger / Gehe            | Isopropyl alcohol | 701244B      | 1              |
| Hedinger / Kehr            | Isopropyl alcohol | 70755B       | 1              |
| Hedinger / Kehr            | Isopropyl alcohol | 7098B        | 1              |
| Hedinger / Krieger         | Isopropyl alcohol | 701156B      | 1              |
| Hedinger / Nowed           | Isopropyl alcohol | 70730B       | 1              |
| Hedinger / Noweda          | Isopropyl alcohol | 70525B       | 1              |
| Hedinger / Noweda          | Isopropyl alcohol | 70587B       | 1              |
| Hedinger / Noweda          | Isopropyl alcohol | 70620B       | 1              |
| Hedinger / Noweda          | Isopropyl alcohol | 70627B       | 1              |
| Hedinger / Noweda          | Isopropyl alcohol | 70659B       | 1              |

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| <b>Supplier</b>             | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|-------------------|--------------|----------------|
| Hedinger / Noweda           | Isopropyl alcohol | 70663B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70675B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70643B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70703B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70734B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70737B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70748B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70762B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70788B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70870B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70882B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70889B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70923B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70959B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 70977B       | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701011B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701015B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701052B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701054B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701071B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701078B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701113B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701073B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701136B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701133B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701145B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701164B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701173B      | 2              |
| Hedinger / Noweda           | Isopropyl alcohol | 701188B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701186B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701194B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701201B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701204B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701173B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701164B      | 1              |
| Hedinger / Noweda           | Isopropyl alcohol | 701212B      | 1              |
| HEDINGER / NOWEDA           | Isopropyl alcohol | 70898B       | 1              |
| Hedinger / Noweda Münster   | Isopropyl alcohol | 70734B       | 1              |
| Hedinger / Phoenix Leip...  | Isopropyl alcohol | 70722B       | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 907948       | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 70994B       | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 701035B      | 2              |
| Hedinger / Phönix           | Isopropyl alcohol | 701054B      | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 701065B      | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 701073B      | 1              |
| Hedinger / Phönix           | Isopropyl alcohol | 701123B      | 2              |
| Hedinger / Phönix           | Isopropyl alcohol | 701105B      | 1              |
| Hedinger / Phönix (12.0...  | Isopropyl alcohol | 701123B      | 1              |
| Hedinger / Sana             | Isopropyl alcohol | 70748B       | 1              |
| Hedinger / Sana             | Isopropyl alcohol | 70799B       | 1              |
| Hedinger / Sana             | Isopropyl alcohol | 70881B       | 1              |
| Hedinger / Sanacorp         | Isopropyl alcohol | 707446B      | 1              |
| Hedinger / Sanacorp         | Isopropyl alcohol | 70737B       | 1              |
| Hedinger / Sanacorp         | Isopropyl alcohol | 701114B      | 1              |
| Hedinger / Sanacorp         | Isopropyl alcohol | 701169B      | 1              |
| Hedinger / Sanacorp         | Isopropyl alcohol | 701218B      | 1              |
| Hedinger / Alliance Heal... | Isopropyl alcohol | 701043B      | 3              |
| Hedinger / Anzag            | Isopropyl alcohol | 70991B       | 3              |
| Hedinger / Anzag            | Isopropyl alcohol | 701203B      | 1              |
| Hedinger / Phoenix          | Isopropyl alcohol | 701073B      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Hedinger /Sana             | Isopropyl alcohol | 70488B       | 1              |
| Hedinger 15.04.2013 Spa... | Isopropyl alcohol | 70511B       | 2              |
| Hedinger Ahc               | Isopropyl alcohol | 70969B       | 2              |
| Hedinger Ahc               | Isopropyl alcohol | 70983B       | 1              |
| Hedinger Ahc               | Isopropyl alcohol | 701026B      | 1              |
| Hedinger Gehe              | Isopropyl alcohol | 70562B       | 1              |
| Hedinger Gehe              | Isopropyl alcohol | 70673B       | 1              |
| Hedinger Gehe              | Isopropyl alcohol | 701043B      | 1              |
| Hedinger GmbH              | Isopropyl alcohol | 70729B       | 1              |
| Hedinger GmbH              | Isopropyl alcohol | 70889B       | 1              |
| Hedinger GmbH              | Isopropyl alcohol | 16310612     | 1              |
| Hedinger GmbH              | Isopropyl alcohol | 70936B       | 1              |
| Hedinger GmbH              | Isopropyl alcohol | 701173B      | 1              |
| Hedinger GmbH & Co KG      | Isopropyl alcohol | 701212B      | 1              |
| Hedinger GmbH & Co. KG     | Isopropyl alcohol | 701043B      | 1              |
| Hedinger GmbH & Co. KG     | Isopropyl alcohol | 701113B      | 1              |
| Hedinger GmbH &Co KG       | Isopropyl alcohol | 70977B       | 1              |
| Hedinger GmbH &Co KG       | Isopropyl alcohol | 701043B      | 1              |
| Hedinger GmbH &Co KG       | Isopropyl alcohol | 701071B      | 1              |
| Hedinger GmbH und Co KG    | Isopropyl alcohol | 701196B      | 1              |
| Hedinger GmbH/Alliance ... | Isopropyl alcohol | 701182B      | 1              |
| Hedinger GmbH/Noweda       | Isopropyl alcohol | 701189B      | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 70478B       | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 70545B       | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 70693B       | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 70720B       | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 70953B       | 1              |
| Hedinger Jenne             | Isopropyl alcohol | 701065B      | 1              |
| Hedinger Noweda            | Isopropyl alcohol | 701093B      | 1              |
| Hedinger Noweda            | Isopropyl alcohol | 701220B      | 1              |
| Hedinger Noweda            | Isopropyl alcohol | 701220B      | 1              |
| Hedinger Phönix            | Isopropyl alcohol | 70991B       | 1              |
| Hedinger Sanacorp          | Isopropyl alcohol | 70737B       | 1              |
| Hedinger Sanacorp          | Isopropyl alcohol | 70835B       | 1              |
| Hedinger Sanacorp          | Isopropyl alcohol | 70862B       | 1              |
| Hedinger Sanacorp          | Isopropyl alcohol | 70931B(II)   | 2              |
| Hedinger Sanacorp          | Isopropyl alcohol | 70931B(I)    | 1              |
| Hedinger Sanacorp          | Isopropyl alcohol | 701231B      | 1              |
| Hedinger über Noweda       | Isopropyl alcohol | 70439B       | 1              |
| Hedinger(Gehe)             | Isopropyl alcohol | 70573B       | 1              |
| Hedinger, Heiligenwiese... | Isopropyl alcohol | 70471B       | 1              |
| Hedinger, Heiligenwiese... | Isopropyl alcohol | 70519B       | 1              |
| Hedinger, Kehr /08.02.2... | Isopropyl alcohol | 701093B      | 1              |
| Hedinger, Noweda           | Isopropyl alcohol | 7474907      | 1              |
| Hedinger, Sanacorp         | Isopropyl alcohol | 701136B      | 1              |
| Hedinger/ AHD              | Isopropyl alcohol | 70788B       | 1              |
| Hedinger/ AHD              | Isopropyl alcohol | 70947B       | 1              |
| Hedinger/ AHD              | Isopropyl alcohol | 70991B       | 1              |
| Hedinger/ AHD              | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/ AHD              | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/ Alliance         | Isopropyl alcohol | 70875B       | 1              |
| Hedinger/ Alliance         | Isopropyl alcohol | 701026B      | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol | 70492B       | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol | 70638B       | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol | 701196B      | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol | 701196B      | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol | 70120-48     | 1              |
| Hedinger/ E&J              | Isopropyl alcohol | 70947B       | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 70444B       | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 70708B       | 2              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Hedinger/ Gehe             | Isopropyl alcohol | 70835B       | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 70973B       | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 70993B       | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 701061B      | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/ Gehe             | Isopropyl alcohol | 70977B       | 2              |
| Hedinger/ Gehe             | Isopropyl alcohol | 701065B      | 1              |
| Hedinger/ GEHE             | Isopropyl alcohol | 706388       | 1              |
| Hedinger/ Ginkgo           | Isopropyl alcohol | 701164B      | 1              |
| Hedinger/ jenne            | Isopropyl alcohol | 70541B       | 1              |
| Hedinger/ Jenne            | Isopropyl alcohol | 70595B       | 1              |
| Hedinger/ Jenne            | Isopropyl alcohol | 70608B       | 1              |
| Hedinger/ Jenne            | Isopropyl alcohol | 70620B       | 1              |
| Hedinger/ Jenne            | Isopropyl alcohol | 701026B      | 1              |
| Hedinger/ Kehr             | Isopropyl alcohol | 70703B       | 1              |
| Hedinger/ Kehr             | Isopropyl alcohol | 701196B      | 1              |
| Hedinger/ Max Jenne Lüb... | Isopropyl alcohol | 701136B      | 1              |
| Hedinger/ Max Jenne Lüb... | Isopropyl alcohol | 701212B      | 1              |
| Hedinger/ Max Jenne Lüb... | Isopropyl alcohol | 701204B      | 1              |
| Hedinger/ N/ PZN:07474942  | Isopropyl alcohol | 70598B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70517B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70520B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70555B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70627B       | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70675B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70693B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70685B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70771B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70748b       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70799B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70835B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70853B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70889B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70884B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70818B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70943B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70957B       | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70973B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 70959B       | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 701031B      | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol | 701173B      | 1              |
| Hedinger/ Noweda/ 02.04... | Isopropyl alcohol | 701189B      | 6              |
| Hedinger/ Noweda/ 09.04... | Isopropyl alcohol | 701193B      | 3              |
| Hedinger/ Phoenix          | Isopropyl alcohol | 70898B       | 1              |
| Hedinger/ Phoenix          | Isopropyl alcohol | 701189B      | 1              |
| Hedinger/ Phoenix          | Isopropyl alcohol | 701218B      | 1              |
| Hedinger/ Phoenix / 04...  | Isopropyl alcohol | 70809b       | 1              |
| Hedinger/ Phönix           | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/ Phönix           | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/ Sanacorp         | Isopropyl alcohol | 70545B       | 1              |
| Hedinger/ Sanacorp         | Isopropyl alcohol | 701011B      | 1              |
| Hedinger/ Sanacorp         | Isopropyl alcohol | 701145B      | 1              |
| Hedinger/ Sanacorp Lüb...  | Isopropyl alcohol | 701133B      | 1              |
| Hedinger/ Spangro.         | Isopropyl alcohol | 701186B      | 1              |
| Hedinger/A                 | Isopropyl alcohol | 701186B      | 1              |
| Hedinger/A                 | Isopropyl alcohol | 701189B      | 2              |
| Hedinger/A                 | Isopropyl alcohol | 701193B      | 1              |
| Hedinger/AHCA              | Isopropyl alcohol | 701145B      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Hedinger/AHD               | Isopropyl alcohol | 70527B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70532B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70507B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 705408       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70574B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70788B       | 2              |
| Hedinger/AHD               | Isopropyl alcohol | 70690B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70737B       | 3              |
| Hedinger/AHD               | Isopropyl alcohol | 70748B       | 2              |
| Hedinger/AHD               | Isopropyl alcohol | 70768B       | 3              |
| Hedinger/AHD               | Isopropyl alcohol | 70771B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 707888       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 70931B       | 2              |
| Hedinger/AHD               | Isopropyl alcohol | 70915B       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 709838       | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701078B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 7011058      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701145B      | 2              |
| Hedinger/AHD               | Isopropyl alcohol | 701114B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701123B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701107B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701173B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701169B      | 1              |
| Hedinger/AHD               | Isopropyl alcohol | 701182B      | 2              |
| Hedinger/AHD               | Isopropyl alcohol | 701212B      | 1              |
| HEDINGER/AHD               | Isopropyl alcohol | 701169B      | 3              |
| HEDINGER/AHD               | Isopropyl alcohol | 701156B      | 1              |
| HEDINGER/AHD               | Isopropyl alcohol | 701218B      | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 70818B       | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 70870B       | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 70846B       | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 70991B       | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 701026B      | 1              |
| Hedinger/Alliance          | Isopropyl alcohol | 701099B      | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70898B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70503B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70768B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70936B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70858B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70941B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70908B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 70982B       | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 701035B      | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 701071B      | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 701186B      | 1              |
| Hedinger/Alliance Healt... | Isopropyl alcohol | 701201B      | 1              |
| Hedinger/AllianceHealth    | Isopropyl alcohol | 70889B       | 1              |
| hedinger/anzag             | Isopropyl alcohol | 705838       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70471B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70519B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 705198       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70545B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70553B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 705728       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70608B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70627B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70643B       | 1              |
| Hedinger/Anzag             | Isopropyl alcohol | 70675B       | 1              |

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| <b>Supplier</b>           | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|-------------------|--------------|----------------|
| Hedinger/Anzag            | Isopropyl alcohol | 70685B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70703B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70737B       | 2              |
| Hedinger/Anzag            | Isopropyl alcohol | 70736B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70768B       | 2              |
| Hedinger/Anzag            | Isopropyl alcohol | 70788B       | 2              |
| Hedinger/Anzag            | Isopropyl alcohol | 70853B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70866B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70906B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 709918       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 70982B       | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701015B      | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701061B      | 2              |
| Hedinger/Anzag            | Isopropyl alcohol | 701114B      | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701113B      | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701149B      | 4              |
| Hedinger/Anzag            | Isopropyl alcohol | 701156B      | 4              |
| Hedinger/Anzag            | Isopropyl alcohol | 701123B      | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701181B      | 2              |
| Hedinger/Anzag            | Isopropyl alcohol | 701175B      | 1              |
| Hedinger/Anzag            | Isopropyl alcohol | 701210B      | 2              |
| Hedinger/Anzag 25.05.20   | Isopropyl alcohol | 701196B      | 1              |
| Hedinger/Anzag 27.02.2012 | Isopropyl alcohol | 70417B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 70882B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 70734B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 70898B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 70943B       | 3              |
| Hedinger/Ebert            | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 70991B       | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 701065B      | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 701073B      | 2              |
| Hedinger/Ebert            | Isopropyl alcohol | 701105B      | 3              |
| Hedinger/Ebert            | Isopropyl alcohol | 701136B      | 1              |
| Hedinger/Ebert            | Isopropyl alcohol | 701156B      | 3              |
| Hedinger/Ebert&Jacobi     | Isopropyl alcohol | 70627B       | 2              |
| Hedinger/Ebert&Jacobi     | Isopropyl alcohol | 70620B       | 1              |
| Hedinger/Ebetr            | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/Ebetr            | Isopropyl alcohol | 709994B      | 2              |
| Hedinger/Ebetr            | Isopropyl alcohol | 701052B      | 2              |
| Hedinger/Fiebig           | Isopropyl alcohol | 70729B       | 1              |
| Hedinger/Fiebig           | Isopropyl alcohol | 70959B       | 1              |
| Hedinger/Fiebig           | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/Fiebig           | Isopropyl alcohol | 701114B      | 1              |
| Hedinger/Fiebig           | Isopropyl alcohol | 701220B      | 1              |
| Hedinger/G                | Isopropyl alcohol | 70994B       | 1              |
| hedinger/Gehe             | Isopropyl alcohol | 7012148      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70478B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70492B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70481B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70501B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 704988       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70507B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70505B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70532B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70540B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70527B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70553B       | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 70584B       | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| Hedinger/Gehe   | Isopropyl alcohol | 70581B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70562B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70587B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70598B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 7087B        | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70603B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70607B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70627B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70659B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70638B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70668B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70666B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70675B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70663B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70693B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70690B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70703B       | 4              |
| Hedinger/Gehe   | Isopropyl alcohol | 70701B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70696B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70715B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70730B       | 5              |
| Hedinger/Gehe   | Isopropyl alcohol | 70723B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70736B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70671b       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70737B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 707308       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70739B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70755B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70767B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70748B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70763B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 7076B        | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70783B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70796B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70804B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70818B       | 3              |
| Hedinger/Gehe   | Isopropyl alcohol | 70771B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70809B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70816B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70858B       | 3              |
| Hedinger/Gehe   | Isopropyl alcohol | 70825B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70875B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70799B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70882B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70892B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70870B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70918B       | 2              |
| Hedinger/Gehe   | Isopropyl alcohol | 70889B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70931B       | 3              |
| Hedinger/Gehe   | Isopropyl alcohol | 70908B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70941B       | 4              |
| Hedinger/Gehe   | Isopropyl alcohol | 70936B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70957B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70959B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70983B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70898B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70973B       | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 70994B       | 4              |
| Hedinger/Gehe   | Isopropyl alcohol | 701006B      | 1              |
| Hedinger/Gehe   | Isopropyl alcohol | 701031B      | 4              |

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| <b>Supplier</b>           | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|-------------------|--------------|----------------|
| Hedinger/Gehe             | Isopropyl alcohol | 701015B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701035B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701065B      | 3              |
| Hedinger/Gehe             | Isopropyl alcohol | 701078B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701093B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701099B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701107B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 7011148      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701123B      | 2              |
| Hedinger/Gehe             | Isopropyl alcohol | 701136B      | 2              |
| Hedinger/Gehe             | Isopropyl alcohol | 701149B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701148B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701182B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701169B      | 3              |
| Hedinger/Gehe             | Isopropyl alcohol | 701175B      | 2              |
| Hedinger/Gehe             | Isopropyl alcohol | 701173B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701201B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701194B      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 7012148      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 7012188      | 1              |
| Hedinger/Gehe             | Isopropyl alcohol | 701244B      | 2              |
| Hedinger/Gehe             | Isopropyl alcohol | 701282B      | 1              |
| Hedinger/GEHE             | Isopropyl alcohol | 1514Q1079    | 1              |
| Hedinger/GEHE             | Isopropyl alcohol | 701186B      | 1              |
| Hedinger/GEHE             | Isopropyl alcohol | 701194B      | 2              |
| HEDINGER/Gehe             | Isopropyl alcohol | 709478       | 1              |
| Hedinger/gehe/38,69       | Isopropyl alcohol | 701148       | 1              |
| Hedinger/Geibo            | Isopropyl alcohol | 701105B      | 1              |
| Hedinger/Geilenkirchen    | Isopropyl alcohol | 706388       | 1              |
| Hedinger/Hedinger         | Isopropyl alcohol | 701173B      | 1              |
| Hedinger/Hedinger         | Isopropyl alcohol | 701186B      | 2              |
| Hedinger/Holdermann       | Isopropyl alcohol | 70607B       | 1              |
| Hedinger/Holdermann       | Isopropyl alcohol | 70898B       | 1              |
| Hedinger/Holdermann       | Isopropyl alcohol | 70881B       | 1              |
| Hedinger/Holdermann 30... | Isopropyl alcohol | 70444B       | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 70525B       | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 70559B       | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 701139B      | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 701189B      | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 701212B      | 1              |
| Hedinger/Jenne            | Isopropyl alcohol | 701194B      | 2              |
| Hedinger/Jenne 31.10.2014 | Isopropyl alcohol | 706388       | 1              |
| Hedinger/Jenne/12.01.18   | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/Kehr             | Isopropyl alcohol | 70675B       | 1              |
| Hedinger/Kehr             | Isopropyl alcohol | 7073B        | 1              |
| Hedinger/Kehr             | Isopropyl alcohol | 701093B      | 2              |
| Hedinger/Krieger          | Isopropyl alcohol | 708358       | 1              |
| Hedinger/Krieger          | Isopropyl alcohol | 70918B       | 1              |
| Hedinger/Krieger          | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/Krieger          | Isopropyl alcohol | 701114B      | 2              |
| Hedinger/Krieger          | Isopropyl alcohol | 701214B      | 1              |
| Hedinger/L10              | Isopropyl alcohol | 7010158      | 1              |
| Hedinger/N                | Isopropyl alcohol | 70675B       | 1              |
| Hedinger/N                | Isopropyl alcohol | 70818B       | 1              |
| HEDINGER/N/1.06.13/PZN... | Isopropyl alcohol | 70527b       | 1              |
| Hedinger/N/PZN:07474942   | Isopropyl alcohol | 70559B       | 1              |
| Hedinger/Noveda           | Isopropyl alcohol | 701054B      | 1              |
| hedinger/noveda/anzag     | Isopropyl alcohol | 701194B      | 1              |
| hedinger/noweda           | Isopropyl alcohol | CH0701175B   | 1              |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-------------------|--------------|----------------|
| hedinger/Noweda | Isopropyl alcohol | 70918B       | 1              |
| Hedinger/noweda | Isopropyl alcohol | 70957B       | 1              |
| Hedinger/noweda | Isopropyl alcohol | 701015B      | 2              |
| Hedinger/noweda | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/noweda | Isopropyl alcohol | 701054B      | 1              |
| Hedinger/noweda | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/noweda | Isopropyl alcohol | 701105B      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70457B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70465B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70519B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70520B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70540B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 7054907      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70545B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70565B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70584B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70603B       | 4              |
| Hedinger/Noweda | Isopropyl alcohol | 70620B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 706388       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70627B       | 4              |
| Hedinger/Noweda | Isopropyl alcohol | 70788B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70690B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70685B       | 3              |
| Hedinger/Noweda | Isopropyl alcohol | 70720B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70643B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70736B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70726B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70737B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 707718       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70767B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70818B       | 4              |
| Hedinger/Noweda | Isopropyl alcohol | 70835B       | 3              |
| Hedinger/Noweda | Isopropyl alcohol | 70730B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 708188       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70853B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 4916U-01079  | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 4716M-01079  | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70882b       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70889B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70922B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70906B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70908B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70947B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 70969B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70957B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70973B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70977B       | 4              |
| Hedinger/Noweda | Isopropyl alcohol | 70941B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 709082B      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70983B       | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 70994B       | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 707075B      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 701015B      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 701006B      | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 701011B      | 1              |
| Hedinger/Noweda | Isopropyl alcohol | 701043B      | 9              |
| Hedinger/Noweda | Isopropyl alcohol | 701026B      | 3              |
| Hedinger/Noweda | Isopropyl alcohol | 701031B      | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 701035B      | 2              |
| Hedinger/Noweda | Isopropyl alcohol | 701065B      | 1              |

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| <b>Supplier</b>  | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|------------------|-------------------|--------------|----------------|
| Hedinger/Noweda  | Isopropyl alcohol | 701071B      | 3              |
| Hedinger/Noweda  | Isopropyl alcohol | 701061B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701078B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701081B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701099B      | 2              |
| Hedinger/Noweda  | Isopropyl alcohol | 701105B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701035B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701107B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701114B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701136B      | 2              |
| Hedinger/Noweda  | Isopropyl alcohol | 701133B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701139B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701123B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701133B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701156B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701149B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701158B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 7011B6B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701193B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701194B      | 2              |
| Hedinger/Noweda  | Isopropyl alcohol | 701201B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701203B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701214B      | 1              |
| Hedinger/Noweda  | Isopropyl alcohol | 701182B      | 2              |
| Hedinger/Noweda  | Isopropyl alcohol | 701233B      | 2              |
| Hedinger/Otto    | Isopropyl alcohol | 70581B       | 1              |
| Hedinger/phoenix | Isopropyl alcohol | 707488       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70545B       | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 70578B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70659B       | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 70734B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70799B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70794B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70837B       | 3              |
| Hedinger/Phoenix | Isopropyl alcohol | 70908B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70889B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70969B       | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 70973B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 70994B       | 3              |
| Hedinger/Phoenix | Isopropyl alcohol | 70994B       | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701031B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701006B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701035B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701065B      | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 701073B      | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 700078B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701093B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701105B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701113B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701099B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701123B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701156B      | 3              |
| Hedinger/Phoenix | Isopropyl alcohol | 701164B      | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 701169B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701189B      | 1              |
| Hedinger/Phoenix | Isopropyl alcohol | 701231B      | 2              |
| Hedinger/Phoenix | Isopropyl alcohol | 701214B      | 1              |
| Hedinger/Phönix  | Isopropyl alcohol | 70520B       | 1              |

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| <b>Supplier</b>              | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|------------------------------|-------------------|--------------|----------------|
| Hedinger/Phönix              | Isopropyl alcohol | 70565B       | 3              |
| Hedinger/Phönix              | Isopropyl alcohol | 70536B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70598B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70607B       | 2              |
| Hedinger/Phönix              | Isopropyl alcohol | 70627B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70643B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 706808       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70680B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70715B       | 2              |
| Hedinger/Phönix              | Isopropyl alcohol | 70723B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70748B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70768B       | 2              |
| Hedinger/Phönix              | Isopropyl alcohol | 70771B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70783B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70809B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70825B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70858B       | 2              |
| Hedinger/Phönix              | Isopropyl alcohol | 70385B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70846B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70969B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 709473B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701043B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701065B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 70977B       | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 7011148      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701105B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701148B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 7011369B     | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701156B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701123B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701189B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701214B      | 1              |
| Hedinger/Phönix              | Isopropyl alcohol | 701231B      | 1              |
| Hedinger/Sana                | Isopropyl alcohol | 70663B       | 1              |
| Hedinger/Sana                | Isopropyl alcohol | 70881B       | 1              |
| Hedinger/Sana                | Isopropyl alcohol | 70943B       | 1              |
| Hedinger/Sana                | Isopropyl alcohol | 70915B       | 1              |
| Hedinger/Sana EK: EUR 72,... | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/sanacorp            | Isopropyl alcohol | 70739B       | 3              |
| Hedinger/sanacorp            | Isopropyl alcohol | 701156B      | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70476B       | 2              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70519B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70540B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70541B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70553BH      | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70564B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70578B       | 3              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70598B       | 3              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70593B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70587B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70614B       | 3              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70620B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70627B       | 3              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70638B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70643B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70650B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70659B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70656B       | 1              |
| Hedinger/Sanacorp            | Isopropyl alcohol | 70685B       | 1              |

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| <b>Supplier</b>           | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|-------------------|--------------|----------------|
| Hedinger/Sanacorp         | Isopropyl alcohol | 70696B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 2309I/01079  | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 7685B        | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70704B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70703B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70720B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70726B       | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70734B       | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70737B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70767B       | 5              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70755B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70771B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70742B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70763B       | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70777B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70788B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70835B       | 3              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70879B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70818B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70892B       | 3              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70896B       | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70915B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70923B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70936B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70982B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70977B       | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701020B      | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701026B      | 4              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701031B      | 4              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701043B      | 4              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 70762B       | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701052B      | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 7010438      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701054B      | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 7010618      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701061B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701065B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701073B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701078B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701093B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701107B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701114B      | 4              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701133B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701136B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701156B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 7011498      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 7701189B     | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701201B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701194B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701164B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701218B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701196B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701203B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701220B      | 2              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701231B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701210B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701169B      | 1              |
| Hedinger/Sanacorp         | Isopropyl alcohol | 701244B      | 1              |
| HEDINGER/Sanacorp         | Isopropyl alcohol | 701182B      | 1              |
| Hedinger/Sanacorp6.5.2014 | Isopropyl alcohol | 70603B       | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b>   | <b>Spectra</b> |
|----------------------------|-------------------|----------------|----------------|
| Hedinger/Spangro           | Isopropyl alcohol | 701078B        | 1              |
| Hedinger/Spangro           | Isopropyl alcohol | 701133B        | 1              |
| Hedinger/Spangro           | Isopropyl alcohol | 701186B        | 1              |
| Hedinger/VDL               | Isopropyl alcohol | 704788         | 1              |
| Hedinger/VDL               | Isopropyl alcohol | 70884B         | 1              |
| Hedinger1                  | Isopropyl alcohol | 70607B         | 1              |
| HEDINGER7/AHD              | Isopropyl alcohol | 701214B        | 1              |
| HedingerAlliance           | Isopropyl alcohol | 70866B         | 2              |
| HedingerAlliance           | Isopropyl alcohol | 70881B         | 2              |
| HedingerAlliance           | Isopropyl alcohol | 70882B         | 1              |
| HedingerAlliance           | Isopropyl alcohol | 701156B        | 1              |
| HedingerAlliance           | Isopropyl alcohol | 7011640        | 1              |
| HedingerAlliance           | Isopropyl alcohol | 701258B        | 1              |
| HedingerGmbH/AHD           | Isopropyl alcohol | 701233B        | 1              |
| HedingerStuttgart/GEHE     | Isopropyl alcohol | 70430B         | 1              |
| HedingerStuttgart/GEHE     | Isopropyl alcohol | 704958         | 1              |
| HedingerStuttgart/GEHE     | Isopropyl alcohol | 704978         | 1              |
| HedingerStuttgart/GEHE     | Isopropyl alcohol | 70527B         | 1              |
| Hedinger/Gehe              | Isopropyl alcohol | 70994B         | 1              |
| Heidinger                  | Isopropyl alcohol | 70748B         | 1              |
| Heidinger                  | Isopropyl alcohol | 70922B         | 1              |
| Heidinger/ Noweda          | Isopropyl alcohol | 701031B        | 2              |
| Heidinger/ Noweda          | Isopropyl alcohol | 701123B        | 1              |
| Heidinger/ Noweda          | Isopropyl alcohol | 701173B        | 1              |
| Heidinger/ Noweda          | Isopropyl alcohol | 701175B        | 1              |
| Heinger/G                  | Isopropyl alcohol | 70730B         | 1              |
| Henry Lamotte Oils         | Isopropyl alcohol | 16310633       | 1              |
| Henry Lamotte Oils GmbH    | Isopropyl alcohol | 70627B         | 1              |
| Henry Lamotte Oils GmbH    | Isopropyl alcohol | 701052B        | 1              |
| Henry Lamotte/ Sanacorp    | Isopropyl alcohol | 15300912       | 1              |
| Henry LamotteOlis GmbH/... | Isopropyl alcohol | 7011368        | 1              |
| Herdinger                  | Isopropyl alcohol | 70592B         | 1              |
| Herdinger Phönix           | Isopropyl alcohol | 70536B         | 1              |
| Hetterich/Noewda           | Isopropyl alcohol | 70796B         | 1              |
| Höfer                      | Isopropyl alcohol | 1425423        | 1              |
| Höfer Chemie               | Isopropyl alcohol | 20504295       | 2              |
| Höfer Chemie               | Isopropyl alcohol | 20200828352678 | 1              |
| Höfer Chemie GmbH          | Isopropyl alcohol | 200661-7       | 1              |
| Hofmann/Schmittmann Korn   | Isopropyl alcohol | 2710227        | 1              |
| Hofmann/Schmittmann Korn   | Isopropyl alcohol | 2772128        | 1              |
| Ichthyol/Noweda            | Isopropyl alcohol | 70587B         | 1              |
| Ichthyol/Phönix            | Isopropyl alcohol | 70835B         | 1              |
| Isopropylalkohol GMP/Gehe  | Isopropyl alcohol | 70598B         | 1              |
| Isopropylalkohol/Noweda    | Isopropyl alcohol | 701105B        | 1              |
| Jenne                      | Isopropyl alcohol | 701073B        | 1              |
| Jenne                      | Isopropyl alcohol | 7474936        | 1              |
| Jenne                      | Isopropyl alcohol | 701194B        | 2              |
| Jenne                      | Isopropyl alcohol | 70114B         | 1              |
| Jenne                      | Isopropyl alcohol | 701212B        | 2              |
| Jenne, Hedinger            | Isopropyl alcohol | 70475B         | 1              |
| Jenne, Hedinger            | Isopropyl alcohol | 70501B         | 1              |
| Jenne, Hedinger            | Isopropyl alcohol | 70519B         | 1              |
| Caelo                      | Isopropyl alcohol | 701015B        | 1              |
| Jenne/Hedinger             | Isopropyl alcohol | 70643B         | 1              |
| Jenne/Hedinger             | Isopropyl alcohol | 701099B        | 1              |
| Kassner & Sasse            | Isopropyl alcohol | 383316         | 2              |
| Kassner & Sasse            | Isopropyl alcohol | 669929         | 1              |
| Kehr                       | Isopropyl alcohol | 2011           | 1              |
| Kehr/ Hedinger             | Isopropyl alcohol | 70994B         | 1              |
| Kehr/Hedinger              | Isopropyl alcohol | 70898B         | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Klenk                      | Isopropyl alcohol | 70475b       | 1              |
| Klenk                      | Isopropyl alcohol | 70527B       | 1              |
| Kögl                       | Isopropyl alcohol | KNC0576J16   | 1              |
| Kögl                       | Isopropyl alcohol | KNC0593J17   | 1              |
| Kögl                       | Isopropyl alcohol | KNC1686J17   | 1              |
| kost                       | Isopropyl alcohol | 310120913059 | 2              |
| Kost                       | Isopropyl alcohol | 310031215096 | 1              |
| Kost                       | Isopropyl alcohol | 310140616105 | 1              |
| Kost                       | Isopropyl alcohol | 310160418136 | 1              |
| Kost/ - /16.09.13          | Isopropyl alcohol | 310120913059 | 1              |
| Kost/Karl Josef Kost       | Isopropyl alcohol | 310230218134 | 1              |
| Kost/Karl Josef Kost/Kr... | Isopropyl alcohol | 310151019161 | 1              |
| Kost/kost/sophien          | Isopropyl alcohol | 310261113062 | 1              |
| Caelo                      | Isopropyl alcohol | 18291732     | 1              |
| Caelo                      | Isopropyl alcohol | 17044011     | 1              |
| L 10/Hedinger              | Isopropyl alcohol | 70866B       | 1              |
| L10                        | Isopropyl alcohol | 70977B       | 1              |
| L10                        | Isopropyl alcohol | 701031B      | 1              |
| L10                        | Isopropyl alcohol | 701054B      | 1              |
| L10/Apoth.E.Bartel         | Isopropyl alcohol | 70858B       | 1              |
| L11                        | Isopropyl alcohol | 701099B      | 1              |
| L12/Apoth.E.Bartel         | Isopropyl alcohol | 70835B       | 1              |
| Lolab                      | Isopropyl alcohol | 992926       | 1              |
| Merck                      | Isopropyl alcohol | K17381091    | 1              |
| Nanoprotect GmbH           | Isopropyl alcohol | 2020-III     | 1              |
| NeoFroxx/Fox Chemicals     | Isopropyl alcohol | 5E5CEE9F     | 1              |
| neoFroxxGmbH/Fox Chemic... | Isopropyl alcohol | 5D713BC1     | 1              |
| neoFroxxGmbH/Fox Chemic... | Isopropyl alcohol | 5CE6AEEA     | 1              |
| neoFroxxGmbH/Fox Chemic... | Isopropyl alcohol | 5E675FA7     | 1              |
| NicoLiquids Essen          | Isopropyl alcohol | 12345        | 1              |
| Nokun                      | Isopropyl alcohol | 70870B       | 1              |
| Nordwest Chemie            | Isopropyl alcohol | F2000484     | 2              |
| Nordwest Chemie            | Isopropyl alcohol | F2000508-1   | 1              |
| Nordwest Chemie            | Isopropyl alcohol | F2000508     | 1              |
| Nowed                      | Isopropyl alcohol | 701078B      | 1              |
| Nowed                      | Isopropyl alcohol | 701181B      | 3              |
| Nowed                      | Isopropyl alcohol | 701186B      | 3              |
| noweda                     | Isopropyl alcohol | 14278905     | 1              |
| noweda                     | Isopropyl alcohol | 16137324     | 1              |
| Noweda                     | Isopropyl alcohol | 11371222     | 1              |
| Noweda                     | Isopropyl alcohol | 70409B       | 1              |
| Noweda                     | Isopropyl alcohol | 12112218     | 1              |
| Noweda                     | Isopropyl alcohol | 70459B       | 1              |
| Noweda                     | Isopropyl alcohol | 70475B       | 2              |
| Noweda                     | Isopropyl alcohol | 12254715     | 1              |
| Noweda                     | Isopropyl alcohol | 12321023     | 2              |
| Noweda                     | Isopropyl alcohol | 70490B       | 1              |
| Noweda                     | Isopropyl alcohol | 12379515     | 1              |
| Noweda                     | Isopropyl alcohol | 70519B       | 1              |
| Noweda                     | Isopropyl alcohol | 12379510     | 1              |
| Noweda                     | Isopropyl alcohol | 13397303     | 1              |
| Noweda                     | Isopropyl alcohol | 14051027     | 1              |
| Noweda                     | Isopropyl alcohol | 70638B       | 1              |
| Noweda                     | Isopropyl alcohol | 70627B       | 1              |
| Noweda                     | Isopropyl alcohol | 70755B       | 1              |
| Noweda                     | Isopropyl alcohol | 16137302     | 1              |
| Noweda                     | Isopropyl alcohol | 16310616     | 1              |
| Noweda                     | Isopropyl alcohol | 70835B       | 1              |
| Noweda                     | Isopropyl alcohol | 70898B       | 1              |
| Noweda                     | Isopropyl alcohol | 707488       | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Noweda                     | Isopropyl alcohol | 17044033     | 1              |
| Noweda                     | Isopropyl alcohol | 70931B       | 1              |
| Noweda                     | Isopropyl alcohol | 70993B       | 1              |
| Noweda                     | Isopropyl alcohol | 18178207     | 1              |
| Noweda                     | Isopropyl alcohol | 701035B      | 1              |
| Noweda                     | Isopropyl alcohol | 181778209    | 1              |
| Noweda                     | Isopropyl alcohol | 701043B      | 1              |
| Noweda                     | Isopropyl alcohol | 18178240     | 1              |
| Noweda                     | Isopropyl alcohol | 701071B      | 1              |
| Noweda                     | Isopropyl alcohol | 18178209     | 1              |
| Noweda                     | Isopropyl alcohol | 18291710     | 2              |
| Noweda                     | Isopropyl alcohol | 7010818      | 1              |
| Noweda                     | Isopropyl alcohol | 701123B      | 1              |
| Noweda                     | Isopropyl alcohol | 19059527     | 1              |
| Noweda                     | Isopropyl alcohol | 19209802     | 1              |
| Noweda                     | Isopropyl alcohol | 701156B      | 1              |
| Noweda                     | Isopropyl alcohol | 701173B      | 1              |
| Noweda                     | Isopropyl alcohol | 701194B      | 1              |
| Noweda                     | Isopropyl alcohol | 701203B      | 2              |
| Noweda                     | Isopropyl alcohol | 701212B      | 1              |
| Noweda                     | Isopropyl alcohol | 701201B      | 1              |
| Caelo                      | Isopropyl alcohol | 12379508     | 2              |
| Caelo                      | Isopropyl alcohol | 70668B       | 1              |
| Noweda / Hedinger          | Isopropyl alcohol | 70598B       | 1              |
| Noweda / Hedinger          | Isopropyl alcohol | 70638B       | 1              |
| Noweda / Hedinger          | Isopropyl alcohol | 70742B       | 2              |
| Noweda / Hedinger          | Isopropyl alcohol | 701123B      | 1              |
| Caelo                      | Isopropyl alcohol | 14134720     | 2              |
| Noweda Hedinger            | Isopropyl alcohol | 701188B      | 1              |
| Noweda Hedinger 15.01.2... | Isopropyl alcohol | 709948       | 1              |
| Caelo                      | Isopropyl alcohol | 14369307     | 3              |
| Caelo                      | Isopropyl alcohol | 18065430     | 4              |
| Noweda/ Dr. Seeger         | Isopropyl alcohol | 70540B       | 1              |
| Noweda/ Hedinger           | Isopropyl alcohol | 701114B      | 1              |
| Noweda/ Hedinger           | Isopropyl alcohol | 701186B      | 1              |
| Noweda/ Hedinger GmbH      | Isopropyl alcohol | 70663B       | 1              |
| Caelo                      | Isopropyl alcohol | 12379522     | 1              |
| Caelo                      | Isopropyl alcohol | 14278904     | 4              |
| Caelo                      | Isopropyl alcohol | 70973B       | 1              |
| Caelo                      | Isopropyl alcohol | 18291737     | 1              |
| Caelo                      | Isopropyl alcohol | 20001557011  | 2              |
| Noweda/Hedin               | Isopropyl alcohol | 70726B       | 1              |
| Noweda/hedinger            | Isopropyl alcohol | 701258B      | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70507B       | 2              |
| Noweda/Hedinger            | Isopropyl alcohol | 70565B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70574B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70555B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70572B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70584B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70610B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 706148       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70614B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70627B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70650B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70659B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70693B       | 2              |
| Noweda/Hedinger            | Isopropyl alcohol | 70722B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70685        | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70730B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70734B       | 1              |

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| <b>Supplier</b>            | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------|--------------|----------------|
| Noweda/Hedinger            | Isopropyl alcohol | 70799B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70923B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 70943B       | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 701043B      | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 701073B      | 1              |
| Noweda/Hedinger            | Isopropyl alcohol | 701105B      | 1              |
| Noweda/Henry Lamotte       | Isopropyl alcohol | 706638       | 1              |
| Otto fischar               | Isopropyl alcohol | 41000314     | 1              |
| Otto Fischar               | Isopropyl alcohol | ohne         | 1              |
| Otto Fischar               | Isopropyl alcohol | 603117000    | 1              |
| Otto Fischar               | Isopropyl alcohol | 4100014      | 4              |
| Otto Fischar GmbH          | Isopropyl alcohol | 4104072      | 1              |
| Otto Fischar GmbH          | Isopropyl alcohol | 1008081      | 1              |
| Otto Fischar GmbH & Co...  | Isopropyl alcohol | 4108024      | 1              |
| Otto Fischar GmbH & Co...  | Isopropyl alcohol | 1009011      | 1              |
| Otto Fischar/GEHE          | Isopropyl alcohol | 1008011      | 1              |
| Otto Fischer / Alliance... | Isopropyl alcohol | 1009011      | 1              |
| Otto Fischer GmbH & co...  | Isopropyl alcohol | 1008011      | 1              |
| Otto Fischer GmbH & co...  | Isopropyl alcohol | 1008081      | 1              |
| OttoFischar/Noweda         | Isopropyl alcohol | 1005041      | 1              |
| Ph.Eur.                    | Isopropyl alcohol | 701099B      | 1              |
| Ph.Eur.                    | Isopropyl alcohol | 701139B      | 1              |
| Ph.Eur/Sanacorp            | Isopropyl alcohol | 701081B      | 1              |
| Phoen                      | Isopropyl alcohol | 70809B       | 1              |
| phoenix                    | Isopropyl alcohol | 70947B       | 1              |
| Phoenix                    | Isopropyl alcohol | 14219204     | 1              |
| Phoenix                    | Isopropyl alcohol | 3023         | 1              |
| Phoenix                    | Isopropyl alcohol | 3048         | 1              |
| Phoenix                    | Isopropyl alcohol | 3086         | 1              |
| Phoenix                    | Isopropyl alcohol | 3228         | 1              |
| Phoenix                    | Isopropyl alcohol | 3241         | 1              |
| Phoenix                    | Isopropyl alcohol | 70994B       | 1              |
| Phoenix                    | Isopropyl alcohol | 701105B      | 1              |
| Phoenix                    | Isopropyl alcohol | 701113B      | 1              |
| Phoenix                    | Isopropyl alcohol | 701133B      | 2              |
| Phoenix                    | Isopropyl alcohol | 20001179020  | 2              |
| Phoenix 22.10.14           | Isopropyl alcohol | 70607B       | 1              |
| Phoenix goettin            | Isopropyl alcohol | 70685B       | 1              |
| Caelo                      | Isopropyl alcohol | 70593B       | 1              |
| Phoenix/Fischer            | Isopropyl alcohol | 1008081      | 1              |
| Phoenix/Hedinger           | Isopropyl alcohol | 701182B      | 1              |
| Phonix                     | Isopropyl alcohol | 14134715     | 1              |
| phönix                     | Isopropyl alcohol | 70783b       | 1              |
| phönix                     | Isopropyl alcohol | 70799B       | 1              |
| phönix                     | Isopropyl alcohol | 70837B       | 1              |
| phönix                     | Isopropyl alcohol | 70862B       | 1              |
| phönix                     | Isopropyl alcohol | 70898b       | 1              |
| Phönix                     | Isopropyl alcohol | 12321002     | 1              |
| Phönix                     | Isopropyl alcohol | 70536B       | 1              |
| Phönix                     | Isopropyl alcohol | 13249432     | 1              |
| Phönix                     | Isopropyl alcohol | 70870B       | 1              |
| Phönix                     | Isopropyl alcohol | 70862B       | 1              |
| Phönix                     | Isopropyl alcohol | 70983B       | 1              |
| Phönix                     | Isopropyl alcohol | 17300406     | 1              |
| Phönix                     | Isopropyl alcohol | 3138         | 1              |
| Phönix                     | Isopropyl alcohol | 701011B      | 1              |
| Phönix                     | Isopropyl alcohol | 17300430     | 1              |
| Phönix                     | Isopropyl alcohol | 3168         | 1              |
| Phönix                     | Isopropyl alcohol | 18178223     | 1              |
| Phönix                     | Isopropyl alcohol | 19059513     | 1              |

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| <b>Supplier</b>          | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|-------------------|--------------|----------------|
| Phönix                   | Isopropyl alcohol | 1009011      | 1              |
| Phönix                   | Isopropyl alcohol | 4100048      | 1              |
| Phönix 13.10.15 ...      | Isopropyl alcohol | 70734B       | 1              |
| Phönix / Hedinger        | Isopropyl alcohol | 70809B       | 1              |
| Phönix 07.01.15          | Isopropyl alcohol | 70650B       | 1              |
| Phönix W.E:11.04.18 E... | Isopropyl alcohol | 70991B       | 1              |
| Phönix/ HEDINGER         | Isopropyl alcohol | 701218B      | 1              |
| Phönix/ HEDINGER         | Isopropyl alcohol | 701214B      | 1              |
| Caelo                    | Isopropyl alcohol | 18291704     | 1              |
| Phönix/Hedinger          | Isopropyl alcohol | 701113B      | 1              |
| Post Apotheke            | Isopropyl alcohol | 18291708     | 2              |
| PTS GmbH                 | Isopropyl alcohol | 10031701     | 1              |
| Rondell Apotheke         | Isopropyl alcohol | 70607B       | 2              |
| Rondell Apotheke         | Isopropyl alcohol | 70818B       | 1              |
| Roth                     | Isopropyl alcohol | 30291609     | 1              |
| Roth                     | Isopropyl alcohol | 60292951     | 2              |
| Roth Chemical            | Isopropyl alcohol | 1331811      | 1              |
| Roth Chemical            | Isopropyl alcohol | 1344201      | 1              |
| Roth/Walter-CMP          | Isopropyl alcohol | 90293586     | 3              |
| Rückgabe Marschollek     | Isopropyl alcohol | 70896B       | 1              |
| sanacorp                 | Isopropyl alcohol | 70481B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 12321028     | 1              |
| Sanacorp                 | Isopropyl alcohol | 13050904     | 1              |
| Sanacorp                 | Isopropyl alcohol | 13249416     | 1              |
| Sanacorp                 | Isopropyl alcohol | 1324919      | 2              |
| Sanacorp                 | Isopropyl alcohol | 13249410     | 1              |
| Sanacorp                 | Isopropyl alcohol | 70593B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 14051017     | 1              |
| Sanacorp                 | Isopropyl alcohol | 705988       | 1              |
| Sanacorp                 | Isopropyl alcohol | 14134709     | 1              |
| Sanacorp                 | Isopropyl alcohol | 14134725     | 1              |
| Sanacorp                 | Isopropyl alcohol | 14051035     | 1              |
| Sanacorp                 | Isopropyl alcohol | 14278913     | 1              |
| Sanacorp                 | Isopropyl alcohol | 70701B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 15171302     | 1              |
| Sanacorp                 | Isopropyl alcohol | 15300902     | 1              |
| Sanacorp                 | Isopropyl alcohol | 16039901     | 1              |
| Sanacorp                 | Isopropyl alcohol | 70809B       | 3              |
| Sanacorp                 | Isopropyl alcohol | 70918B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 17189318     | 1              |
| Sanacorp                 | Isopropyl alcohol | 70977B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 701011B      | 2              |
| Sanacorp                 | Isopropyl alcohol | 17189324     | 1              |
| Sanacorp                 | Isopropyl alcohol | 18065405     | 2              |
| Sanacorp                 | Isopropyl alcohol | 70994B       | 1              |
| Sanacorp                 | Isopropyl alcohol | 18178231     | 1              |
| Sanacorp                 | Isopropyl alcohol | 18291714     | 1              |
| Sanacorp                 | Isopropyl alcohol | 18291726     | 1              |
| Sanacorp                 | Isopropyl alcohol | 701099B      | 1              |
| Sanacorp                 | Isopropyl alcohol | 701123B      | 2              |
| Sanacorp                 | Isopropyl alcohol | 19209818     | 1              |
| Sanacorp                 | Isopropyl alcohol | 192098004    | 1              |
| Sanacorp                 | Isopropyl alcohol | 701173B      | 1              |
| Sanacorp                 | Isopropyl alcohol | 701175B      | 2              |
| Sanacorp                 | Isopropyl alcohol | 20000450022  | 3              |
| Sanacorp                 | Isopropyl alcohol | 701189B      | 1              |
| Sanacorp                 | Isopropyl alcohol | 701186B      | 1              |
| Sanacorp                 | Isopropyl alcohol | 701196B      | 2              |
| Sanacorp EK:4,56 EUR -1l | Isopropyl alcohol | 70923B       | 1              |
| Caelo                    | Isopropyl alcohol | 15398811     | 1              |

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| <b>Supplier</b>              | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|------------------------------|-------------------|--------------|----------------|
| Sanacorp / Hedinger          | Isopropyl alcohol | 70573B       | 1              |
| Sanacorp, 18.03.17, 29,...   | Isopropyl alcohol | 70906B       | 1              |
| sanacorp, 29,30EUR, 15.09... | Isopropyl alcohol | 70835B       | 1              |
| sanacorp, hedinger           | Isopropyl alcohol | 701156B      | 1              |
| Caelo                        | Isopropyl alcohol | 18065403     | 5              |
| Euro OTC                     | Isopropyl alcohol | 70536B       | 1              |
| Sanacorp/ Hedinger           | Isopropyl alcohol | 701182B      | 1              |
| Sanacorp/ Hedinger           | Isopropyl alcohol | 701199B      | 1              |
| Bombastus                    | Isopropyl alcohol | 701107B      | 1              |
| Caelo                        | Isopropyl alcohol | 12112206     | 1              |
| Caelo                        | Isopropyl alcohol | 12179316     | 1              |
| Caelo                        | Isopropyl alcohol | 12254708/129 | 1              |
| Caelo                        | Isopropyl alcohol | 12379521     | 2              |
| Caelo                        | Isopropyl alcohol | 131/AKD1     | 1              |
| Caelo                        | Isopropyl alcohol | 13336936     | 1              |
| Caelo                        | Isopropyl alcohol | 132/AKD54    | 1              |
| Caelo                        | Isopropyl alcohol | 14369302     | 5              |
| Caelo                        | Isopropyl alcohol | 1469323      | 1              |
| Caelo                        | Isopropyl alcohol | 15300903     | 2              |
| Caelo                        | Isopropyl alcohol | 16234026     | 2              |
| Caelo                        | Isopropyl alcohol | 16310603     | 2              |
| Caelo                        | Isopropyl alcohol | 16310632     | 2              |
| Caelo                        | Isopropyl alcohol | 17189319     | 9              |
| Caelo                        | Isopropyl alcohol | 17300413     | 3              |
| Caelo                        | Isopropyl alcohol | 17300401     | 7              |
| Caelo                        | Isopropyl alcohol | 17300428     | 1              |
| Caelo                        | Isopropyl alcohol | 17300420     | 1              |
| Caelo                        | Isopropyl alcohol | 18178229     | 2              |
| Caelo                        | Isopropyl alcohol | 19059501     | 2              |
| Caelo                        | Isopropyl alcohol | 19209812     | 6              |
| Caelo                        | Isopropyl alcohol | 19209807     | 1              |
| Sanacorp/Hedinger            | Isopropyl alcohol | 70923B       | 1              |
| Sanacorp/Hedinger WE:15...   | Isopropyl alcohol | 70748B       | 1              |
| SAV LP Gmbh                  | Isopropyl alcohol | 20200309     | 1              |
| SAV LP Gmbh                  | Isopropyl alcohol | 939705       | 1              |
| Schwabe                      | Isopropyl alcohol | 40320        | 1              |
| shell                        | Isopropyl alcohol | 701203B      | 1              |
| SHELL                        | Isopropyl alcohol | 70540b       | 1              |
| Shell Chemicals              | Isopropyl alcohol | 70703B       | 1              |
| Shell Chemicals              | Isopropyl alcohol | 70577B       | 1              |
| Shell Chemicals/Noweda       | Isopropyl alcohol | 701196B      | 1              |
| Shell/Noweda                 | Isopropyl alcohol | 701133B      | 2              |
| Shell/Phoenix                | Isopropyl alcohol | 701214B      | 8              |
| sittig                       | Isopropyl alcohol | 70788B       | 1              |
| Sophien AM GmbH/ Kiefer...   | Isopropyl alcohol | 310260117116 | 2              |
| sophien-arzneimittel         | Isopropyl alcohol | 310190514069 | 1              |
| Spangro 16.2.19              | Isopropyl alcohol | 18178236     | 1              |
| Spangro 24.03.2014           | Isopropyl alcohol | 70562B       | 1              |
| Caelo                        | Isopropyl alcohol | 14278907     | 1              |
| Caelo                        | Isopropyl alcohol | 14278911     | 2              |
| Spangropharm                 | Isopropyl alcohol | 705988       | 1              |
| spinnenrad                   | Isopropyl alcohol | 611410093    | 1              |
| Spinnrad                     | Isopropyl alcohol | 1114410092   | 1              |
| Spinnrad                     | Isopropyl alcohol | 516410091    | 1              |
| Spinnrad                     | Isopropyl alcohol | 320410091    | 1              |
| Spinnrad                     | Isopropyl alcohol | 320410093    | 1              |
| Spinnrad/Phönix              | Isopropyl alcohol | 1017410092   | 1              |
| Stockmeier                   | Isopropyl alcohol | 940589       | 1              |
| Stockmeier                   | Isopropyl alcohol | 945599       | 1              |
| Stumpf                       | Isopropyl alcohol | 70540B       | 1              |

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| Supplier                   | Substance         | Batch        | Spectra |
|----------------------------|-------------------|--------------|---------|
| Caelo                      | Isopropyl alcohol | 705368       | 1       |
| Stumpf/Hedinger            | Isopropyl alcohol | 70527B       | 2       |
| Stumpf/Hedinger            | Isopropyl alcohol | 70627B       | 1       |
| Stumpf/Hedinger            | Isopropyl alcohol | 70673B       | 1       |
| Taoasis                    | Isopropyl alcohol | 701011B      | 1       |
| Th. Geyer                  | Isopropyl alcohol | 310310120166 | 1       |
| unbekannt                  | Isopropyl alcohol | 25032020REAL | 1       |
| unbekannt                  | Isopropyl alcohol | 25032020     | 1       |
| Universität Hamburg        | Isopropyl alcohol | 985328       | 1       |
| VDL                        | Isopropyl alcohol | 14051020     | 1       |
| VDL                        | Isopropyl alcohol | 14219213     | 1       |
| Caelo                      | Isopropyl alcohol | 12179328     | 1       |
| Caelo                      | Isopropyl alcohol | 12321008     | 2       |
| Caelo                      | Isopropyl alcohol | 12321012     | 1       |
| Caelo                      | Isopropyl alcohol | 12254709     | 2       |
| VMP                        | Isopropyl alcohol | 43985        | 1       |
| VWR                        | Isopropyl alcohol | 20b034013    | 1       |
| VWR                        | Isopropyl alcohol | K51090266920 | 1       |
| VWR                        | Isopropyl alcohol | K51268166916 | 1       |
| VWR                        | Isopropyl alcohol | 20C194011    | 1       |
| VWR Chemicals              | Isopropyl alcohol | 20B034013    | 2       |
| VWR Chemicals              | Isopropyl alcohol | 20A204118    | 1       |
| VWR Chemicals              | Isopropyl alcohol | 19L264007    | 4       |
| VWR Chemicals              | Isopropyl alcohol | 200-661-7    | 7       |
| WE:Sanacorp 08.11.2016 ... | Isopropyl alcohol | 70870B       | 1       |
| AHD/Fischar                | Isopropyl alcohol |              | 1       |
| Alkoholvertrieb Süd        | Isopropyl alcohol |              | 1       |
| Caelo                      | Isopropyl alcohol |              | 6       |
| Caelo                      | Isopropyl alcohol | 14051031     | 3       |
| Caesar&Loretz GmbH         | Isopropyl alcohol |              | 1       |
| Fagron                     | Isopropyl alcohol |              | 1       |
| Fischar                    | Isopropyl alcohol |              | 1       |
| Hedinger                   | Isopropyl alcohol |              | 2       |
| Hedinger/ Noweda           | Isopropyl alcohol |              | 1       |
| Hedinger/Alliance          | Isopropyl alcohol |              | 1       |
| Hedinger/Otto              | Isopropyl alcohol |              | 1       |
|                            | Isopropyl alcohol | 70603B       | 1       |
| Sanacorp                   | Isopropyl alcohol |              | 1       |

- 237 473 spectra from 1121 *Apo-Ident* customers from a total of 45 654 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Isopropyl alcohol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Isopropyl alcohol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 260           | 0              | 63 679        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 3863          | 27             | 237 473       |

The substance/substance group *Isopropyl alcohol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6923 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.3059 % (> 99.2288 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Isopropyl alcohol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in<br>main model | Distance in<br>second-stage model |
|--------------|---------------------------|-----------------------------------|
| Dexpanthenol | 141.38                    | –                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Isopropyl alcohol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30759     | 31517                  | 7.02                            | 231.35                             |
| 31232     | 31517                  | 1.47                            | 224.21                             |
| 31386     | 31517                  | 3.12                            | 221.08                             |
| 31517     | 31517                  | 0.00                            | 221.77                             |
| 32817     | 31517                  | 6.64                            | 209.38                             |
| 33256     | 31517                  | 5.24                            | 203.87                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances,

thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Isopropyl alcohol 70%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30848-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Isopropyl alcohol 70%; Alcohol isopropylicus 70%

### Special notes

When selecting the *Isopropyl alcohol 70%* substance/substance group, the following information is displayed to the user:

- Information about the content of liquid mixtures: The content of the substance refers to volume percent (V/V). Alcohol-water mixtures weighed in in percent by mass (m/V) may cannot be identified.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Isopropyl alcohol 70%     | 10     | 12     | 1583   |

## Second-stage model

For differentiation of the substance/substance group *Isopropyl alcohol 70%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Isopropyl alcohol 70%*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Isopropyl alcoho... | 14076503 | 31388     | 40      | 1412279     |
| Caelo    | Isopropyl alcoho... | 14331004 | 31622     | 60      | 20141104    |
| Caelo    | Isopropyl alcoho... | 15403802 | 31831     | 60      | 20151127    |
| Caelo    | Isopropyl alcoho... | 160884   | 32216     | 40      | 20160414*   |
| Caelo    | Isopropyl alcoho... | 161678   | 32318     | 40      | 20160722*   |
| Caelo    | Isopropyl alcoho... | 161677   | 32319     | 40      | 20160722*   |
| Caelo    | Isopropyl alcoho... | 161676   | 32320     | 40      | 20160722*   |
| Caelo    | Isopropyl alcoho... | 161679   | 32322     | 40      | 20160722*   |
| Caelo    | Isopropyl alcoho... | 163189   | 33105     | 40      | 20161206*   |
| Caelo    | Isopropyl alcoho... | 163190   | 33106     | 40      | 20161206*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 440 spectra of 10 reference samples from the substance/substance group *Isopropyl alcohol 70%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 10 different batches.
- 63 499 spectra from a total of 1297 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 480 spectra of 12 reference samples from the substance/substance group *Isopropyl alcohol 70%*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance             | Batch  | Sample ID | Spectra |
|----------|-----------------------|--------|-----------|---------|
| Caelo    | Isopropyl alcohol 70% | 163191 | 33107     | 40      |
| Caelo    | Isopropyl alcohol 70% | 163192 | 33108     | 40      |
| Caelo    | Isopropyl alcohol 70% | 172029 | 33685     | 40      |
| Caelo    | Isopropyl alcohol 70% | 172028 | 33686     | 40      |
| Caelo    | Isopropyl alcohol 70% | 172031 | 33689     | 40      |
| Caelo    | Isopropyl alcohol 70% | 170821 | 33702     | 40      |
| Caelo    | Isopropyl alcohol 70% | 181143 | 34067     | 40      |
| Caelo    | Isopropyl alcohol 70% | 181142 | 34068     | 40      |
| Caelo    | Isopropyl alcohol 70% | 181141 | 34069     | 40      |
| Caelo    | Isopropyl alcohol 70% | 180739 | 34071     | 40      |
| Caelo    | Isopropyl alcohol 70% | 183080 | 34465     | 40      |
| Caelo    | Isopropyl alcohol 70% | 183079 | 34466     | 40      |

- 91011 spectra from a total of 2004 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3779 spectra from 478 *Apo-Ident* customers from 1593 batches from the substance/substance group *Isopropyl alcohol 70%*.
- Among them are spectra of independent samples from 1581 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier               | Substance             | Batch    | Spectra |
|------------------------|-----------------------|----------|---------|
| 03.08.2020             | Isopropyl alcohol 70% | 53532    | 3       |
| 03.08.2020             | Isopropyl alcohol 70% | 53537    | 1       |
| 03.08.2020             | Isopropyl alcohol 70% | 53536    | 1       |
| 04.04.19/GEHE/Hedinger | Isopropyl alcohol 70% | 53516    | 1       |
| A. Hedinger/ Noweda    | Isopropyl alcohol 70% | 53590    | 1       |
| A. Hedinger/Noweda     | Isopropyl alcohol 70% | 53336    | 2       |
| A.Hedinger/Ph          | Isopropyl alcohol 70% | 53673    | 1       |
| A.Hedinger/Sana        | Isopropyl alcohol 70% | 53504    | 1       |
| A.Hedinger/Sana        | Isopropyl alcohol 70% | 53506    | 2       |
| A.Hedinger/Sana        | Isopropyl alcohol 70% | 53577    | 1       |
| A.Hedinger/Sana        | Isopropyl alcohol 70% | 53603    | 1       |
| Caelo                  | Isopropyl alcohol 70% | 18235301 | 2       |
| AH/Hedinger            | Isopropyl alcohol 70% | 53490    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53296    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53318    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53329    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53528    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53569    | 1       |
| AHD/Hedinger           | Isopropyl alcohol 70% | 53601    | 1       |

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| Supplier                   | Substance             | Batch       | Spectra |
|----------------------------|-----------------------|-------------|---------|
| AHD/Hedinger               | Isopropyl alcohol 70% | 53633       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 15309201    | 2       |
| Alliance Health 17.03.2... | Isopropyl alcohol 70% | 53279       | 2       |
| alliance healthcare        | Isopropyl alcohol 70% | 53569       | 1       |
| Alliance Healthcare/Hed... | Isopropyl alcohol 70% | 53540       | 1       |
| Alliance/Hedinger          | Isopropyl alcohol 70% | 53638       | 1       |
| allianz                    | Isopropyl alcohol 70% | 53388       | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 117A-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 517I-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 1617M-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 2217M-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 2217Q-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 3317I-01080 | 2       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 4317E-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 5017I-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 518A-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 818E-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 1418I-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 1918I-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 2818M-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 3218M-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 3818I-01080 | 2       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 4818E-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 119M-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 719M-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 2019M-01080 | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | H230819     | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 3919A-01080 | 2       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 320A-01080  | 1       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 420M-01080  | 2       |
| Alte Apo Defektur          | Isopropyl alcohol 70% | 2020I-01080 | 1       |
| Alte Apotheke              | Isopropyl alcohol 70% | 4716E-01080 | 1       |
| Amts-Apotheke/Defektur     | Isopropyl alcohol 70% | 3518A-01080 | 1       |
| Amts-Apotheke/Defektur     | Isopropyl alcohol 70% | 4819E-01080 | 1       |
| antares-apotheke Ler       | Isopropyl alcohol 70% | 1920E-01080 | 1       |
| antares-apotheke Ler       | Isopropyl alcohol 70% | 3420A-01080 | 1       |
| Anzag                      | Isopropyl alcohol 70% | 18307901    | 1       |
| Anzag                      | Isopropyl alcohol 70% | 53594       | 1       |
| Anzag/Hedinger             | Isopropyl alcohol 70% | 53285       | 3       |
| Anzag/Hedinger             | Isopropyl alcohol 70% | 5369        | 1       |
| Anzag/Hedinger             | Isopropyl alcohol 70% | 53702       | 1       |
| apo defektur               | Isopropyl alcohol 70% | IS070082016 | 1       |
| Apo Dunningen              | Isopropyl alcohol 70% | 1917A-01080 | 1       |
| Apo Dunningen              | Isopropyl alcohol 70% | 3517A-01080 | 1       |
| Apolda                     | Isopropyl alcohol 70% | 120214      | 1       |
| Apotärze                   | Isopropyl alcohol 70% | 4815I-01080 | 1       |
| Apoth.E.Bartel             | Isopropyl alcohol 70% | 70545B/2    | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 6062013     | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 4813Q-0180  | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 2815E-01080 | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 116E-07013  | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 12345       | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 70214/51Dre | 1       |
| Apotheke                   | Isopropyl alcohol 70% | 26022021    | 1       |
| Apotheke am Holzweg        | Isopropyl alcohol 70% | 3912Y-01080 | 1       |
| Apotheke am Marktplatz     | Isopropyl alcohol 70% | 4716I-01080 | 1       |
| Apotheke am Marktplatz     | Isopropyl alcohol 70% | 2517Q-01080 | 1       |
| Apotheke am Marktplatz     | Isopropyl alcohol 70% | 3618M-01080 | 1       |
| Apotheke am Rathaus-Def... | Isopropyl alcohol 70% | 20191118    | 1       |
| Apotheke Dunningen         | Isopropyl alcohol 70% | 317A-01080  | 1       |

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| Supplier                   | Substance             | Batch            | Spectra |
|----------------------------|-----------------------|------------------|---------|
| Apotheke im Arnoldhaus/... | Isopropyl alcohol 70% | 2119I-01080      | 1       |
| Apotheke im Arnoldhaus/... | Isopropyl alcohol 70% | 2619Q-01080      | 1       |
| ASS                        | Isopropyl alcohol 70% | 314A01080        | 1       |
| Aug. Hedinger              | Isopropyl alcohol 70% | 53385            | 2       |
| Aug. Hedinger/             | Isopropyl alcohol 70% | 53588            | 1       |
| Aug. Hedinger/Sanacorp     | Isopropyl alcohol 70% | 53550            | 4       |
| Aug.Hedinger               | Isopropyl alcohol 70% | 53508            | 1       |
| Aug.Hedinger               | Isopropyl alcohol 70% | 53548            | 1       |
| Aug.Hedinger GmbH&Co.KG    | Isopropyl alcohol 70% | 53470            | 1       |
| Aug.Hedinger/All.Health.   | Isopropyl alcohol 70% | 53557            | 1       |
| Aug.Hedinger/All.Health.   | Isopropyl alcohol 70% | 53569            | 1       |
| Aug.Hedinger/All.Health.   | Isopropyl alcohol 70% | 53599            | 1       |
| Aug.Hedinger/Noweda        | Isopropyl alcohol 70% | 53582            | 1       |
| Aug.Hedinger/Noweda        | Isopropyl alcohol 70% | 53623            | 1       |
| Aug.Hedinger/Noweda        | Isopropyl alcohol 70% | 53680            | 1       |
| Aug.Hedinger/Noweda        | Isopropyl alcohol 70% | 53657            | 1       |
| Aug.Hedinger/Sanacorp      | Isopropyl alcohol 70% | 53429            | 1       |
| Azur GmbH                  | Isopropyl alcohol 70% | 70-920480        | 6       |
| Azur GmbH                  | Isopropyl alcohol 70% | 70-9204780       | 1       |
| Bären Apotheke             | Isopropyl alcohol 70% | 1917Q-01080      | 1       |
| bartel                     | Isopropyl alcohol 70% | 53612            | 1       |
| bartel                     | Isopropyl alcohol 70% | 53611            | 3       |
| Belous                     | Isopropyl alcohol 70% | 2023001          | 2       |
| Berliner Bär Apotheke      | Isopropyl alcohol 70% | H819091          | 2       |
| bison                      | Isopropyl alcohol 70% | 317H4            | 1       |
| Bison                      | Isopropyl alcohol 70% | 517H2            | 1       |
| Bombastus                  | Isopropyl alcohol 70% | 175131           | 1       |
| Bombastus                  | Isopropyl alcohol 70% | 53485            | 2       |
| Bombastus                  | Isopropyl alcohol 70% | 16319201         | 1       |
| Bombastus                  | Isopropyl alcohol 70% | 53322            | 1       |
| Braun                      | Isopropyl alcohol 70% | 17441M01         | 1       |
| Braun / Sanacorp           | Isopropyl alcohol 70% | 19043M11         | 1       |
| Brinn- Holtz               | Isopropyl alcohol 70% | 1233-04/18       | 1       |
| Brinn-Holtz                | Isopropyl alcohol 70% | 1288-09/18       | 1       |
| Brugger                    | Isopropyl alcohol 70% | 21112013         | 1       |
| C.Lange                    | Isopropyl alcohol 70% | 50817/50La       | 1       |
| C.Lange                    | Isopropyl alcohol 70% | 60307/51La       | 1       |
| Caelo                      | Isopropyl alcohol 70% | H22062013H1      | 1       |
| Caelo                      | Isopropyl alcohol 70% | 14101402         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 2081701          | 1       |
| Caelo                      | Isopropyl alcohol 70% | 9011801          | 1       |
| Caelo                      | Isopropyl alcohol 70% | 12031801         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 15031803         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 14041802         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 18200201         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 2512A-01080      | 1       |
| Caelo                      | Isopropyl alcohol 70% | 12136303         | 6       |
| Caelo                      | Isopropyl alcohol 70% | 2081202          | 1       |
| Caelo                      | Isopropyl alcohol 70% | 24081207         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 24101203         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 221111205        | 1       |
| Caelo                      | Isopropyl alcohol 70% | 14121205         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 12278702         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 7021307          | 1       |
| Caelo                      | Isopropyl alcohol 70% | 22021303         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 13008902         | 2       |
| Caelo                      | Isopropyl alcohol 70% | 13031304         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 12338101         | 1       |
| Caelo                      | Isopropyl alcohol 70% | 12338001         | 1       |
| Caelo                      | Isopropyl alcohol 70% | Eigenherstellung | 1       |

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| Supplier | Substance             | Batch         | Spectra |
|----------|-----------------------|---------------|---------|
| Caelo    | Isopropyl alcohol 70% | 23041304      | 1       |
| Caelo    | Isopropyl alcohol 70% | 22051301      | 1       |
| Caelo    | Isopropyl alcohol 70% | 13092203      | 3       |
| Caelo    | Isopropyl alcohol 70% | 130009002     | 1       |
| Caelo    | Isopropyl alcohol 70% | 130009003     | 1       |
| Caelo    | Isopropyl alcohol 70% | 13092201      | 1       |
| Caelo    | Isopropyl alcohol 70% | 18061306      | 1       |
| Caelo    | Isopropyl alcohol 70% | 7082013/1     | 1       |
| Caelo    | Isopropyl alcohol 70% | 24081303      | 1       |
| Caelo    | Isopropyl alcohol 70% | 13092202      | 1       |
| Caelo    | Isopropyl alcohol 70% | 20091302      | 1       |
| Caelo    | Isopropyl alcohol 70% | 3091302       | 1       |
| Caelo    | Isopropyl alcohol 70% | 12101301      | 1       |
| Caelo    | Isopropyl alcohol 70% | 14101303      | 1       |
| Caelo    | Isopropyl alcohol 70% | 18101301      | 1       |
| Caelo    | Isopropyl alcohol 70% | 15111304      | 1       |
| Caelo    | Isopropyl alcohol 70% | 12121306      | 1       |
| Caelo    | Isopropyl alcohol 70% | 24011405      | 1       |
| Caelo    | Isopropyl alcohol 70% | 6041407       | 1       |
| Caelo    | Isopropyl alcohol 70% | 20021414      | 1       |
| Caelo    | Isopropyl alcohol 70% | 13363001      | 1       |
| Caelo    | Isopropyl alcohol 70% | 20021415      | 1       |
| Caelo    | Isopropyl alcohol 70% | 113363003     | 1       |
| Caelo    | Isopropyl alcohol 70% | 11031406      | 1       |
| Caelo    | Isopropyl alcohol 70% | 14026303      | 2       |
| Caelo    | Isopropyl alcohol 70% | 14026401      | 5       |
| Caelo    | Isopropyl alcohol 70% | 2314E-01080   | 1       |
| Caelo    | Isopropyl alcohol 70% | 14076603      | 2       |
| Caelo    | Isopropyl alcohol 70% | 6061401       | 1       |
| Caelo    | Isopropyl alcohol 70% | 26071401      | 1       |
| Caelo    | Isopropyl alcohol 70% | 3414E-01080   | 1       |
| Caelo    | Isopropyl alcohol 70% | 6081405       | 1       |
| Caelo    | Isopropyl alcohol 70% | 25081401      | 1       |
| Caelo    | Isopropyl alcohol 70% | 14146801      | 3       |
| Caelo    | Isopropyl alcohol 70% | 14074205      | 1       |
| Caelo    | Isopropyl alcohol 70% | 25091402      | 1       |
| Caelo    | Isopropyl alcohol 70% | 141t46801     | 1       |
| Caelo    | Isopropyl alcohol 70% | RH141030-0003 | 1       |
| Caelo    | Isopropyl alcohol 70% | 47141-01080   | 2       |
| Caelo    | Isopropyl alcohol 70% | 19111401      | 1       |
| Caelo    | Isopropyl alcohol 70% | 21114103      | 1       |
| Caelo    | Isopropyl alcohol 70% | 4914A-01080   | 1       |
| Caelo    | Isopropyl alcohol 70% | 16121402      | 1       |
| Caelo    | Isopropyl alcohol 70% | 14330901      | 3       |
| Caelo    | Isopropyl alcohol 70% | 20011503      | 1       |
| Caelo    | Isopropyl alcohol 70% | H030315T1     | 1       |
| Caelo    | Isopropyl alcohol 70% | H170315T1     | 1       |
| Caelo    | Isopropyl alcohol 70% | 15014202      | 2       |
| Caelo    | Isopropyl alcohol 70% | 2415Q-01080   | 1       |
| Caelo    | Isopropyl alcohol 70% | 15248503      | 1       |
| Caelo    | Isopropyl alcohol 70% | 28091701      | 1       |
| Caelo    | Isopropyl alcohol 70% | 14229103      | 2       |
| Caelo    | Isopropyl alcohol 70% | 12031514      | 1       |
| Caelo    | Isopropyl alcohol 70% | 20021506      | 1       |
| Caelo    | Isopropyl alcohol 70% | 18031503      | 1       |
| Caelo    | Isopropyl alcohol 70% | 2041501       | 1       |
| Caelo    | Isopropyl alcohol 70% | 14041501      | 1       |
| Caelo    | Isopropyl alcohol 70% | 15076401      | 2       |
| Caelo    | Isopropyl alcohol 70% | 15014302      | 2       |
| Caelo    | Isopropyl alcohol 70% | 5061501       | 1       |

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| Supplier | Substance             | Batch        | Spectra |
|----------|-----------------------|--------------|---------|
| Caelo    | Isopropyl alcohol 70% | 11051501     | 1       |
| Caelo    | Isopropyl alcohol 70% | 15053505     | 1       |
| Caelo    | Isopropyl alcohol 70% | 18061508     | 1       |
| Caelo    | Isopropyl alcohol 70% | 23061501     | 1       |
| Caelo    | Isopropyl alcohol 70% | 16071503     | 1       |
| Caelo    | Isopropyl alcohol 70% | 18081510     | 1       |
| Caelo    | Isopropyl alcohol 70% | 18081511     | 1       |
| Caelo    | Isopropyl alcohol 70% | 53324        | 1       |
| Caelo    | Isopropyl alcohol 70% | 15192102     | 2       |
| Caelo    | Isopropyl alcohol 70% | 2015181201E0 | 1       |
| Caelo    | Isopropyl alcohol 70% | 53353        | 2       |
| Caelo    | Isopropyl alcohol 70% | 303033       | 1       |
| Caelo    | Isopropyl alcohol 70% | 15430002     | 1       |
| Caelo    | Isopropyl alcohol 70% | 15430004     | 2       |
| Caelo    | Isopropyl alcohol 70% | 140505       | 1       |
| Caelo    | Isopropyl alcohol 70% | 16049003     | 1       |
| Caelo    | Isopropyl alcohol 70% | 53359        | 1       |
| Caelo    | Isopropyl alcohol 70% | 2616E-01080  | 1       |
| Caelo    | Isopropyl alcohol 70% | 2916A-01080  | 1       |
| Caelo    | Isopropyl alcohol 70% | 15437802     | 3       |
| Caelo    | Isopropyl alcohol 70% | 3081605      | 1       |
| Caelo    | Isopropyl alcohol 70% | 16138703     | 1       |
| Caelo    | Isopropyl alcohol 70% | 15430005     | 1       |
| Caelo    | Isopropyl alcohol 70% | 16088403     | 3       |
| Caelo    | Isopropyl alcohol 70% | 16202803     | 1       |
| Caelo    | Isopropyl alcohol 70% | 2600980T     | 1       |
| Caelo    | Isopropyl alcohol 70% | 16237302     | 1       |
| Caelo    | Isopropyl alcohol 70% | 16167802     | 2       |
| Caelo    | Isopropyl alcohol 70% | Caelo        | 1       |
| Caelo    | Isopropyl alcohol 70% | 16296604     | 1       |
| Caelo    | Isopropyl alcohol 70% | 11031704     | 1       |
| Caelo    | Isopropyl alcohol 70% | 27031704     | 1       |
| Caelo    | Isopropyl alcohol 70% | 53415        | 1       |
| Caelo    | Isopropyl alcohol 70% | 13041701     | 1       |
| Caelo    | Isopropyl alcohol 70% | 15437701     | 1       |
| Caelo    | Isopropyl alcohol 70% | 5051702      | 1       |
| Caelo    | Isopropyl alcohol 70% | 4051704      | 1       |
| Caelo    | Isopropyl alcohol 70% | 53413        | 1       |
| Caelo    | Isopropyl alcohol 70% | 1061701      | 1       |
| Caelo    | Isopropyl alcohol 70% | 17033801     | 1       |
| Caelo    | Isopropyl alcohol 70% | 23061707     | 1       |
| Caelo    | Isopropyl alcohol 70% | 17082101     | 4       |
| Caelo    | Isopropyl alcohol 70% | 17082102     | 5       |
| Caelo    | Isopropyl alcohol 70% | 53428        | 1       |
| Caelo    | Isopropyl alcohol 70% | 9071701      | 1       |
| Caelo    | Isopropyl alcohol 70% | 21081701     | 1       |
| Caelo    | Isopropyl alcohol 70% | 21081702     | 1       |
| Caelo    | Isopropyl alcohol 70% | 53444        | 2       |
| Caelo    | Isopropyl alcohol 70% | 17082302     | 6       |
| Caelo    | Isopropyl alcohol 70% | 8091702      | 1       |
| Caelo    | Isopropyl alcohol 70% | 17202903     | 6       |
| Caelo    | Isopropyl alcohol 70% | 17202801     | 5       |
| Caelo    | Isopropyl alcohol 70% | 17202802     | 1       |
| Caelo    | Isopropyl alcohol 70% | 17203001     | 5       |
| Caelo    | Isopropyl alcohol 70% | 6111701      | 1       |
| Caelo    | Isopropyl alcohol 70% | 6111702      | 1       |
| Caelo    | Isopropyl alcohol 70% | 173441       | 1       |
| Caelo    | Isopropyl alcohol 70% | 22111701     | 1       |
| Caelo    | Isopropyl alcohol 70% | 20121701     | 1       |
| Caelo    | Isopropyl alcohol 70% | 29011805     | 1       |

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| Supplier | Substance             | Batch       | Spectra |
|----------|-----------------------|-------------|---------|
| Caelo    | Isopropyl alcohol 70% | 15021802    | 1       |
| Caelo    | Isopropyl alcohol 70% | 174321      | 1       |
| Caelo    | Isopropyl alcohol 70% | 305201801   | 1       |
| Caelo    | Isopropyl alcohol 70% | 53475       | 1       |
| Caelo    | Isopropyl alcohol 70% | 18051801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 18073801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 18073902    | 11      |
| Caelo    | Isopropyl alcohol 70% | 20061801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 53513       | 2       |
| Caelo    | Isopropyl alcohol 70% | 19071801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 19071802    | 1       |
| Caelo    | Isopropyl alcohol 70% | 18114101    | 2       |
| Caelo    | Isopropyl alcohol 70% | 21081801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 10091802    | 1       |
| Caelo    | Isopropyl alcohol 70% | 24101804    | 1       |
| Caelo    | Isopropyl alcohol 70% | 30101801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 8111802     | 2       |
| Caelo    | Isopropyl alcohol 70% | 18199101    | 1       |
| Caelo    | Isopropyl alcohol 70% | 5121814     | 1       |
| Caelo    | Isopropyl alcohol 70% | 53530       | 1       |
| Caelo    | Isopropyl alcohol 70% | 8011901     | 1       |
| Caelo    | Isopropyl alcohol 70% | 22011901    | 1       |
| Caelo    | Isopropyl alcohol 70% | 18308001    | 10      |
| Caelo    | Isopropyl alcohol 70% | 184741      | 1       |
| Caelo    | Isopropyl alcohol 70% | 18308203    | 2       |
| Caelo    | Isopropyl alcohol 70% | 19078704    | 13      |
| Caelo    | Isopropyl alcohol 70% | 18308202    | 4       |
| Caelo    | Isopropyl alcohol 70% | 1614001     | 1       |
| Caelo    | Isopropyl alcohol 70% | 20001612002 | 3       |
| Caelo    | Isopropyl alcohol 70% | 53383       | 1       |
| Caelo    | Isopropyl alcohol 70% | 16167901    | 2       |
| Caelo    | Isopropyl alcohol 70% | 16319102    | 3       |
| Caelo    | Isopropyl alcohol 70% | 17202901    | 3       |
| Caelo    | Isopropyl alcohol 70% | 17358202    | 3       |
| Caelo    | Isopropyl alcohol 70% | 20003389001 | 1       |
| Caelo    | Isopropyl alcohol 70% | 19138601    | 19      |
| Caelo    | Isopropyl alcohol 70% | 192621001   | 2       |
| Caelo    | Isopropyl alcohol 70% | 53241       | 1       |
| Caelo    | Isopropyl alcohol 70% | 1416702     | 1       |
| Caelo    | Isopropyl alcohol 70% | 1915A-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 15308201    | 1       |
| Caelo    | Isopropyl alcohol 70% | 16167801    | 1       |
| Caelo    | Isopropyl alcohol 70% | 16319202    | 2       |
| Caelo    | Isopropyl alcohol 70% | 4118012     | 1       |
| Caelo    | Isopropyl alcohol 70% | 18114302    | 2       |
| Caelo    | Isopropyl alcohol 70% | 193622      | 1       |
| Caelo    | Isopropyl alcohol 70% | 12338104    | 3       |
| Caelo    | Isopropyl alcohol 70% | 13009003    | 1       |
| Caelo    | Isopropyl alcohol 70% | 13319405    | 3       |
| Caelo    | Isopropyl alcohol 70% | 13363107    | 1       |
| Caelo    | Isopropyl alcohol 70% | 14076602    | 6       |
| Caelo    | Isopropyl alcohol 70% | 14146703    | 1       |
| Caelo    | Isopropyl alcohol 70% | 14331003    | 5       |
| Caelo    | Isopropyl alcohol 70% | 18073702    | 14      |
| Caelo    | Isopropyl alcohol 70% | 20003391001 | 1       |
| Caelo    | Isopropyl alcohol 70% | 15437601    | 10      |
| Caelo    | Isopropyl alcohol 70% | 17203101    | 5       |
| Caelo    | Isopropyl alcohol 70% | 14327203    | 1       |
| Caelo    | Isopropyl alcohol 70% | 1613q-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 14026403    | 3       |

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| Supplier | Substance             | Batch       | Spectra |
|----------|-----------------------|-------------|---------|
| Caelo    | Isopropyl alcohol 70% | 20002771001 | 2       |
| Caelo    | Isopropyl alcohol 70% | 14146803    | 6       |
| Caelo    | Isopropyl alcohol 70% | 15076602    | 7       |
| Caelo    | Isopropyl alcohol 70% | 15192101    | 4       |
| Caelo    | Isopropyl alcohol 70% | 15309001    | 5       |
| Caelo    | Isopropyl alcohol 70% | 4813E-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 16167803    | 2       |
| Caelo    | Isopropyl alcohol 70% | 13008903    | 2       |
| Caelo    | Isopropyl alcohol 70% | 13155403    | 3       |
| Caelo    | Isopropyl alcohol 70% | 13217603    | 2       |
| Caelo    | Isopropyl alcohol 70% | 18308101    | 10      |
| Caelo    | Isopropyl alcohol 70% | 182731      | 2       |
| Caelo    | Isopropyl alcohol 70% | 16319201    | 6       |
| Caelo    | Isopropyl alcohol 70% | 817J01080   | 1       |
| Caelo    | Isopropyl alcohol 70% | 1517A-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 13363003    | 2       |
| Caelo    | Isopropyl alcohol 70% | 53332       | 1       |
| Caelo    | Isopropyl alcohol 70% | 53476       | 1       |
| Caelo    | Isopropyl alcohol 70% | 53527       | 2       |
| Caelo    | Isopropyl alcohol 70% | 18308002    | 1       |
| Caelo    | Isopropyl alcohol 70% | 18307901    | 3       |
| Caelo    | Isopropyl alcohol 70% | 303126      | 1       |
| Caelo    | Isopropyl alcohol 70% | 19138701    | 4       |
| Caelo    | Isopropyl alcohol 70% | 140902      | 1       |
| Caelo    | Isopropyl alcohol 70% | 17311403    | 6       |
| Caelo    | Isopropyl alcohol 70% | 18235302    | 8       |
| Caelo    | Isopropyl alcohol 70% | 53416       | 1       |
| Caelo    | Isopropyl alcohol 70% | 19261801    | 12      |
| Caelo    | Isopropyl alcohol 70% | 13217602    | 1       |
| Caelo    | Isopropyl alcohol 70% | 15076603    | 2       |
| Caelo    | Isopropyl alcohol 70% | 15404002    | 2       |
| Caelo    | Isopropyl alcohol 70% | 53367       | 1       |
| Caelo    | Isopropyl alcohol 70% | 53465       | 2       |
| Caelo    | Isopropyl alcohol 70% | 180621006   | 1       |
| Caelo    | Isopropyl alcohol 70% | 534825599   | 1       |
| Caelo    | Isopropyl alcohol 70% | 20002772001 | 1       |
| Caelo    | Isopropyl alcohol 70% | 53404       | 1       |
| Caelo    | Isopropyl alcohol 70% | 19078801    | 4       |
| Caelo    | Isopropyl alcohol 70% | 19078901    | 1       |
| Caelo    | Isopropyl alcohol 70% | 19261901    | 1       |
| Caelo    | Isopropyl alcohol 70% | 20001614001 | 1       |
| Caelo    | Isopropyl alcohol 70% | 2x053426    | 1       |
| Caelo    | Isopropyl alcohol 70% | 3115E-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 18114001    | 15      |
| Caelo    | Isopropyl alcohol 70% | 18235101    | 4       |
| Caelo    | Isopropyl alcohol 70% | 18235003    | 5       |
| Caelo    | Isopropyl alcohol 70% | 19079001    | 11      |
| Caelo    | Isopropyl alcohol 70% | 41161-01080 | 1       |
| Caelo    | Isopropyl alcohol 70% | 53567       | 1       |
| Caelo    | Isopropyl alcohol 70% | 140226402   | 1       |
| Caelo    | Isopropyl alcohol 70% | 14114501    | 3       |
| Caelo    | Isopropyl alcohol 70% | 14229101    | 3       |
| Caelo    | Isopropyl alcohol 70% | 12202902    | 1       |
| Caelo    | Isopropyl alcohol 70% | 14146804    | 1       |
| Caelo    | Isopropyl alcohol 70% | 15014301    | 1       |
| Caelo    | Isopropyl alcohol 70% | 15191902    | 3       |
| Caelo    | Isopropyl alcohol 70% | 15192001    | 2       |
| Caelo    | Isopropyl alcohol 70% | 15192003    | 2       |
| Caelo    | Isopropyl alcohol 70% | 2601004T    | 1       |
| Caelo    | Isopropyl alcohol 70% | 163191102   | 1       |

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| Supplier | Substance             | Batch               | Spectra |
|----------|-----------------------|---------------------|---------|
| Caelo    | Isopropyl alcohol 70% | 17311701            | 1       |
| Caelo    | Isopropyl alcohol 70% | 53496               | 1       |
| Caelo    | Isopropyl alcohol 70% | 18235201            | 13      |
| Caelo    | Isopropyl alcohol 70% | 820M-01080          | 1       |
| Caelo    | Isopropyl alcohol 70% | 192620002           | 1       |
| Caelo    | Isopropyl alcohol 70% | 17203002            | 3       |
| Caelo    | Isopropyl alcohol 70% | 13217501            | 1       |
| Caelo    | Isopropyl alcohol 70% | 15437703            | 1       |
| Caelo    | Isopropyl alcohol 70% | 191386601           | 1       |
| Caelo    | Isopropyl alcohol 70% | 53398               | 2       |
| Caelo    | Isopropyl alcohol 70% | 53613               | 1       |
| Caelo    | Isopropyl alcohol 70% | 17358201            | 15      |
| Caelo    | Isopropyl alcohol 70% | 14146701            | 3       |
| Caelo    | Isopropyl alcohol 70% | 53141-01080         | 1       |
| Caelo    | Isopropyl alcohol 70% | 14229201            | 2       |
| Caelo    | Isopropyl alcohol 70% | 15014102            | 3       |
| Caelo    | Isopropyl alcohol 70% | 15076601            | 1       |
| Caelo    | Isopropyl alcohol 70% | 15309101            | 1       |
| Caelo    | Isopropyl alcohol 70% | 123456789           | 1       |
| Caelo    | Isopropyl alcohol 70% | 53385               | 1       |
| Caelo    | Isopropyl alcohol 70% | 16088302            | 6       |
| Caelo    | Isopropyl alcohol 70% | 53396               | 1       |
| Caelo    | Isopropyl alcohol 70% | 53408               | 1       |
| Caelo    | Isopropyl alcohol 70% | 16318901            | 3       |
| Caelo    | Isopropyl alcohol 70% | 141117P801/17203002 | 1       |
| Caelo    | Isopropyl alcohol 70% | 53498               | 1       |
| Caelo    | Isopropyl alcohol 70% | 5309                | 1       |
| Caelo    | Isopropyl alcohol 70% | 53524               | 1       |
| Caelo    | Isopropyl alcohol 70% | 18235001            | 2       |
| Caelo    | Isopropyl alcohol 70% | 20001615001         | 1       |
| Caelo    | Isopropyl alcohol 70% | 13155401            | 2       |
| Caelo    | Isopropyl alcohol 70% | 53401               | 3       |
| Caelo    | Isopropyl alcohol 70% | 253487              | 1       |
| Caelo    | Isopropyl alcohol 70% | 4118013             | 1       |
| Caelo    | Isopropyl alcohol 70% | 53565               | 1       |
| Caelo    | Isopropyl alcohol 70% | 14330803            | 3       |
| Caelo    | Isopropyl alcohol 70% | 17082303            | 4       |
| Caelo    | Isopropyl alcohol 70% | 172003002           | 1       |
| Caelo    | Isopropyl alcohol 70% | 17045801            | 1       |
| Caelo    | Isopropyl alcohol 70% | 12136201            | 1       |
| Caelo    | Isopropyl alcohol 70% | 12202801            | 1       |
| Caelo    | Isopropyl alcohol 70% | 12278601            | 4       |
| Caelo    | Isopropyl alcohol 70% | 12278704            | 2       |
| Caelo    | Isopropyl alcohol 70% | 13155503            | 5       |
| Caelo    | Isopropyl alcohol 70% | 13319502            | 1       |
| Caelo    | Isopropyl alcohol 70% | 13319404            | 2       |
| Caelo    | Isopropyl alcohol 70% | 13363104            | 1       |
| Caelo    | Isopropyl alcohol 70% | 13363101            | 2       |
| Caelo    | Isopropyl alcohol 70% | 14114601            | 1       |
| Caelo    | Isopropyl alcohol 70% | 14146802            | 1       |
| Caelo    | Isopropyl alcohol 70% | 15014101            | 1       |
| Caelo    | Isopropyl alcohol 70% | 15014204            | 1       |
| Caelo    | Isopropyl alcohol 70% | 14330902            | 1       |
| Caelo    | Isopropyl alcohol 70% | 15192002            | 4       |
| Caelo    | Isopropyl alcohol 70% | 15437801            | 1       |
| Caelo    | Isopropyl alcohol 70% | 2216M-01080         | 1       |
| Caelo    | Isopropyl alcohol 70% | 2171-01080          | 1       |
| Caelo    | Isopropyl alcohol 70% | 16167601            | 4       |
| Caelo    | Isopropyl alcohol 70% | 9171-01080          | 1       |
| Caelo    | Isopropyl alcohol 70% | 53392               | 1       |

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| Supplier                   | Substance             | Batch       | Spectra |
|----------------------------|-----------------------|-------------|---------|
| Caelo                      | Isopropyl alcohol 70% | 53437       | 2       |
| Caelo                      | Isopropyl alcohol 70% | 2601025T    | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53474       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53500       | 2       |
| Caelo                      | Isopropyl alcohol 70% | 53488       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53493       | 3       |
| Caelo                      | Isopropyl alcohol 70% | 18114202    | 14      |
| Caelo                      | Isopropyl alcohol 70% | 303101      | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53578       | 2       |
| Caelo                      | Isopropyl alcohol 70% | 20001613001 | 5       |
| Caelo                      | Isopropyl alcohol 70% | 15403902    | 1       |
| Caelo                      | Isopropyl alcohol 70% | 18114301    | 5       |
| Caelo                      | Isopropyl alcohol 70% | 18235202    | 5       |
| Caelo                      | Isopropyl alcohol 70% | AL313       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 116M-01080  | 1       |
| Caelo                      | Isopropyl alcohol 70% | 14330802    | 1       |
| Caelo                      | Isopropyl alcohol 70% | 1016A       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 2716I-01080 | 1       |
| Caelo                      | Isopropyl alcohol 70% | 3216E       | 2       |
| Caelo                      | Isopropyl alcohol 70% | 53378       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 4116104     | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53551       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 720Q04043   | 1       |
| Caelo                      | Isopropyl alcohol 70% | 53395       | 1       |
| Caelo                      | Isopropyl alcohol 70% | 14229202    | 1       |
| Caelo                      | Isopropyl alcohol 70% | 15150202    | 4       |
| Caelo                      | Isopropyl alcohol 70% | 16088201    | 4       |
| Caelo                      | Isopropyl alcohol 70% | 16319001    | 6       |
| Caelo                      | Isopropyl alcohol 70% | 17082201    | 3       |
| Caelo                      | Isopropyl alcohol 70% | 16319021    | 1       |
| Caelo                      | Isopropyl alcohol 70% | 17082103    | 6       |
| Caelo                      | Isopropyl alcohol 70% | 15150201    | 1       |
| Caecolo/Phoenix            | Isopropyl alcohol 70% | 18235202    | 1       |
| Caesar & Loretz            | Isopropyl alcohol 70% | 20001615001 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 18308101    | 3       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 18308001    | 2       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 18307901    | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 18308202    | 3       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 19078704    | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 19078901    | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 19138501    | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 19261801    | 4       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 19138601    | 2       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 18235101    | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20000215002 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20001612002 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20001613001 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20003390001 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20002772001 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20002770001 | 1       |
| Caesar & Loretz GmbH       | Isopropyl alcohol 70% | 20003391001 | 1       |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol 70% | 18307901    | 1       |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol 70% | 18308203    | 2       |
| Caesar & Loretz GmbH / ... | Isopropyl alcohol 70% | 19138701    | 1       |
| Caesar & Loretz GmbH Sa... | Isopropyl alcohol 70% | 20002771001 | 1       |
| Caesar & Loretz GmbH/An... | Isopropyl alcohol 70% | 19138601    | 1       |
| Caesar & Loretz GmbH/No... | Isopropyl alcohol 70% | 18308001    | 1       |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol 70% | 19078901    | 1       |
| Caesar & Loretz GmbH/Sa... | Isopropyl alcohol 70% | 19261901    | 1       |
| Caesar & Loretz GmbH/Sp... | Isopropyl alcohol 70% | 19138501    | 1       |

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| Supplier       | Substance             | Batch           | Spectra |
|----------------|-----------------------|-----------------|---------|
| Caleo/ Ebert   | Isopropyl alcohol 70% | 18114202        | 2       |
| Caleo/ Noweda  | Isopropyl alcohol 70% | 17202802        | 1       |
| Caleo/ Noweda  | Isopropyl alcohol 70% | 18114101        | 1       |
| Caolo          | Isopropyl alcohol 70% | D07104T1        | 1       |
| carina certain | Isopropyl alcohol 70% | 11097           | 1       |
| Cealo          | Isopropyl alcohol 70% | 14146801        | 1       |
| Celo           | Isopropyl alcohol 70% | 16167802        | 1       |
| CL. LANGE      | Isopropyl alcohol 70% | 50921/51LA      | 1       |
| Claudia Lange  | Isopropyl alcohol 70% | 60620/50La      | 1       |
| Claudia Lange  | Isopropyl alcohol 70% | 60620/51La      | 1       |
| Claudia Lange  | Isopropyl alcohol 70% | 60704/50La      | 1       |
| Defektur       | Isopropyl alcohol 70% | 2812M-01080     | 1       |
| Defektur       | Isopropyl alcohol 70% | 23712           | 1       |
| Defektur       | Isopropyl alcohol 70% | 3812            | 1       |
| Defektur       | Isopropyl alcohol 70% | 53/12           | 1       |
| Defektur       | Isopropyl alcohol 70% | 21012013        | 1       |
| Defektur       | Isopropyl alcohol 70% | 2/13            | 1       |
| Defektur       | Isopropyl alcohol 70% | 9/13            | 1       |
| Defektur       | Isopropyl alcohol 70% | 200313Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | H17042013B1     | 1       |
| Defektur       | Isopropyl alcohol 70% | 180413Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 16/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 100513Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 22/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 280513Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 210613Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 27/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 250713Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 37/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 290813Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 42/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 3713Q-01080     | 1       |
| Defektur       | Isopropyl alcohol 70% | 51/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 151113Iso70     | 1       |
| Defektur       | Isopropyl alcohol 70% | 58/13           | 1       |
| Defektur       | Isopropyl alcohol 70% | 5013A           | 1       |
| Defektur       | Isopropyl alcohol 70% | 80114Iso70      | 1       |
| Defektur       | Isopropyl alcohol 70% | 2/14            | 1       |
| Defektur       | Isopropyl alcohol 70% | 514A            | 1       |
| Defektur       | Isopropyl alcohol 70% | 7/14            | 1       |
| Defektur       | Isopropyl alcohol 70% | 1214I           | 1       |
| Defektur       | Isopropyl alcohol 70% | 1414I           | 1       |
| Defektur       | Isopropyl alcohol 70% | 14/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 22/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 28/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 1467/2014072920 | 1       |
| Defektur       | Isopropyl alcohol 70% | 34/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 4114I           | 1       |
| Defektur       | Isopropyl alcohol 70% | 37/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 43/14           | 1       |
| Defektur       | Isopropyl alcohol 70% | 4714M           | 1       |
| Defektur       | Isopropyl alcohol 70% | 5214A           | 1       |
| Defektur       | Isopropyl alcohol 70% | 2/15            | 1       |
| Defektur       | Isopropyl alcohol 70% | 12/15           | 1       |
| Defektur       | Isopropyl alcohol 70% | 1215A           | 1       |
| Defektur       | Isopropyl alcohol 70% | 1415M-01080     | 1       |
| Defektur       | Isopropyl alcohol 70% | 2915E           | 1       |
| Defektur       | Isopropyl alcohol 70% | 50907/50Si      | 1       |
| Defektur       | Isopropyl alcohol 70% | 1SW20150917     | 1       |
| Defektur       | Isopropyl alcohol 70% | 3715Q           | 1       |

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| Supplier                   | Substance             | Batch        | Spectra |
|----------------------------|-----------------------|--------------|---------|
| Defektur                   | Isopropyl alcohol 70% | 4115Q        | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4315Q-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4415A-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 60209/50Hk   | 1       |
| Defektur                   | Isopropyl alcohol 70% | 1516M-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 1716A-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 2216B-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 170109002    | 1       |
| Defektur                   | Isopropyl alcohol 70% | 217Q-01080   | 1       |
| Defektur                   | Isopropyl alcohol 70% | H2017A-01080 | 1       |
| Defektur                   | Isopropyl alcohol 70% | 170529002    | 1       |
| Defektur                   | Isopropyl alcohol 70% | 2717I-07125  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 71016/52Dre  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4517M-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4917A-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 80625/50A1   | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4118A-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 819060       | 1       |
| Defektur                   | Isopropyl alcohol 70% | 719I-01080   | 1       |
| Defektur                   | Isopropyl alcohol 70% | 3019A-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 3819I-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 4119M-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 320Q-01080   | 1       |
| Defektur                   | Isopropyl alcohol 70% | 620M-01080   | 1       |
| Defektur                   | Isopropyl alcohol 70% | 2020M-01080  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 1LP20200605  | 1       |
| Defektur                   | Isopropyl alcohol 70% | 121Q-01080   | 1       |
| DEFEKTUR                   | Isopropyl alcohol 70% | 2314M-01080  | 2       |
| Defektur / Wolf-Apotheke   | Isopropyl alcohol 70% | 50828/50W1o  | 1       |
| Defektur 1616E-01080       | Isopropyl alcohol 70% | 1616E-01080  | 1       |
| Defektur 25.04.2014        | Isopropyl alcohol 70% | 2014-04-25   | 1       |
| Defektur 4416A-01080       | Isopropyl alcohol 70% | 4416A-01080  | 1       |
| Defektur 4814N-01080       | Isopropyl alcohol 70% | 4814N-01080  | 2       |
| Defektur Rheinbogen Apo... | Isopropyl alcohol 70% | 1/20192005   | 1       |
| Defektur/eigen             | Isopropyl alcohol 70% | 1416Q-01080  | 1       |
| Defektur/eigen             | Isopropyl alcohol 70% | 2216A-01080  | 1       |
| Defektur/eigen             | Isopropyl alcohol 70% | 2816M-01080  | 1       |
| Defektur/eigen             | Isopropyl alcohol 70% | 3016E-01080  | 1       |
| Defektur/eigen             | Isopropyl alcohol 70% | 3216I-01080  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 40509/50Wo   | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 50103/50W1o  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 50227/50W1o  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 50313/50W1o  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 50330/50W1o  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 50715/50W1o  | 1       |
| Defektur/Wolf-Apotheke     | Isopropyl alcohol 70% | 61215/50Dre  | 1       |
| Defektur_EW_04062013       | Isopropyl alcohol 70% | 130604002    | 1       |
| Defektur_JP_07012013       | Isopropyl alcohol 70% | 213A-07015   | 1       |
| Defektur_JP_25022013       | Isopropyl alcohol 70% | 913A-07015   | 1       |
| Defektur_JP_28012013       | Isopropyl alcohol 70% | 513A-07015   | 1       |
| Defekur                    | Isopropyl alcohol 70% | 516Q-01080   | 1       |
| Delta                      | Isopropyl alcohol 70% | 53451        | 1       |
| Delta                      | Isopropyl alcohol 70% | 18073702     | 1       |
| Delta                      | Isopropyl alcohol 70% | 53510        | 1       |
| Deselaers                  | Isopropyl alcohol 70% | 3218Q-01080  | 1       |
| Deselaers                  | Isopropyl alcohol 70% | 4518R-01080  | 1       |
| Deselaers                  | Isopropyl alcohol 70% | 519Q-01080   | 1       |
| Deselaers                  | Isopropyl alcohol 70% | 4519Q-01080  | 1       |
| Deselaers Carola           | Isopropyl alcohol 70% | 620M-01080   | 1       |
| Deselaers Carola           | Isopropyl alcohol 70% | 1720A-01080  | 1       |

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| Supplier                    | Substance             | Batch               | Spectra |
|-----------------------------|-----------------------|---------------------|---------|
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 4012M-01080         | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 4912M-01080         | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 913A-01080          | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 3013A-01080         | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 3413M-01080         | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 200518004           | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 200703003           | 1       |
| Doppeleiche Apotheke        | Isopropyl alcohol 70% | 200910005           | 1       |
| Duburg-Apo                  | Isopropyl alcohol 70% | 521E-01080          | 1       |
| Ebert/Hedinger              | Isopropyl alcohol 70% | 53526               | 1       |
| Ebert/Hedinger              | Isopropyl alcohol 70% | 53550               | 1       |
| Eiegn/Defektur              | Isopropyl alcohol 70% | 616E-01080          | 1       |
| eigen                       | Isopropyl alcohol 70% | 3615I-01080         | 1       |
| eigen                       | Isopropyl alcohol 70% | 116G-01080          | 1       |
| eigen                       | Isopropyl alcohol 70% | 116E-01080          | 1       |
| Eigen                       | Isopropyl alcohol 70% | 4413A-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 3914A-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 3615A-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 4215E-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 5315I-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | Eigen               | 2       |
| Eigen                       | Isopropyl alcohol 70% | 2416M-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 3116M-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 3616M-01080         | 2       |
| Eigen                       | Isopropyl alcohol 70% | 5216E-01079         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 1317N-01080         | 2       |
| Eigen                       | Isopropyl alcohol 70% | 2908-1705           | 1       |
| Eigen                       | Isopropyl alcohol 70% | 320I-01080          | 1       |
| Eigen                       | Isopropyl alcohol 70% | 1920M-01080         | 1       |
| Eigen                       | Isopropyl alcohol 70% | 3320A-01080Defektur | 1       |
| EIGEN                       | Isopropyl alcohol 70% | 4117E-01080         | 1       |
| EIGEN                       | Isopropyl alcohol 70% | 4117I-01080         | 1       |
| EIGEN                       | Isopropyl alcohol 70% | EIGEN               | 1       |
| Eigen /Defektur             | Isopropyl alcohol 70% | 2619E-01080         | 1       |
| Eigen Defektur              | Isopropyl alcohol 70% | 316Q-01080          | 1       |
| Eigen Defektur              | Isopropyl alcohol 70% | 1016E-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 3515A-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 4215M-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 4715E-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 4815Q-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 5015A-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 216A-01080          | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 216M-01080          | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 716M-01080          | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 1116M-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 1916M-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 2316I-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 2516I-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 2616Q-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 2716A-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 3016M-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 3516M-01080         | 1       |
| Eigen/Defektur              | Isopropyl alcohol 70% | 3419Q-01080         | 1       |
| Eigenbedarf ( Hergestel ... | Isopropyl alcohol 70% | 260613              | 1       |
| Eigene                      | Isopropyl alcohol 70% | 3815A-01080         | 1       |
| Eigene                      | Isopropyl alcohol 70% | 2818Q-01080         | 1       |
| Eigene                      | Isopropyl alcohol 70% | 3019U-01371         | 1       |
| Eigene                      | Isopropyl alcohol 70% | 1620Q-01080         | 1       |
| Eigene                      | Isopropyl alcohol 70% | AP200611-01         | 1       |
| Eigene                      | Isopropyl alcohol 70% | 121Q-01080          | 1       |

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| Supplier           | Substance             | Batch        | Spectra |
|--------------------|-----------------------|--------------|---------|
| Eigene             | Isopropyl alcohol 70% | 1521Q-01080  | 1       |
| Eigene Defektur    | Isopropyl alcohol 70% | 5119M-01080  | 2       |
| eigene herstellung | Isopropyl alcohol 70% | a1308        | 1       |
| eigene herstellung | Isopropyl alcohol 70% | a1309        | 1       |
| eigene herstellung | Isopropyl alcohol 70% | AL314        | 2       |
| eigene Herstellung | Isopropyl alcohol 70% | 3013M-01080  | 1       |
| eigene Herstellung | Isopropyl alcohol 70% | 1201-15      | 1       |
| eigene Herstellung | Isopropyl alcohol 70% | 5210115      | 1       |
| eigene Herstellung | Isopropyl alcohol 70% | 91215        | 1       |
| eigene Herstellung | Isopropyl alcohol 70% | AL321        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL310        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL311        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL312        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | A1315        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL316        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | A1317        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL318        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL319        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | AL320        | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | 1019Q-01080  | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | 1919A-01080  | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | 2619A-01080  | 1       |
| Eigene Herstellung | Isopropyl alcohol 70% | 4119Q-01080  | 1       |
| eigenherstellung   | Isopropyl alcohol 70% | 3116Q-03043  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9051212      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | eigene       | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9070313      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1513A-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1823         | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9230413      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9010813      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 3313Q-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9100414      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 28072014     | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 3414E-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1-20082014   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 4114Q-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1-23102014   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1-11122014   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 5114M-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9261114      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 515E-01080   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1215M-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9270215      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1815E-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 2015E-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 23/15        | 2       |
| Eigenherstellung   | Isopropyl alcohol 70% | 3215E-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 4015A-0108   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 4715M        | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 4515Q-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9091115      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 5015Q-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 9211215      | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 216M-01080   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 316E         | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 4022016-01   | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 17036        | 2       |
| Eigenherstellung   | Isopropyl alcohol 70% | 1416E-01080  | 1       |
| Eigenherstellung   | Isopropyl alcohol 70% | 2016040520KS | 1       |

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| Supplier                   | Substance             | Batch            | Spectra |
|----------------------------|-----------------------|------------------|---------|
| Eigenherstellung           | Isopropyl alcohol 70% | 1916A            | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 2216E-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 2716I_01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 1953             | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | Eigenherstellung | 2       |
| Eigenherstellung           | Isopropyl alcohol 70% | 3116I-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 4716Q-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 517Q-01080       | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 3917A-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 26107            | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 5018I-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 2019A-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 2419Q-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 141120-1         | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 1020F-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 1720E-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 190620-01        | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 2620A-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 200822-02        | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 3520A-01080      | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% | 4115A-01080      | 1       |
| EIGENHERSTELLUNG           | Isopropyl alcohol 70% | 3315I_01080      | 1       |
| EIGENHERSTELLUNG           | Isopropyl alcohol 70% | 5115A-01080      | 1       |
| EIGENHERSTELLUNG           | Isopropyl alcohol 70% | 19012017         | 1       |
| EIGENHERSTELLUNG           | Isopropyl alcohol 70% | 1717A-01080      | 1       |
| Eigenherstellung Hubert... | Isopropyl alcohol 70% | 2014072221 (DF)  | 1       |
| Eigenproduktion            | Isopropyl alcohol 70% | 2413E-01080      | 1       |
| Eigenrezeptur              | Isopropyl alcohol 70% | 4616A-01080      | 1       |
| Eigenrezeptur              | Isopropyl alcohol 70% | 4616E-01080      | 1       |
| Engel-Apotheke             | Isopropyl alcohol 70% | 2519A-01080      | 1       |
| Euro OCT                   | Isopropyl alcohol 70% | 200214           | 1       |
| Euro OTC                   | Isopropyl alcohol 70% | 4012Q-01080      | 1       |
| Euro OTC                   | Isopropyl alcohol 70% | 2600973T         | 1       |
| Euro OTC                   | Isopropyl alcohol 70% | 53245            | 1       |
| EuroPTC/Phönix             | Isopropyl alcohol 70% | 15076401         | 2       |
| Fagron                     | Isopropyl alcohol 70% | 4114104          | 1       |
| Fagron                     | Isopropyl alcohol 70% | 53411            | 3       |
| Fagron                     | Isopropyl alcohol 70% | 18114202         | 2       |
| Fagron                     | Isopropyl alcohol 70% | 1234             | 1       |
| Fagron                     | Isopropyl alcohol 70% | 15076501         | 1       |
| Fagron                     | Isopropyl alcohol 70% | 13009002         | 1       |
| Fagron                     | Isopropyl alcohol 70% | 17311701         | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 4116123          | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 4117103          | 13      |
| Fiebig                     | Isopropyl alcohol 70% | 53475            | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 4117125          | 7       |
| Fiebig                     | Isopropyl alcohol 70% | 53478            | 3       |
| Fiebig                     | Isopropyl alcohol 70% | 4117124          | 9       |
| Fiebig                     | Isopropyl alcohol 70% | 53482            | 3       |
| Fiebig                     | Isopropyl alcohol 70% | 4118012          | 4       |
| Fiebig                     | Isopropyl alcohol 70% | 53495            | 3       |
| Fiebig                     | Isopropyl alcohol 70% | 4118011          | 10      |
| Fiebig                     | Isopropyl alcohol 70% | 53505            | 5       |
| Fiebig                     | Isopropyl alcohol 70% | 4118051          | 5       |
| Fiebig                     | Isopropyl alcohol 70% | 4118052          | 4       |
| Fiebig                     | Isopropyl alcohol 70% | 4118053          | 11      |
| Fiebig                     | Isopropyl alcohol 70% | 4118074          | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 53509            | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 53504            | 1       |
| Fiebig                     | Isopropyl alcohol 70% | 4118063          | 10      |

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| Supplier           | Substance             | Batch    | Spectra |
|--------------------|-----------------------|----------|---------|
| Fiebig             | Isopropyl alcohol 70% | 4118071  | 16      |
| Fiebig             | Isopropyl alcohol 70% | 53526    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53527    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 4118092  | 4       |
| Fiebig             | Isopropyl alcohol 70% | 53525    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53542    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53529    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 4118073  | 4       |
| Fiebig             | Isopropyl alcohol 70% | 4118102  | 3       |
| Fiebig             | Isopropyl alcohol 70% | 4118094  | 3       |
| Fiebig             | Isopropyl alcohol 70% | 53539    | 2       |
| Fiebig             | Isopropyl alcohol 70% | 4118104  | 8       |
| Fiebig             | Isopropyl alcohol 70% | 53550    | 3       |
| Fiebig             | Isopropyl alcohol 70% | 4118113  | 11      |
| Fiebig             | Isopropyl alcohol 70% | 53545    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53552    | 2       |
| Fiebig             | Isopropyl alcohol 70% | 4118114  | 12      |
| Fiebig             | Isopropyl alcohol 70% | 4119011  | 15      |
| Fiebig             | Isopropyl alcohol 70% | 53559    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53556    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 18308001 | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53562    | 3       |
| Fiebig             | Isopropyl alcohol 70% | 4119012  | 8       |
| Fiebig             | Isopropyl alcohol 70% | 4119026  | 3       |
| Fiebig             | Isopropyl alcohol 70% | 4119041  | 2       |
| Fiebig             | Isopropyl alcohol 70% | 53573    | 2       |
| Fiebig             | Isopropyl alcohol 70% | 4119043  | 10      |
| Fiebig             | Isopropyl alcohol 70% | 4119062  | 4       |
| Fiebig             | Isopropyl alcohol 70% | 53576    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 4119063  | 7       |
| Fiebig             | Isopropyl alcohol 70% | 4119064  | 14      |
| Fiebig             | Isopropyl alcohol 70% | 53587    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 53586    | 1       |
| Fiebig             | Isopropyl alcohol 70% | 4119065  | 6       |
| Fiebig             | Isopropyl alcohol 70% | 4119073  | 1       |
| Fiebig/ Hedinger   | Isopropyl alcohol 70% | 53343    | 1       |
| Fiebig/ O. Fischar | Isopropyl alcohol 70% | 4110901  | 1       |
| Fiebig/ O. Fischar | Isopropyl alcohol 70% | 4119091  | 8       |
| Fiebig/ O. Fischar | Isopropyl alcohol 70% | 4119101  | 2       |
| Fiebig/ O. Fischar | Isopropyl alcohol 70% | 4119092  | 6       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53336    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53360    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53400    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53445    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53475    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53600    | 1       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53607    | 4       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53611    | 2       |
| Fiebig/Hedinger    | Isopropyl alcohol 70% | 53612    | 1       |
| Finteler Apotheke  | Isopropyl alcohol 70% | 53425    | 1       |
| fischar            | Isopropyl alcohol 70% | 4118022  | 1       |
| fischar            | Isopropyl alcohol 70% | 4118011  | 1       |
| fischar            | Isopropyl alcohol 70% | 4118032  | 2       |
| fischar            | Isopropyl alcohol 70% | 4118053  | 4       |
| fischar            | Isopropyl alcohol 70% | 4118111  | 4       |
| fischar            | Isopropyl alcohol 70% | 4119012  | 3       |
| fischar            | Isopropyl alcohol 70% | 4119021  | 3       |
| fischar            | Isopropyl alcohol 70% | 4119041  | 1       |
| Fischar            | Isopropyl alcohol 70% | 2183     | 1       |
| Fischar            | Isopropyl alcohol 70% | 4114041  | 1       |

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| Supplier            | Substance             | Batch           | Spectra |
|---------------------|-----------------------|-----------------|---------|
| Fischar             | Isopropyl alcohol 70% | 4114064         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4116044         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4114082         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4115061         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4115062         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4116123         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4116125         | 2       |
| Fischar             | Isopropyl alcohol 70% | 4117022         | 2       |
| Fischar             | Isopropyl alcohol 70% | 4117043         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4117052         | 2       |
| Fischar             | Isopropyl alcohol 70% | 4117064         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4117062         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4117065         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4117082         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4117122         | 3       |
| Fischar             | Isopropyl alcohol 70% | 4118051         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4119012         | 2       |
| Fischar             | Isopropyl alcohol 70% | 4119041         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4119042         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4119043         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4119063         | 1       |
| Fischar             | Isopropyl alcohol 70% | 4119071         | 2       |
| Fischar             | Isopropyl alcohol 70% | 4110053         | 1       |
| Fischar / Anzag     | Isopropyl alcohol 70% | 4115073         | 1       |
| Fischar / Phönix    | Isopropyl alcohol 70% | 4118101         | 1       |
| Fischar/Fiebig      | Isopropyl alcohol 70% | 4117064         | 8       |
| Fischar/Fiebig      | Isopropyl alcohol 70% | 4117065         | 12      |
| Fischar/Fiebig      | Isopropyl alcohol 70% | 4117121         | 7       |
| Fischar/Phoenix     | Isopropyl alcohol 70% | 4117091         | 1       |
| Fischar/Phoenix     | Isopropyl alcohol 70% | 4110022         | 1       |
| Fischar/Phönix      | Isopropyl alcohol 70% | 4117126         | 1       |
| Fischar/Phönix      | Isopropyl alcohol 70% | 4118073         | 1       |
| Fischar/Phönix      | Isopropyl alcohol 70% | 4119026         | 2       |
| Fischar/Phönix      | Isopropyl alcohol 70% | 4110012         | 1       |
| Fischar/Sanacorp    | Isopropyl alcohol 70% | 4114044         | 1       |
| Franz GmbH, Phoenix | Isopropyl alcohol 70% | 53426           | 1       |
| Frau Hennies        | Isopropyl alcohol 70% | 240216          | 1       |
| Gehe                | Isopropyl alcohol 70% | 11370004        | 3       |
| Gehe                | Isopropyl alcohol 70% | 14026402        | 4       |
| Gehe                | Isopropyl alcohol 70% | 53264           | 1       |
| Gehe                | Isopropyl alcohol 70% | 53290           | 1       |
| Gehe                | Isopropyl alcohol 70% | 15014302        | 1       |
| Gehe                | Isopropyl alcohol 70% | 15192002        | 1       |
| Gehe                | Isopropyl alcohol 70% | 15309101        | 1       |
| Gehe                | Isopropyl alcohol 70% | 15309001        | 1       |
| Gehe                | Isopropyl alcohol 70% | 15404001        | 1       |
| Gehe                | Isopropyl alcohol 70% | 15437601        | 1       |
| Gehe                | Isopropyl alcohol 70% | 16088302        | 2       |
| Gehe                | Isopropyl alcohol 70% | 16167701        | 1       |
| Gehe                | Isopropyl alcohol 70% | 16167902        | 1       |
| Gehe                | Isopropyl alcohol 70% | 53408           | 1       |
| Gehe                | Isopropyl alcohol 70% | 16318901        | 1       |
| Gehe                | Isopropyl alcohol 70% | 16319001        | 2       |
| Gehe                | Isopropyl alcohol 70% | 53391           | 1       |
| Gehe                | Isopropyl alcohol 70% | 17202903        | 1       |
| Gehe                | Isopropyl alcohol 70% | 17203101        | 1       |
| Gehe                | Isopropyl alcohol 70% | 17358201        | 1       |
| Gehe                | Isopropyl alcohol 70% | 310170118132/70 | 1       |
| Gehe                | Isopropyl alcohol 70% | 17358202        | 1       |
| Gehe                | Isopropyl alcohol 70% | 18073902        | 1       |

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| Supplier                | Substance             | Batch            | Spectra |
|-------------------------|-----------------------|------------------|---------|
| Gehe                    | Isopropyl alcohol 70% | 18074001         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18114001         | 2       |
| Gehe                    | Isopropyl alcohol 70% | 18114101         | 2       |
| Gehe                    | Isopropyl alcohol 70% | 18073901         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18073702         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18114301         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18235202         | 3       |
| Gehe                    | Isopropyl alcohol 70% | 53552            | 1       |
| Gehe                    | Isopropyl alcohol 70% | 53559            | 2       |
| Gehe                    | Isopropyl alcohol 70% | 53565            | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18308202         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 19078704         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 18308101         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 53516            | 1       |
| Gehe                    | Isopropyl alcohol 70% | 19138501         | 1       |
| Gehe                    | Isopropyl alcohol 70% | 194231           | 1       |
| Gehe                    | Isopropyl alcohol 70% | 53600            | 1       |
| Gehe                    | Isopropyl alcohol 70% | 19261801         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 12037601         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 221160/3         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 603117000        | 1       |
| GEHE                    | Isopropyl alcohol 70% | 53420            | 2       |
| GEHE                    | Isopropyl alcohol 70% | 16319001         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 53491            | 1       |
| GEHE                    | Isopropyl alcohol 70% | 18114101         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 18114001         | 1       |
| GEHE                    | Isopropyl alcohol 70% | 18235301         | 1       |
| Fagron                  | Isopropyl alcohol 70% | 53279            | 1       |
| Gehe Hedinger           | Isopropyl alcohol 70% | 53448            | 1       |
| Caelo                   | Isopropyl alcohol 70% | 190261801        | 1       |
| Caelo                   | Isopropyl alcohol 70% | 1160113          | 1       |
| Gehe 07.12.18           | Isopropyl alcohol 70% | 18235302         | 1       |
| GEHE am 16.08.2014      | Isopropyl alcohol 70% | 53297            | 1       |
| GEHE am 17.06.2014      | Isopropyl alcohol 70% | 53286            | 1       |
| Gehe/ Hedinger          | Isopropyl alcohol 70% | 53494/1300518    | 1       |
| GEHE/ HEDINGER          | Isopropyl alcohol 70% | 53622            | 1       |
| Bombastus               | Isopropyl alcohol 70% | 2813Q-01080      | 1       |
| Caelo                   | Isopropyl alcohol 70% | 16319101         | 4       |
| Caelo                   | Isopropyl alcohol 70% | 17203002/1271117 | 1       |
| Caelo                   | Isopropyl alcohol 70% | 17311402         | 3       |
| Caelo                   | Isopropyl alcohol 70% | 18073702/1170418 | 1       |
| Caelo                   | Isopropyl alcohol 70% | 20001612001      | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53310            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53370            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 83366            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53379            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53421            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53461            | 1       |
| Gehe/Hedinger           | Isopropyl alcohol 70% | 53473            | 1       |
| Gehe/Hedinger26.04.16   | Isopropyl alcohol 70% | 53359            | 1       |
| Gehe/Hedinger29.08.2016 | Isopropyl alcohol 70% | 53372            | 1       |
| Gehe/Phönix             | Isopropyl alcohol 70% | 12338001         | 2       |
| Gehe/Phönix             | Isopropyl alcohol 70% | 136363003        | 1       |
| Gehe/Phönix             | Isopropyl alcohol 70% | 14229101         | 1       |
| Geibo                   | Isopropyl alcohol 70% | 183541           | 1       |
| Geibo/Hedinger          | Isopropyl alcohol 70% | 53505            | 1       |
| geiger                  | Isopropyl alcohol 70% | 2213E-01080      | 1       |
| Geilenkirchen/Hedinger  | Isopropyl alcohol 70% | 53382            | 1       |
| Geilenkirchen/Hedinger  | Isopropyl alcohol 70% | 53383            | 1       |
| Geilenkirchen/Hedinger  | Isopropyl alcohol 70% | 53404            | 1       |

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| Supplier           | Substance             | Batch       | Spectra |
|--------------------|-----------------------|-------------|---------|
| Germania Apo       | Isopropyl alcohol 70% | 315032      | 1       |
| GUMO/04.04.2013    | Isopropyl alcohol 70% | 2600726T    | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 3212I-01080 | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 3812E-01080 | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 4212A-01080 | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 4612I-01080 | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 130206004   | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 130327003   | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 130725001   | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 130813006   | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 130912001   | 1       |
| Gutenberg-Apotheke | Isopropyl alcohol 70% | 140612014   | 1       |
| hadinger/allianz   | Isopropyl alcohol 70% | 53420       | 1       |
| Hedinge/AHD        | Isopropyl alcohol 70% | 53703       | 1       |
| Hedinge/AHD        | Isopropyl alcohol 70% | 53709       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53236       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53459       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53476       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53490       | 1       |
| hedinger           | Isopropyl alcohol 70% | 303073      | 1       |
| hedinger           | Isopropyl alcohol 70% | 53528       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53538       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53566       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53563       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53569       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53585       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53599       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53609       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53670       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53681       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53684       | 1       |
| hedinger           | Isopropyl alcohol 70% | 53727       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53226       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53228       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53240       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53241       | 3       |
| Hedinger           | Isopropyl alcohol 70% | 53242       | 2       |
| Hedinger           | Isopropyl alcohol 70% | 53250       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53245       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53259       | 2       |
| Hedinger           | Isopropyl alcohol 70% | 53255       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53258       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53265       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53268       | 2       |
| Hedinger           | Isopropyl alcohol 70% | 53267       | 2       |
| Hedinger           | Isopropyl alcohol 70% | 53253       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53274       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53280       | 5       |
| Hedinger           | Isopropyl alcohol 70% | 53284       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53291       | 1       |
| Hedinger           | Isopropyl alcohol 70% | HA32        | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53297       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53301       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53306       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53303       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53309       | 3       |
| Hedinger           | Isopropyl alcohol 70% | B230715     | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53308       | 1       |
| Hedinger           | Isopropyl alcohol 70% | 53315       | 4       |
| Hedinger           | Isopropyl alcohol 70% | 53320       | 1       |

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| <b>Supplier</b> | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-----------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol 70% | 53316        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53324        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53333        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53334        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53340        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53341        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53337        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53350        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53352        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53354        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53357        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53362        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53353        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53351        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53359        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53368        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53370        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53366        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53375        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53371        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53363        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53378        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53372        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53382        | 7              |
| Hedinger        | Isopropyl alcohol 70% | 53373        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53385        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53383        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53386        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53392        | 5              |
| Hedinger        | Isopropyl alcohol 70% | 53397        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53387        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53388        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53398        | 9              |
| Hedinger        | Isopropyl alcohol 70% | 53390        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53393        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53404        | 6              |
| Hedinger        | Isopropyl alcohol 70% | 53402        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53401        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53407        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53411        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53408        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53406        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53410        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53400        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53418        | 6              |
| Hedinger        | Isopropyl alcohol 70% | 53412        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53426        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53419        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53409        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53429        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53425        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53416        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53421        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53413        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53427        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53437        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 303049       | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53430        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53442        | 10             |
| Hedinger        | Isopropyl alcohol 70% | 53438        | 1              |

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| Supplier | Substance             | Batch     | Spectra |
|----------|-----------------------|-----------|---------|
| Hedinger | Isopropyl alcohol 70% | 534375310 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53444     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53440     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53443     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53439     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53449     | 2       |
| Hedinger | Isopropyl alcohol 70% | 534275329 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53377     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53447     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53445     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53451     | 1       |
| Hedinger | Isopropyl alcohol 70% | 534495370 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53428     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53462     | 2       |
| Hedinger | Isopropyl alcohol 70% | 303054    | 1       |
| Hedinger | Isopropyl alcohol 70% | 53454     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53458     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53448     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53467     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53461     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53465     | 2       |
| Hedinger | Isopropyl alcohol 70% | 534405397 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53460     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53470     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53464     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53463     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53469     | 4       |
| Hedinger | Isopropyl alcohol 70% | 534685436 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53474     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53483     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53480     | 5       |
| Hedinger | Isopropyl alcohol 70% | 53479     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53486     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53491     | 3       |
| Hedinger | Isopropyl alcohol 70% | 303071    | 1       |
| Hedinger | Isopropyl alcohol 70% | 181108187 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53468     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53478     | 2       |
| Hedinger | Isopropyl alcohol 70% | 534685475 | 1       |
| Hedinger | Isopropyl alcohol 70% | 534895520 | 1       |
| Hedinger | Isopropyl alcohol 70% | 53456     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53493     | 4       |
| Hedinger | Isopropyl alcohol 70% | 53482     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53488     | 4       |
| Hedinger | Isopropyl alcohol 70% | 53484     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53495     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53498     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53502     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53505     | 2       |
| Hedinger | Isopropyl alcohol 70% | 303081    | 1       |
| Hedinger | Isopropyl alcohol 70% | 53509     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53513     | 3       |
| Hedinger | Isopropyl alcohol 70% | 53510     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53515     | 7       |
| Hedinger | Isopropyl alcohol 70% | 53506     | 3       |
| Hedinger | Isopropyl alcohol 70% | 303087    | 1       |
| Hedinger | Isopropyl alcohol 70% | 53526     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53446     | 1       |
| Hedinger | Isopropyl alcohol 70% | 53516     | 2       |
| Hedinger | Isopropyl alcohol 70% | 53519     | 2       |

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| <b>Supplier</b> | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|-----------------|-----------------------|--------------|----------------|
| Hedinger        | Isopropyl alcohol 70% | 53523        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53522        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53520        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53525        | 4              |
| Hedinger        | Isopropyl alcohol 70% | 53527        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53530        | 4              |
| Hedinger        | Isopropyl alcohol 70% | 53542        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53537        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53529        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53539        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53532        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53546        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53533        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53545        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53534        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53521        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53551        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53558        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53541        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53557        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53548        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53561        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53553        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53550        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53562        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53576        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53567        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53559        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53577        | 5              |
| Hedinger        | Isopropyl alcohol 70% | 53568        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53573        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53565        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53578        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53584        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53586        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53571        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53512        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53554        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53587        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53581        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53580        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53593        | 4              |
| Hedinger        | Isopropyl alcohol 70% | 53595        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53597        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53598        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53600        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 53590        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53602        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53594        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53603        | 7              |
| Hedinger        | Isopropyl alcohol 70% | 303140       | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53613        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 303145       | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53608        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53611        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53619        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53607        | 3              |
| Hedinger        | Isopropyl alcohol 70% | 53634        | 2              |
| Hedinger        | Isopropyl alcohol 70% | 42550        | 1              |
| Hedinger        | Isopropyl alcohol 70% | 53650        | 3              |

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| <b>Supplier</b>    | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|--------------------|-----------------------|--------------|----------------|
| Hedinger           | Isopropyl alcohol 70% | 53617        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53670        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53694        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53674        | 2              |
| Hedinger           | Isopropyl alcohol 70% | 53682        | 2              |
| Hedinger           | Isopropyl alcohol 70% | 701203B      | 1              |
| Hedinger           | Isopropyl alcohol 70% | 701189B      | 1              |
| Hedinger           | Isopropyl alcohol 70% | 700186B      | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53686        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53714        | 2              |
| Hedinger           | Isopropyl alcohol 70% | 53706        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53716        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53717        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 303185       | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53733        | 2              |
| Hedinger           | Isopropyl alcohol 70% | 53739        | 1              |
| Hedinger           | Isopropyl alcohol 70% | 53683        | 1              |
| HEDINGER           | Isopropyl alcohol 70% | 53478        | 1              |
| HEDINGER           | Isopropyl alcohol 70% | 53525        | 1              |
| HEDINGER           | Isopropyl alcohol 70% | 53561        | 2              |
| HEDINGER           | Isopropyl alcohol 70% | 53616        | 1              |
| HEDINGER           | Isopropyl alcohol 70% | 53686        | 1              |
| Hedinger / AHD     | Isopropyl alcohol 70% | 53378        | 1              |
| Hedinger / AHD     | Isopropyl alcohol 70% | 53499        | 1              |
| Hedinger / AHD     | Isopropyl alcohol 70% | 53572        | 1              |
| Hedinger / AHD     | Isopropyl alcohol 70% | 53687        | 1              |
| Hedinger / Anzag   | Isopropyl alcohol 70% | 53529        | 1              |
| Hedinger / Anzag   | Isopropyl alcohol 70% | 53551        | 1              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 53337        | 1              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 303059       | 1              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 53452        | 1              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 53465        | 1              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 53506        | 2              |
| Hedinger / Gehe    | Isopropyl alcohol 70% | 53696        | 1              |
| Hedinger / Kehr    | Isopropyl alcohol 70% | 53359        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53266        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53267        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53300        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 5331         | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53321        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53324        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53385        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53387        | 2              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53443        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53453        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53461        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53476        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53525        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53528        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53557        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53552        | 1              |
| Hedinger / Noweda  | Isopropyl alcohol 70% | 53598        | 1              |
| HEDINGER / Noweda  | Isopropyl alcohol 70% | 53340        | 1              |
| Hedinger / Phoenix | Isopropyl alcohol 70% | 53561        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53266        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53290        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53309        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53326        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53413        | 1              |
| Hedinger / Phönix  | Isopropyl alcohol 70% | 53430        | 1              |

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| <b>Supplier</b>            | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------|--------------|----------------|
| Hedinger / Phönix          | Isopropyl alcohol 70% | 53442        | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 53407        | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 53483        | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 53491        | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 503549       | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 53638        | 1              |
| Hedinger / Sanacorp        | Isopropyl alcohol 70% | 53690        | 1              |
| hedinger / AHD             | Isopropyl alcohol 70% | 535045666    | 1              |
| Hedinger /Sanacorp WE: ... | Isopropyl alcohol 70% | 53338        | 1              |
| Hedinger Gehe              | Isopropyl alcohol 70% | 53473        | 1              |
| Hedinger Gehe              | Isopropyl alcohol 70% | 53476        | 1              |
| Hedinger Gehe              | Isopropyl alcohol 70% | 53517        | 1              |
| Hedinger Gehe              | Isopropyl alcohol 70% | 53536        | 1              |
| Hedinger Gehe              | Isopropyl alcohol 70% | 53549        | 1              |
| Hedinger GmbH & Co. KG     | Isopropyl alcohol 70% | 53515        | 1              |
| Hedinger GmbH & Co. KG     | Isopropyl alcohol 70% | 303172       | 1              |
| Hedinger GmbH & Co. KG/... | Isopropyl alcohol 70% | 53328        | 1              |
| Hedinger GmbH & Co. KG/... | Isopropyl alcohol 70% | 53329        | 1              |
| Hedinger GmbH/Alliance ... | Isopropyl alcohol 70% | 303137       | 1              |
| Hedinger GmbH/Sanacorp     | Isopropyl alcohol 70% | 53452        | 1              |
| Hedinger Jenne             | Isopropyl alcohol 70% | 53417        | 1              |
| Hedinger Jenne             | Isopropyl alcohol 70% | 53441        | 1              |
| Hedinger Jenne             | Isopropyl alcohol 70% | 53435        | 1              |
| Hedinger/                  | Isopropyl alcohol 70% | 53600        | 1              |
| Hedinger/                  | Isopropyl alcohol 70% | 53594        | 1              |
| Hedinger/                  | Isopropyl alcohol 70% | 53664        | 1              |
| Hedinger/                  | Isopropyl alcohol 70% | 53696        | 1              |
| Hedinger/                  | Isopropyl alcohol 70% | 53694        | 1              |
| Hedinger/ AHD              | Isopropyl alcohol 70% | 53482        | 1              |
| Hedinger/ AHD              | Isopropyl alcohol 70% | 53495        | 2              |
| Hedinger/ AHD              | Isopropyl alcohol 70% | 53509        | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol 70% | 53499        | 1              |
| Hedinger/ Anzag            | Isopropyl alcohol 70% | 53508        | 2              |
| Hedinger/ Anzag            | Isopropyl alcohol 70% | 53514        | 2              |
| Hedinger/ Gehe             | Isopropyl alcohol 70% | 53354        | 1              |
| Hedinger/ Kehr             | Isopropyl alcohol 70% | 53377        | 4              |
| Hedinger/ Kehr             | Isopropyl alcohol 70% | 53429        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53440        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 303058       | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53480        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53499        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53529        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53545        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53561        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53571        | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53567        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53581        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53598        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53602        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53603        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53673        | 2              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 30062001     | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 22092001     | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53717        | 1              |
| Hedinger/ Noweda           | Isopropyl alcohol 70% | 53739        | 2              |
| Hedinger/ NOWEDA           | Isopropyl alcohol 70% | 53527        | 1              |
| Hedinger/ NOWEDA           | Isopropyl alcohol 70% | 53616        | 1              |
| Hedinger/ NOWEDA           | Isopropyl alcohol 70% | 53704        | 1              |
| Hedinger/ PH               | Isopropyl alcohol 70% | 53687        | 1              |
| Hedinger/ Phoenix          | Isopropyl alcohol 70% | 53413        | 1              |

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| Supplier                   | Substance             | Batch     | Spectra |
|----------------------------|-----------------------|-----------|---------|
| Hedinger/ Phönix           | Isopropyl alcohol 70% | 53536     | 1       |
| Hedinger/ Phönix           | Isopropyl alcohol 70% | 53578     | 1       |
| hedinger/ Sanacorp         | Isopropyl alcohol 70% | 535105725 | 1       |
| hedinger/ Sanacorp         | Isopropyl alcohol 70% | 535265764 | 1       |
| Hedinger/ Sanacorp         | Isopropyl alcohol 70% | 53354     | 1       |
| Hedinger/ Sanacorp         | Isopropyl alcohol 70% | 53360     | 1       |
| Hedinger/ Sanacorp         | Isopropyl alcohol 70% | 53398     | 1       |
| Hedinger/ Sanacorp         | Isopropyl alcohol 70% | 53509     | 1       |
| Hedinger/ Sanacorp         | Isopropyl alcohol 70% | 53607     | 1       |
| Hedinger/ Sanacorp Lüb...  | Isopropyl alcohol 70% | 53591     | 1       |
| Hedinger/ Sanacorp Lüb...  | Isopropyl alcohol 70% | 53668     | 1       |
| Hedinger/1                 | Isopropyl alcohol 70% | 53355     | 1       |
| HEDINGER/1                 | Isopropyl alcohol 70% | 53525     | 1       |
| HEDINGER/1                 | Isopropyl alcohol 70% | 53565     | 1       |
| HEDINGER/1                 | Isopropyl alcohol 70% | 53603     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53265     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53268     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53290     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53277     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53310     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53322     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53346     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53355     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53340     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53326     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53399     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53407     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53420     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53435     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53479     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53495     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53549     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53513     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53557     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53555     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53582     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53643     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53661     | 2       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53687     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53689     | 1       |
| Hedinger/AHD               | Isopropyl alcohol 70% | 53709     | 1       |
| Hedinger/Alli              | Isopropyl alcohol 70% | 53665     | 1       |
| Hedinger/Alliance          | Isopropyl alcohol 70% | 53324     | 1       |
| Hedinger/Alliance          | Isopropyl alcohol 70% | 53359     | 1       |
| Hedinger/Alliance          | Isopropyl alcohol 70% | 53353     | 1       |
| Hedinger/Alliance          | Isopropyl alcohol 70% | 53417     | 1       |
| Hedinger/Alliance Healt... | Isopropyl alcohol 70% | 53376     | 1       |
| Hedinger/Alliance Healt... | Isopropyl alcohol 70% | 53467     | 3       |
| Hedinger/Alliance Hirsc... | Isopropyl alcohol 70% | 53519     | 1       |
| Hedinger/Anz               | Isopropyl alcohol 70% | 53399     | 1       |
| Hedinger/Anz               | Isopropyl alcohol 70% | 53514     | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 303007    | 2       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 303006    | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 303008    | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53447     | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53497     | 2       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53524     | 4       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53518     | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53525     | 1       |
| Hedinger/Anzag             | Isopropyl alcohol 70% | 53554     | 2       |

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| Supplier              | Substance             | Batch          | Spectra |
|-----------------------|-----------------------|----------------|---------|
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53548          | 3       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53550          | 4       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53574          | 3       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53586          | 5       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53601          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | sieheProtokoll | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53607          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53610          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53606          | 2       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53622          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53632          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53694          | 2       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53700          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53667          | 1       |
| Hedinger/Anzag        | Isopropyl alcohol 70% | 53737          | 1       |
| Hedinger/Anzag direkt | Isopropyl alcohol 70% | 53545          | 1       |
| Caelo                 | Isopropyl alcohol 70% | 53518          | 1       |
| Hedinger/Delta        | Isopropyl alcohol 70% | 53539          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53442          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53449          | 2       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53452          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53462          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53460          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53494          | 2       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53504          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53506          | 2       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53562          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53577          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53598          | 1       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53602          | 2       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53600          | 3       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53685          | 2       |
| Hedinger/Ebert        | Isopropyl alcohol 70% | 53697          | 3       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53326          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53391          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53409          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53420          | 3       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53440          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53451          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53456          | 3       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53454          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53447          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53469          | 5       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53468          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 303035         | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53478          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53493          | 3       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53488          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53495          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53505          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53510          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53509          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53515          | 3       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53525          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53542          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53530          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53534          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53545          | 1       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53552          | 2       |
| Hedinger/Fiebig       | Isopropyl alcohol 70% | 53562          | 2       |

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| <b>Supplier</b>        | <b>Substance</b>      | <b>Batch</b>   | <b>Spectra</b> |
|------------------------|-----------------------|----------------|----------------|
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53576          | 3              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53577          | 1              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 5386           | 1              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53593          | 2              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53603          | 2              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53611          | 2              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53706          | 1              |
| Hedinger/Fiebig        | Isopropyl alcohol 70% | 53741          | 3              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53302          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53315          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53322          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53333          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53340          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53338          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53346          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53357          | 3              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 5335           | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53352          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53351          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53367          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53366          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53379          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53380          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53376          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53388          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53392          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53402          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53385          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53401          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53416          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53422          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 1200717/053443 | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53491          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53482          | 4              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53492          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53498          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53511          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53532          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53536          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53557          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53565          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53570          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53562          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53581          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53594          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53595          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53607          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53617          | 2              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53601          | 5              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53629          | 1              |
| Hedinger/Gehe          | Isopropyl alcohol 70% | 53695          | 1              |
| Hedinger/GEHE          | Isopropyl alcohol 70% | 53266          | 1              |
| Hedinger/GEHE          | Isopropyl alcohol 70% | 53453          | 1              |
| Hedinger/GEHE          | Isopropyl alcohol 70% | 53673          | 1              |
| Hedinger/Geibo         | Isopropyl alcohol 70% | 53383          | 2              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53266          | 1              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53262          | 1              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53306          | 2              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53320          | 1              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53333          | 1              |

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| <b>Supplier</b>        | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|------------------------|-----------------------|--------------|----------------|
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53566        | 4              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53570        | 3              |
| Hedinger/Geilenkirchen | Isopropyl alcohol 70% | 53604        | 2              |
| Hedinger/Jenne         | Isopropyl alcohol 70% | 53601        | 1              |
| Hedinger/Jenne         | Isopropyl alcohol 70% | 53652        | 2              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53386        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53393        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53425        | 2              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53435        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53439        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53438        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53497        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53524        | 2              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53545        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53548        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53559        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53555        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53582        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53590        | 1              |
| Hedinger/Kehr          | Isopropyl alcohol 70% | 53601        | 1              |
| Hedinger/Klosterring   | Isopropyl alcohol 70% | 53518        | 1              |
| hedinger/noweda        | Isopropyl alcohol 70% | 53397        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53412        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53403        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53420        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53434        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53441        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53459        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53464        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53461        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 181115182    | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53503        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53497        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53511        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53517        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53514        | 1              |
| hedinger/Noweda        | Isopropyl alcohol 70% | 53544        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53266        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53320        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53343        | 2              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53346        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53357        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53360        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53367        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53380        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53381        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53379        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53383        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53395        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53397        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53419        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53406        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53410        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53422        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53425        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53417        | 2              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53430        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53439        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53438        | 1              |
| Hedinger/Noweda        | Isopropyl alcohol 70% | 53451        | 1              |

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| Supplier         | Substance             | Batch       | Spectra |
|------------------|-----------------------|-------------|---------|
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53443       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 3817M-01080 | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53454       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53458       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53467       | 2       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53468       | 2       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53355       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53485       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53491       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 303078      | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 5308        | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53517       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 303084      | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53526       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53518       | 3       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53521       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 303100      | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53537       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53571       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53519       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53580       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53600       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53608       | 2       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53611       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53603       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53616       | 2       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53645       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53655       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53674       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53639       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53672       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53695       | 4       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53618       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53716       | 2       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53727       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53738       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53734       | 5       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53733       | 1       |
| Hedinger/Noweda  | Isopropyl alcohol 70% | 53750       | 3       |
| Hedinger/Phö     | Isopropyl alcohol 70% | 53340       | 1       |
| Hedinger/Phö     | Isopropyl alcohol 70% | 53401       | 1       |
| Hedinger/Phö     | Isopropyl alcohol 70% | 53416       | 1       |
| Hedinger/Phö     | Isopropyl alcohol 70% | 5432        | 1       |
| Hedinger/phoenix | Isopropyl alcohol 70% | 53567       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53332       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53367       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53382       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53377       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53392       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53385       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53442       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 303053      | 4       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53447       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53456       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53453       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53448       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53475       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53488       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53499       | 1       |
| Hedinger/Phoenix | Isopropyl alcohol 70% | 53509       | 4       |

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| Supplier                     | Substance             | Batch   | Spectra |
|------------------------------|-----------------------|---------|---------|
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53506   | 6       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53511   | 3       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53522   | 2       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53517   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53528   | 2       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53539   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53527   | 5       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53524   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53540   | 8       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53537   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53552   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53563   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53559   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53582   | 2       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53578   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53581   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53585   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53608   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 303144  | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53664   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53651   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53686   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53704   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53694   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53723   | 1       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53756   | 4       |
| Hedinger/Phoenix             | Isopropyl alcohol 70% | 53769   | 1       |
| Hedinger/Phoenix 16.07.18    | Isopropyl alcohol 70% | 53480   | 1       |
| Hedinger/Phoenix WE: 09. ... | Isopropyl alcohol 70% | 53410   | 2       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53651   | 2       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53348   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303035  | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53369   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303037  | 3       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303039  | 3       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53385   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303040  | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53397   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53398   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53392   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53401   | 2       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303042  | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53410   | 3       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303045  | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 3030046 | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53426   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53432   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53451   | 3       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 303059  | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53462   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53447   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53480   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53456   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53479   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53486   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53488   | 6       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53493   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53497   | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 701035B | 1       |
| Hedinger/Phönix              | Isopropyl alcohol 70% | 53502   | 2       |

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| <b>Supplier</b>   | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|-------------------|-----------------------|--------------|----------------|
| Hedinger/Phönix   | Isopropyl alcohol 70% | 303087       | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53520        | 4              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53523        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53519        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53539        | 4              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 303095       | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53526        | 4              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53541        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53550        | 4              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53561        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53573        | 3              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53577        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53567        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 533586       | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53584        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53587        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53590        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53600        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53612        | 3              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53603        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53674        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53682        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 4110039      | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53695        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53702        | 2              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53672        | 1              |
| Hedinger/Phönix   | Isopropyl alcohol 70% | 53686        | 1              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53369        | 2              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53380        | 2              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53398        | 1              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53401        | 4              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53387        | 1              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53410        | 1              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53416        | 3              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53426        | 1              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53432        | 4              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53451        | 2              |
| HEDINGER/Phönix   | Isopropyl alcohol 70% | 53456        | 1              |
| Hedinger/Sana     | Isopropyl alcohol 70% | 53397        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53493        | 1              |
| Hedinger/sanacorp | Isopropyl alcohol 70% | 53571        | 1              |
| Hedinger/sanacorp | Isopropyl alcohol 70% | 53570        | 1              |
| Hedinger/sanacorp | Isopropyl alcohol 70% | 53655        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53300        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53324        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53332        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53337        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53341        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53353        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53371        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53372        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53370        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53375        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53381        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53383        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53382        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53396        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53404        | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 3407         | 1              |
| Hedinger/Sanacorp | Isopropyl alcohol 70% | 53410        | 2              |

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| Supplier                   | Substance             | Batch       | Spectra |
|----------------------------|-----------------------|-------------|---------|
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53412       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53411       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53416       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 704103      | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53421       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53432       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53440       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53443       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53456       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53447       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53460       | 4       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53466       | 3       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53470       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53469       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53465       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53493       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53494       | 3       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53492       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53504       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53479       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53506       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53513       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53523       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53519       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53544       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53510       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53525       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53534       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53540       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53550       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53542       | 3       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53561       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53570       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53577       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53587       | 5       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53606       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53608       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 303155      | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53678       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53694       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53703       | 2       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53685       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53697       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53704       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 5374        | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53690       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53669       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53728       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | AP210225-02 | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53747       | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | Ap210720-02 | 1       |
| Hedinger/Sanacorp          | Isopropyl alcohol 70% | 53753       | 1       |
| HEDINGER/Sanacorp          | Isopropyl alcohol 70% | 53550       | 1       |
| HEDINGER/Sanacorp          | Isopropyl alcohol 70% | 53710       | 1       |
| Hedinger/Sanacorp (Zyto... | Isopropyl alcohol 70% | 53725       | 2       |
| Hedinger/Sanacorp (Zyto... | Isopropyl alcohol 70% | 53713       | 1       |
| Hedinger/Spangro           | Isopropyl alcohol 70% | 53508       | 1       |
| Hedinger/Spangro           | Isopropyl alcohol 70% | 53524       | 3       |
| Hedinger/Spangro           | Isopropyl alcohol 70% | 53548       | 1       |
| Hedinger/VDL               | Isopropyl alcohol 70% | 53425       | 1       |

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| <b>Supplier</b>            | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------|--------------|----------------|
| Hedinger1                  | Isopropyl alcohol 70% | 53290        | 1              |
| HedingerAlliance           | Isopropyl alcohol 70% | 53548        | 1              |
| HedingerSanacorp           | Isopropyl alcohol 70% | 53526        | 1              |
| Hedunger / Phönix          | Isopropyl alcohol 70% | 53686        | 1              |
| Hedunger / Phönix          | Isopropyl alcohol 70% | 53695        | 1              |
| Heidinger/Sanacorp         | Isopropyl alcohol 70% | 53454        | 1              |
| Herdin/AHD                 | Isopropyl alcohol 70% | 53296        | 1              |
| Hergestellt                | Isopropyl alcohol 70% | 1150727      | 1              |
| hergestellt am 11.04.13    | Isopropyl alcohol 70% | 191012/925   | 1              |
| Hergestellt am03.07.2013   | Isopropyl alcohol 70% | 2013-07-03B  | 1              |
| Herstellung                | Isopropyl alcohol 70% | 110416P2     | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 20120911     | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 20130102     | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 22042013     | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 70587B       | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 20130613     | 1              |
| Herstellung in Apotheke    | Isopropyl alcohol 70% | 70643B       | 1              |
| Hetterich                  | Isopropyl alcohol 70% | 140301       | 1              |
| Hetterich                  | Isopropyl alcohol 70% | 140403       | 1              |
| Hetterich                  | Isopropyl alcohol 70% | 140001       | 1              |
| Hetterich/AEP              | Isopropyl alcohol 70% | 140703       | 1              |
| Hetterich/Sanacorp         | Isopropyl alcohol 70% | 140803       | 1              |
| Hetterich/Spangro          | Isopropyl alcohol 70% | 140804       | 1              |
| Hirsch                     | Isopropyl alcohol 70% | Die16041301  | 1              |
| Hirsch                     | Isopropyl alcohol 70% | 1913E-01080  | 1              |
| Hirsch                     | Isopropyl alcohol 70% | 4413I-01080  | 1              |
| Hirsch                     | Isopropyl alcohol 70% | 4213E-01080  | 1              |
| Hirsch                     | Isopropyl alcohol 70% | 5013Q-01080  | 1              |
| Hirsch                     | Isopropyl alcohol 70% | 714E-01080   | 1              |
| Hirsch Apotheke            | Isopropyl alcohol 70% | 4714I-01080  | 1              |
| Hirsch Apotheke            | Isopropyl alcohol 70% | 415M-0108    | 1              |
| Hirsch Apotheke            | Isopropyl alcohol 70% | 1615I-01080  | 1              |
| HirschApotheke             | Isopropyl alcohol 70% | 4514I-01080  | 1              |
| HirschApotheke             | Isopropyl alcohol 70% | 1015I-01080  | 1              |
| HirschApotheke             | Isopropyl alcohol 70% | 1815E-01080  | 1              |
| HirschApotheke             | Isopropyl alcohol 70% | 2315I-01080  | 1              |
| hochhaus-Apotheke          | Isopropyl alcohol 70% | 4715E-01080  | 1              |
| hochhaus-Apotheke          | Isopropyl alcohol 70% | 5315E-01080  | 1              |
| hochhaus-Apotheke          | Isopropyl alcohol 70% | 916I-01080   | 1              |
| hochhaus-Apotheke          | Isopropyl alcohol 70% | 917M-01080   | 1              |
| Hochhaus-Apotheke          | Isopropyl alcohol 70% | 3715A-01080  | 1              |
| Hochhaus-Apotheke          | Isopropyl alcohol 70% | 4315E-01080  | 1              |
| Hochhaus-Apotheke          | Isopropyl alcohol 70% | 1116E-01080  | 1              |
| Hochhaus-Apotheke          | Isopropyl alcohol 70% | 117E-01080   | 1              |
| hochhaus-apotheke/Eigen... | Isopropyl alcohol 70% | 2417Q-01080  | 1              |
| Hofmann und Sommer         | Isopropyl alcohol 70% | 940817       | 1              |
| Hofmann&Sommer             | Isopropyl alcohol 70% | 1280320      | 1              |
| hofmanns/noweda            | Isopropyl alcohol 70% | 1340420      | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | ChB120914    | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 71014        | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | ChB060115    | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 230915       | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 31215        | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 110416       | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 103171       | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 103172       | 1              |
| Hubertus Apotheke          | Isopropyl alcohol 70% | 103173       | 1              |
| Ichthyol über Phoenix      | Isopropyl alcohol 70% | 16167802     | 1              |
| Ichthyol/Noweda            | Isopropyl alcohol 70% | 17311403     | 1              |
| Ichtyol                    | Isopropyl alcohol 70% | 2600971T     | 1              |

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| Supplier                  | Substance             | Batch       | Spectra |
|---------------------------|-----------------------|-------------|---------|
| Igel Apotheke             | Isopropyl alcohol 70% | 3813E-01080 | 1       |
| Igel-Apo                  | Isopropyl alcohol 70% | 4318Q-01080 | 1       |
| Igel-Apo                  | Isopropyl alcohol 70% | 4618E-01080 | 1       |
| Igel-Apo                  | Isopropyl alcohol 70% | 119M-01080  | 1       |
| Igel-Apo                  | Isopropyl alcohol 70% | 4819I-01080 | 1       |
| Infectopharm / Noweda     | Isopropyl alcohol 70% | 53504       | 1       |
| Isopropylalkohol GMP/Gehe | Isopropyl alcohol 70% | 2314M-01080 | 1       |
| Jenne                     | Isopropyl alcohol 70% | 18308001    | 2       |
| Kastner                   | Isopropyl alcohol 70% | 914I-01080  | 1       |
| Kastner                   | Isopropyl alcohol 70% | 1714I-01080 | 1       |
| Kastner (eigen)           | Isopropyl alcohol 70% | 3914A-01080 | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53444       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53451       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53458       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53486       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53484       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53498       | 2       |
| Kehr                      | Isopropyl alcohol 70% | 53516       | 1       |
| Kehr                      | Isopropyl alcohol 70% | 53582       | 1       |
| Kehr/A.Hedinger           | Isopropyl alcohol 70% | 53490       | 1       |
| Caelo                     | Isopropyl alcohol 70% | 53589       | 1       |
| Kehr/Hedinger             | Isopropyl alcohol 70% | 53406       | 1       |
| Kehr/Hedinger             | Isopropyl alcohol 70% | 53419       | 4       |
| Kehr/Hedinger             | Isopropyl alcohol 70% | 53482       | 1       |
| Kehr/Hedinger             | Isopropyl alcohol 70% | 53584       | 1       |
| Klenk                     | Isopropyl alcohol 70% | 1214M-1080  | 1       |
| Klosterring               | Isopropyl alcohol 70% | 53448       | 1       |
| Euro OTC                  | Isopropyl alcohol 70% | 53467       | 2       |
| Krieger/hedinger          | Isopropyl alcohol 70% | 53388       | 1       |
| Krieger/Hedinger          | Isopropyl alcohol 70% | 53449       | 1       |
| Krieger/Hedinger          | Isopropyl alcohol 70% | 53488       | 1       |
| Krieger/Hedinger          | Isopropyl alcohol 70% | 53516       | 1       |
| Krieger/Hedinger          | Isopropyl alcohol 70% | 53559       | 1       |
| kruppa                    | Isopropyl alcohol 70% | 717H4       | 1       |
| kruppa                    | Isopropyl alcohol 70% | 817H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 1116H2      | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 117H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 317H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 417H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 617H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 218H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 118H4       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 418H4       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 518H2       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 718H4       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 718H6       | 1       |
| Kruppa                    | Isopropyl alcohol 70% | 818H7       | 1       |
| L10                       | Isopropyl alcohol 70% | 53427       | 1       |
| L10                       | Isopropyl alcohol 70% | 53429       | 1       |
| L10                       | Isopropyl alcohol 70% | 53423       | 3       |
| L10                       | Isopropyl alcohol 70% | 53449       | 2       |
| L10                       | Isopropyl alcohol 70% | 53466       | 2       |
| L10                       | Isopropyl alcohol 70% | 53486       | 1       |
| L10                       | Isopropyl alcohol 70% | 53562       | 1       |
| L10                       | Isopropyl alcohol 70% | 53561       | 3       |
| L12                       | Isopropyl alcohol 70% | 53387       | 6       |
| L12                       | Isopropyl alcohol 70% | 53404       | 1       |
| L12                       | Isopropyl alcohol 70% | 53402       | 1       |
| L12                       | Isopropyl alcohol 70% | 53567       | 2       |
| L30                       | Isopropyl alcohol 70% | 53456       | 1       |

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| Supplier                     | Substance             | Batch        | Spectra |
|------------------------------|-----------------------|--------------|---------|
| L30                          | Isopropyl alcohol 70% | 53469        | 3       |
| L30                          | Isopropyl alcohol 70% | 53484        | 1       |
| L30                          | Isopropyl alcohol 70% | 53502        | 3       |
| L30                          | Isopropyl alcohol 70% | 53494        | 1       |
| L30                          | Isopropyl alcohol 70% | 53539        | 5       |
| L30                          | Isopropyl alcohol 70% | 53516        | 1       |
| L30                          | Isopropyl alcohol 70% | 53530        | 4       |
| L30                          | Isopropyl alcohol 70% | 53542        | 1       |
| L30                          | Isopropyl alcohol 70% | 53576        | 1       |
| Laborchemie Apolda/Phönix    | Isopropyl alcohol 70% | 18114202     | 1       |
| Lamotte/AHCA                 | Isopropyl alcohol 70% | 6010905001   | 4       |
| Lamotte/Alliance             | Isopropyl alcohol 70% | 303032       | 1       |
| Lamotte/Sanacorp             | Isopropyl alcohol 70% | 53377        | 1       |
| Caelo                        | Isopropyl alcohol 70% | 16052014-100 | 1       |
| Lehy/ Noweda                 | Isopropyl alcohol 70% | 182741       | 1       |
| ley Pharma                   | Isopropyl alcohol 70% | 200531       | 1       |
| Ley Pharma GmbH/ Gehe        | Isopropyl alcohol 70% | 174551       | 1       |
| Ley Pharma GmbH/ Gehe        | Isopropyl alcohol 70% | 182132       | 1       |
| Ley Pharma/Phönix            | Isopropyl alcohol 70% | 153741       | 1       |
| Ley/Noweda                   | Isopropyl alcohol 70% | 170951       | 1       |
| Ley/Noweda                   | Isopropyl alcohol 70% | 172241       | 1       |
| Ley/Noweda                   | Isopropyl alcohol 70% | 174521       | 3       |
| leyh pharma                  | Isopropyl alcohol 70% | 161411       | 1       |
| leyh pharma                  | Isopropyl alcohol 70% | 201643       | 1       |
| leyh pharma                  | Isopropyl alcohol 70% | 201522       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 132021       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 141311       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 143541       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 152121       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 154531       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 155021       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 164721       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 170951       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 170721       | 2       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 174921       | 1       |
| Leyh Pharma                  | Isopropyl alcohol 70% | 184341       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 181611       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 183451       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 164021       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 181231       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 181212       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 191041       | 1       |
| Leyh Pharma GmbH             | Isopropyl alcohol 70% | 201541       | 1       |
| Leyh Pharma GmbH / Noweda    | Isopropyl alcohol 70% | 181141       | 1       |
| Leyh Pharma GmbH / Noweda    | Isopropyl alcohol 70% | 183511       | 1       |
| Leyh Pharma GmbH / Noweda    | Isopropyl alcohol 70% | 191351       | 1       |
| Leyh Pharma GmbH / Noweda    | Isopropyl alcohol 70% | 201222       | 1       |
| Leyh Pharma GmbH/ Allia. . . | Isopropyl alcohol 70% | 201641       | 1       |
| Leyh Pharma/ AHD             | Isopropyl alcohol 70% | 191411       | 1       |
| Leyh Pharma/Kehr             | Isopropyl alcohol 70% | 201541       | 1       |
| Leyh Pharma/Noweda           | Isopropyl alcohol 70% | 183521       | 1       |
| Leyh Pharms                  | Isopropyl alcohol 70% | 152521       | 1       |
| Leyh Pharna GmbH / Geibo     | Isopropyl alcohol 70% | 193711       | 1       |
| Leyh/Gehe                    | Isopropyl alcohol 70% | 183121       | 1       |
| Leyh/Gehe                    | Isopropyl alcohol 70% | 183441       | 1       |
| Leyh/Noweda                  | Isopropyl alcohol 70% | 183211       | 1       |
| Leyh/Noweda                  | Isopropyl alcohol 70% | 201731       | 1       |
| Leyh/Phoenix                 | Isopropyl alcohol 70% | 181832       | 1       |
| Leyh/Phönix                  | Isopropyl alcohol 70% | 183433       | 1       |
| Leyh-Pharma/Spangro          | Isopropyl alcohol 70% | 201622       | 1       |

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| Supplier                | Substance             | Batch       | Spectra |
|-------------------------|-----------------------|-------------|---------|
| Lichtenstein            | Isopropyl alcohol 70% | 123456789   | 1       |
| Linden-Apotheke Görlitz | Isopropyl alcohol 70% | 2915Q-01080 | 1       |
| Linden-Apotheke Görlitz | Isopropyl alcohol 70% | 2816E-01080 | 1       |
| Lornsen Apotheke        | Isopropyl alcohol 70% | 123456      | 1       |
| Löwen Apotheke          | Isopropyl alcohol 70% | H28122012P1 | 1       |
| M.Kastner               | Isopropyl alcohol 70% | 2914M-01080 | 1       |
| M.Kastner               | Isopropyl alcohol 70% | 3314I-01080 | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-171013-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-131213-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-150314-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-300714-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-191214-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-030715-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-241115-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-150216-1D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-110716-2D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-021116-2D | 1       |
| Martinus-Apotheke       | Isopropyl alcohol 70% | A-200117-1D | 1       |
| Nauto                   | Isopropyl alcohol 70% | 180131      | 1       |
| Neue-Apotheke Defektur  | Isopropyl alcohol 70% | 2120M-01080 | 1       |
| Neugereut Apotheke      | Isopropyl alcohol 70% | 713M-01080  | 1       |
| Neugereut Apotheke      | Isopropyl alcohol 70% | 3531Q-01080 | 1       |
| Neugereut Apotheke      | Isopropyl alcohol 70% | 4913M-01080 | 1       |
| Neugereut Apotheke      | Isopropyl alcohol 70% | 214Q-01080  | 1       |
| noweda                  | Isopropyl alcohol 70% | 2600787T    | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53333       | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53417       | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53422       | 1       |
| Noweda                  | Isopropyl alcohol 70% | 18114001    | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53542       | 1       |
| Noweda                  | Isopropyl alcohol 70% | 18308001    | 1       |
| Noweda                  | Isopropyl alcohol 70% | 19138801    | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53650       | 1       |
| Noweda                  | Isopropyl alcohol 70% | 53735       | 1       |
| Caelo                   | Isopropyl alcohol 70% | 18073901    | 7       |
| Euro OTC                | Isopropyl alcohol 70% | 53398       | 1       |
| Noweda 12.12.2019       | Isopropyl alcohol 70% | 53608       | 1       |
| Noweda am 13.10.2017    | Isopropyl alcohol 70% | 17082102    | 1       |
| Noweda/ Hedinger        | Isopropyl alcohol 70% | 53383       | 1       |
| Noweda/ Hedinger        | Isopropyl alcohol 70% | 53408       | 1       |
| Noweda/ Hedinger        | Isopropyl alcohol 70% | 53426       | 1       |
| Caelo                   | Isopropyl alcohol 70% | 19138802    | 1       |
| Noweda/hedinger         | Isopropyl alcohol 70% | 53593       | 2       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53343       | 1       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53350       | 1       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53428       | 1       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53537       | 1       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53552       | 2       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53589       | 1       |
| Noweda/Hedinger         | Isopropyl alcohol 70% | 53663       | 1       |
| O. Fischar              | Isopropyl alcohol 70% | 4119113     | 6       |
| O. Fischar              | Isopropyl alcohol 70% | 4110013     | 5       |
| Ohm Apotheke            | Isopropyl alcohol 70% | 12345       | 1       |
| Ostertor Apotheke       | Isopropyl alcohol 70% | 2819I-01080 | 1       |
| Ottlik                  | Isopropyl alcohol 70% | 2015090420  | 1       |
| Otto Fischar            | Isopropyl alcohol 70% | 4117081     | 1       |
| Otto Fischar            | Isopropyl alcohol 70% | 4110038     | 1       |
| Otto Fischar / PHÖNIX   | Isopropyl alcohol 70% | 4119012     | 1       |
| Otto Fischar gmbh       | Isopropyl alcohol 70% | 4116045     | 1       |
| Otto Fischar GmbH       | Isopropyl alcohol 70% | 4115084     | 1       |

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| <b>Supplier</b>            | <b>Substance</b>      | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|-----------------------|---------------|----------------|
| Otto Fischar GmbH          | Isopropyl alcohol 70% | 4116033       | 1              |
| Otto Fischar GmbH          | Isopropyl alcohol 70% | 4116083       | 1              |
| Otto Fischar GmbH & Co.... | Isopropyl alcohol 70% | 4115012       | 1              |
| Otto Fischar GmbH & Co.... | Isopropyl alcohol 70% | 4115114       | 2              |
| Otto Fischar GmbH/Phoenix  | Isopropyl alcohol 70% | 4110033       | 1              |
| Otto Fischar/Fiebig        | Isopropyl alcohol 70% | 4117091       | 5              |
| Otto Fischar/Fiebig        | Isopropyl alcohol 70% | 4117092       | 10             |
| Otto Fischar/Phönix        | Isopropyl alcohol 70% | 4119092       | 1              |
| Otto Fischar/Phönix        | Isopropyl alcohol 70% | 4119101       | 1              |
| Otto Fischar/Phönix        | Isopropyl alcohol 70% | 4119072       | 1              |
| Otto Fischar/Phönix        | Isopropyl alcohol 70% | 4110042       | 1              |
| Otto Fischer               | Isopropyl alcohol 70% | 4117121       | 1              |
| Otto Fischer               | Isopropyl alcohol 70% | 4118011       | 1              |
| Otto Fischer               | Isopropyl alcohol 70% | 4118062       | 1              |
| Otto Fischer GmbH          | Isopropyl alcohol 70% | 4118073       | 1              |
| Otto Fischer/Fiebig        | Isopropyl alcohol 70% | 4117041       | 15             |
| Otto Fischer/Fiebig        | Isopropyl alcohol 70% | 4117042       | 11             |
| Otto Fischer/Phönix        | Isopropyl alcohol 70% | 4117043       | 20             |
| Otto Fischer/Phönix        | Isopropyl alcohol 70% | 4119022       | 1              |
| Otto FischerGmbH&Co.KG/... | Isopropyl alcohol 70% | 4118033       | 1              |
| Otto FischerGmbH&Co.KG/... | Isopropyl alcohol 70% | 4118071       | 1              |
| OttoFischar/Fiebig         | Isopropyl alcohol 70% | 41170         | 1              |
| Phoen                      | Isopropyl alcohol 70% | 162621        | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 4116125053416 | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 4116126       | 6              |
| Phoenix                    | Isopropyl alcohol 70% | 53447         | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 4117126       | 14             |
| Phoenix                    | Isopropyl alcohol 70% | 18235302      | 2              |
| Phoenix                    | Isopropyl alcohol 70% | 303104        | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 53573         | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 4119081       | 13             |
| Phoenix                    | Isopropyl alcohol 70% | 4119071       | 2              |
| Phoenix                    | Isopropyl alcohol 70% | 4110041       | 1              |
| Phoenix                    | Isopropyl alcohol 70% | 53673         | 1              |
| Phoenix 17.03.2014         | Isopropyl alcohol 70% | 53280         | 1              |
| Phoenix/AHD                | Isopropyl alcohol 70% | 53329         | 1              |
| Phoenix/Cealo              | Isopropyl alcohol 70% | 53496         | 1              |
| Phoenix/Hedinger           | Isopropyl alcohol 70% | 53493         | 1              |
| Phoenix/Hedinger           | Isopropyl alcohol 70% | 53578         | 1              |
| Phonix                     | Isopropyl alcohol 70% | 14026403      | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53252         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 1217603       | 1              |
| Phönix                     | Isopropyl alcohol 70% | 13217601      | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53413         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53442         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53475         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53488         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 1073902       | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53519         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 18308101      | 1              |
| Phönix                     | Isopropyl alcohol 70% | 535553        | 2              |
| Phönix                     | Isopropyl alcohol 70% | 53573         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53581         | 1              |
| Phönix                     | Isopropyl alcohol 70% | 53608         | 6              |
| Phönix E.K:5,68 -1L        | Isopropyl alcohol 70% | 53474         | 2              |
| Phönix / Otto Fischar G... | Isopropyl alcohol 70% | 4110043       | 1              |
| Caelo                      | Isopropyl alcohol 70% | 18235002      | 2              |
| Phönix 05.01.15            | Isopropyl alcohol 70% | 53303         | 1              |
| Phönix 13.01.2014          | Isopropyl alcohol 70% | 13319404      | 1              |
| Caelo                      | Isopropyl alcohol 70% | 16167902      | 5              |

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| Supplier          | Substance             | Batch         | Spectra |
|-------------------|-----------------------|---------------|---------|
| Caelo             | Isopropyl alcohol 70% | 53369         | 1       |
| Phönix/fischar    | Isopropyl alcohol 70% | 4118073       | 1       |
| Phönix/Fischar    | Isopropyl alcohol 70% | 4117102       | 6       |
| Phönix/Fischar    | Isopropyl alcohol 70% | 4119065       | 1       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53295         | 2       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53341         | 1       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53426         | 1       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53486         | 2       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53525         | 1       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53513         | 1       |
| Phönix/Hedinger   | Isopropyl alcohol 70% | 53153         | 1       |
| Phönix/Leyhpharma | Isopropyl alcohol 70% | 180311        | 1       |
| Purren Apotheke   | Isopropyl alcohol 70% | 18043         | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1150617       | 1       |
| Rezeptur          | Isopropyl alcohol 70% | IS070092017   | 1       |
| Rezeptur          | Isopropyl alcohol 70% | IS70112017    | 1       |
| Rezeptur          | Isopropyl alcohol 70% | IS70122017    | 1       |
| Rezeptur          | Isopropyl alcohol 70% | IS70122017B   | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 216IS0700218B | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 216IS0700218A | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 316IS700318A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 316IS700318B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | Rezeptur      | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 416IS700318A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 416IS700318B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 416IS700318C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 616IS700618C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 616IS700618B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 616IS700618A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 716IS700718   | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 916IS700918A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 916IS700918   | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 916IS700918C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1216IS701218A | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1216IS701218B | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 117IS701118C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 117IS701118B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 117IS701118A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 417IS700419B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 417IS700419   | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 417IS700419C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 717IS700719A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 717IS700719B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 817IS0819C    | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 817IS0819B    | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 817IS0819     | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1117IS701119A | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1117IS701119B | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1117IS701119  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 118IS700120A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 118IS700120B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 318IS700320B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 318IS700320C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 318IS700320A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 518IS700520C  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 518IS700520B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 518IS700520A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 818IS700820A  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 818IS700820B  | 1       |
| Rezeptur          | Isopropyl alcohol 70% | 1018IS701020B | 1       |

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| Supplier                | Substance             | Batch         | Spectra |
|-------------------------|-----------------------|---------------|---------|
| Rezeptur                | Isopropyl alcohol 70% | 1018IS701020C | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1018IS701020A | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1218IS1220A   | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1218IS1220B   | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 219IS700221A  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 219IS700221B  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 219IS700221C  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 419IS700421A  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 419IS700421B  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 419IS700421C  | 3       |
| Rezeptur                | Isopropyl alcohol 70% | 419IS700421D  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 719IS700721A  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 719IS700721B  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 719IS700721C  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 719IS700721D  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1019IS701021A | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1019IS701021B | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 1019IS701021C | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422A  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422B  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422D  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422E  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422C  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 420IS700422F  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 620IS700622   | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 620IS700622B  | 1       |
| Rezeptur                | Isopropyl alcohol 70% | 620IS700622C  | 1       |
| Rodh/Sanacorp           | Isopropyl alcohol 70% | 3915N-01080   | 1       |
| Römerapo.               | Isopropyl alcohol 70% | 53316         | 1       |
| Rondell                 | Isopropyl alcohol 70% | 414Q-07123    | 1       |
| Rondell                 | Isopropyl alcohol 70% | 1014M-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 2613Q-01080   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 3113M-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 2814E-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 4814E-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 245Q-07123    | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 1115Q-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 2615E-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 3215M-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 4215E-07123   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 4815M-01080   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 716M-01080    | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 1316I-01080   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 1316I-01080   | 2       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 3016E-01080   | 1       |
| Rondell Apotheke        | Isopropyl alcohol 70% | 3816A-01080   | 1       |
| rondell-Apotheke        | Isopropyl alcohol 70% | 3413M-07123   | 1       |
| Rondell-Apotheke        | Isopropyl alcohol 70% | 3814Q-07123   | 1       |
| Rosen Apotheke          | Isopropyl alcohol 70% | 2017E-07125   | 1       |
| Rosen Apotheke Dr.Erdal | Isopropyl alcohol 70% | 2003209-2     | 1       |
| Rosen Apotheke Dr.Erdal | Isopropyl alcohol 70% | 2003209-1     | 1       |
| Sana/ Hedinger          | Isopropyl alcohol 70% | 53682         | 1       |
| Sana/ Hedinger          | Isopropyl alcohol 70% | 53725         | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 14267805      | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 53417         | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 53430         | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 17082103      | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 16319102      | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 418E-01080    | 1       |
| Sanacorp                | Isopropyl alcohol 70% | 2218E-01080   | 1       |

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| <b>Supplier</b>            | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------|--------------|----------------|
| Sanacorp                   | Isopropyl alcohol 70% | 53550        | 1              |
| Sanacorp                   | Isopropyl alcohol 70% | 419E-01080   | 1              |
| Sanacorp                   | Isopropyl alcohol 70% | 53571        | 1              |
| Sanacorp                   | Isopropyl alcohol 70% | 53632        | 2              |
| Sanacorp                   | Isopropyl alcohol 70% | 53661        | 2              |
| Sanacorp                   | Isopropyl alcohol 70% | 303169       | 1              |
| Caelo                      | Isopropyl alcohol 70% | 53426        | 1              |
| Sanacorp (Hedinger)        | Isopropyl alcohol 70% | 53397        | 1              |
| Caelo                      | Isopropyl alcohol 70% | 2600907T     | 1              |
| Caelo                      | Isopropyl alcohol 70% | 2600887T     | 1              |
| Sanacorp 26.11.15          | Isopropyl alcohol 70% | 2600905T     | 1              |
| Sanacorp WE: 21.11.17 1... | Isopropyl alcohol 70% | 53460        | 1              |
| Sanacorp WE: 25.10.17 1... | Isopropyl alcohol 70% | 53452        | 1              |
| Euro OTC                   | Isopropyl alcohol 70% | 53442        | 1              |
| Sanacorp/ Hedinger         | Isopropyl alcohol 70% | 53497        | 1              |
| Sanacorp/ Hedinger         | Isopropyl alcohol 70% | 53534        | 2              |
| Caelo                      | Isopropyl alcohol 70% | 18073701     | 2              |
| Caelo                      | Isopropyl alcohol 70% | 19138501     | 6              |
| sanacorp/hedinger          | Isopropyl alcohol 70% | 53499        | 1              |
| Sanacorp/HEDINGER          | Isopropyl alcohol 70% | 53531        | 1              |
| Sanacorp/Winthrop WE:18... | Isopropyl alcohol 70% | 2600929T     | 1              |
| SanacorpWE:19.01.2017 ...  | Isopropyl alcohol 70% | 53407        | 2              |
| Schwanen-Apotheke, Köster  | Isopropyl alcohol 70% | 160104-1     | 1              |
| Schwanen-Apothek-Köster    | Isopropyl alcohol 70% | 151028-1     | 1              |
| selbst                     | Isopropyl alcohol 70% | 7106         | 1              |
| selbst                     | Isopropyl alcohol 70% | 8108         | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1MD20200321  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 2MD20200321  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 2MD20200404  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1MD20200404  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1520A-01080  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 3MD20200404  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1520M-01080  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1520N-01080  | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 1200-01080   | 1              |
| selbst hergestellt         | Isopropyl alcohol 70% | 2820A-01080  | 1              |
| Selbsterstellung           | Isopropyl alcohol 70% | 1017A-07096  | 1              |
| Selbsterstellung           | Isopropyl alcohol 70% | 1020E-01080  | 1              |
| Sieg-Apotheke              | Isopropyl alcohol 70% | 661302027    | 1              |
| sittig                     | Isopropyl alcohol 70% | 10815        | 1              |
| sittig                     | Isopropyl alcohol 70% | 130616       | 1              |
| Sittig                     | Isopropyl alcohol 70% | 150416       | 1              |
| Sonnen - Apotheke          | Isopropyl alcohol 70% | 9/16         | 1              |
| SonnenApo                  | Isopropyl alcohol 70% | 3819I-01080  | 1              |
| SonnenApo                  | Isopropyl alcohol 70% | 1920E-01080  | 1              |
| SonnenApo                  | Isopropyl alcohol 70% | 3220E-01080  | 2              |
| Sonnen-Apotheke            | Isopropyl alcohol 70% | 210513H1     | 1              |
| Sonnen-Apotheke            | Isopropyl alcohol 70% | 3/16         | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 17/2015      | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 33/15        | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 37/15        | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 44/15        | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 18/16        | 1              |
| Sonnen-Apotheke Wefensl... | Isopropyl alcohol 70% | 23/16        | 1              |
| Sonnenberg-Apotheke        | Isopropyl alcohol 70% | 100214       | 1              |
| Caelo                      | Isopropyl alcohol 70% | 13337004     | 1              |
| St. Georg Apotheke         | Isopropyl alcohol 70% | 7071193B     | 1              |
| St.Georg                   | Isopropyl alcohol 70% | 701193B      | 2              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 5217I-01080  | 1              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 718A-01080   | 1              |

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| <b>Supplier</b>            | <b>Substance</b>      | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------|--------------|----------------|
| Stadt-Apo                  | Isopropyl alcohol 70% | 1518Q-018080 | 1              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 2418A-01080  | 1              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 3118M-01080  | 1              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 35181-01080  | 1              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 4318Q-01080  | 2              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 1619M-01080  | 3              |
| Stadt-Apo                  | Isopropyl alcohol 70% | 720E-01080   | 1              |
| Stadtapotheke Achern       | Isopropyl alcohol 70% | 4871B-01080  | 1              |
| STERN                      | Isopropyl alcohol 70% | 131202002    | 1              |
| STERN                      | Isopropyl alcohol 70% | 140507002    | 1              |
| STERN                      | Isopropyl alcohol 70% | 140617002    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 130321004    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 130425004    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 130703007    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 130805002    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 20130912     | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 130927002    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 20131022     | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 131108001    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 131216005    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 140116004    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 140210001    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 140310001    | 1              |
| Stern-Defektur             | Isopropyl alcohol 70% | 140404005    | 1              |
| Stern-Rezeptur             | Isopropyl alcohol 70% | 131015001    | 1              |
| Stifts-Apotheke            | Isopropyl alcohol 70% | 2716Q-01080  | 1              |
| Stifts-Apotheke            | Isopropyl alcohol 70% | 317E-01080   | 1              |
| Teofarma srl               | Isopropyl alcohol 70% | 140701       | 1              |
| Teofarma srl/ GEHE         | Isopropyl alcohol 70% | 140703       | 1              |
| Teofarma/Noweda            | Isopropyl alcohol 70% | 140806       | 1              |
| Teofarma/Noweda            | Isopropyl alcohol 70% | 140902       | 1              |
| Teofarma/Spangro           | Isopropyl alcohol 70% | 140002       | 1              |
| Teopharma                  | Isopropyl alcohol 70% | 140804       | 3              |
| Töste Apotheke             | Isopropyl alcohol 70% | 1520A-01080  | 1              |
| unbekannt                  | Isopropyl alcohol 70% | 1320Q-01080  | 1              |
| Unisan                     | Isopropyl alcohol 70% | 13155502     | 1              |
| Caelo                      | Isopropyl alcohol 70% | 14076501     | 2              |
| WE 27.12.16 Hedinger/Ph... | Isopropyl alcohol 70% | 53401        | 1              |
| WE: Phoenix 19.10.2016 ... | Isopropyl alcohol 70% | 53388        | 2              |
| Werner Hofmann/Werner H... | Isopropyl alcohol 70% | 53580        | 1              |
| Winthorp                   | Isopropyl alcohol 70% | 2601013T     | 1              |
| Winthorp                   | Isopropyl alcohol 70% | 26010231     | 1              |
| Winthorp AM/NOW            | Isopropyl alcohol 70% | 2600790T     | 1              |
| winthrop                   | Isopropyl alcohol 70% | 2600735T     | 1              |
| winthrop                   | Isopropyl alcohol 70% | 2600850T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600670T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600685T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600681T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600706T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600846T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600870T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600940T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600938T     | 1              |
| Winthrop                   | Isopropyl alcohol 70% | 2600977T     | 1              |
| Winthrop Arzneimittel      | Isopropyl alcohol 70% | 2600969T     | 1              |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600915T     | 1              |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600916T     | 1              |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2601007T     | 1              |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2601021T     | 1              |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2601026T     | 1              |

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| Supplier                   | Substance             | Batch       | Spectra |
|----------------------------|-----------------------|-------------|---------|
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600802T    | 1       |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600857T    | 1       |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600807T    | 1       |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600830T    | 1       |
| Winthrop Arzneimittel G... | Isopropyl alcohol 70% | 2600846T    | 1       |
| Winthrop/Alliance Healt... | Isopropyl alcohol 70% | 2600875T    | 1       |
| Winthrop/Alliance Healt... | Isopropyl alcohol 70% | 2600892t    | 1       |
| Winthrop/Phönix            | Isopropyl alcohol 70% | 2600966T    | 1       |
| Winthrop/Phönix            | Isopropyl alcohol 70% | 2600852T    | 1       |
| Winthrop/Sanacorp          | Isopropyl alcohol 70% | 2600873T    | 1       |
| Winthrop/Sanacorp          | Isopropyl alcohol 70% | 2600882t    | 1       |
| Winthrop/Sanacorp          | Isopropyl alcohol 70% | 2600981T    | 1       |
| Wintrop                    | Isopropyl alcohol 70% | 2600863T    | 2       |
| Wintrop                    | Isopropyl alcohol 70% | 2600869t    | 1       |
| Wintrop                    | Isopropyl alcohol 70% | 2600908t    | 1       |
| Wintrop                    | Isopropyl alcohol 70% | 80616-12    | 1       |
| Wintrop                    | Isopropyl alcohol 70% | 2600969T    | 1       |
| Wintrop AM GmbH            | Isopropyl alcohol 70% | 2600749T    | 1       |
| Wintrop AM GmbH/Anzag      | Isopropyl alcohol 70% | 2600754T    | 1       |
| wir leben Apotheke Tespe   | Isopropyl alcohol 70% | 3415M-01080 | 1       |
| Wolf- Apotheke / Defektur  | Isopropyl alcohol 70% | 50914/51Wlo | 1       |
| Wolf-Apotheke              | Isopropyl alcohol 70% | 60623/50Dre | 1       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 40729/50Hk  | 1       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 123456      | 2       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 41017/50Wlo | 1       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 41125/1Hk   | 1       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 41212/50Si  | 1       |
| Wolf-Apotheke / Defektur   | Isopropyl alcohol 70% | 50204/50Bz  | 1       |
| Zentiva/Alliance Health... | Isopropyl alcohol 70% | 2600866T    | 1       |
| Zentiva/Alliance Health... | Isopropyl alcohol 70% | 2600887T    | 1       |
| Zentiva/Alliance Health... | Isopropyl alcohol 70% | 2600906T    | 2       |
| Zentiva/Alliance Health... | Isopropyl alcohol 70% | 2600948T    | 1       |
| Zentiva/Alliance Health... | Isopropyl alcohol 70% | 2600953T    | 1       |
| Adler-Apotheke             | Isopropyl alcohol 70% |             | 1       |
| Caelo                      | Isopropyl alcohol 70% |             | 6       |
| Caelo                      | Isopropyl alcohol 70% | 14076503    | 2       |
| Caelo                      | Isopropyl alcohol 70% | 14331004    | 2       |
| Caelo                      | Isopropyl alcohol 70% | 15403802    | 8       |
| Defektur                   | Isopropyl alcohol 70% |             | 5       |
| Eigen                      | Isopropyl alcohol 70% |             | 1       |
| Eigene                     | Isopropyl alcohol 70% |             | 1       |
| Eigenherstellung           | Isopropyl alcohol 70% |             | 3       |
| Eigenproduktion            | Isopropyl alcohol 70% |             | 2       |
| Hedinger                   | Isopropyl alcohol 70% |             | 2       |
| Hedinger/Alliance Healt... | Isopropyl alcohol 70% |             | 1       |
| Fagron                     | Isopropyl alcohol 70% |             | 1       |
|                            | Isopropyl alcohol 70% | 201644      | 1       |
| MAROS Arznei, Noweda       | Isopropyl alcohol 70% |             | 1       |
| N.N.                       | Isopropyl alcohol 70% |             | 1       |
| Neugereut Apotheke         | Isopropyl alcohol 70% |             | 2       |
| Noweda                     | Isopropyl alcohol 70% |             | 3       |
| Praxisbedarf Neurologen    | Isopropyl alcohol 70% |             | 5       |
| selbst                     | Isopropyl alcohol 70% |             | 2       |
| Wensauer Apotheke          | Isopropyl alcohol 70% |             | 1       |

- 237 584 spectra from 1121 *Apo-Ident* customers from a total of 45 448 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#),

the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Isopropyl alcohol 70%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Isopropyl alcohol 70%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 440           | 0              | 63 499        |
| Type B | 0              | 480           | 0              | 91 011        |
| Type C | 0              | 3765          | 14             | 237 584       |

The substance/substance group *Isopropyl alcohol 70%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.6364 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.7500 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.6295 % (> 99.5501 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Isopropyl alcohol 70%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance      | Distance in main model | Distance in second-stage model |
|----------------|------------------------|--------------------------------|
| Camphor spirit | 37.23                  | —                              |
| Spirit soap    | 63.31                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Isopropyl alcohol 70%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:



| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31388     | 31388               | 0.00                         | 76.32                           |
| 31622     | 32318               | 3.24                         | 61.03                           |
| 31831     | 32216               | 2.81                         | 72.57                           |
| 32216     | 32216               | 0.00                         | 75.13                           |
| 32318     | 32318               | 0.00                         | 58.67                           |
| 32319     | 32319               | 0.00                         | 58.21                           |
| 32320     | 32320               | 0.00                         | 59.96                           |
| 32322     | 32322               | 0.00                         | 59.66                           |
| 33105     | 33105               | 0.00                         | 58.18                           |
| 33106     | 33106               | 0.00                         | 58.88                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Isopropyl myristate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30977-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Isopropyl myristate; Isopropylis myristas

### Special notes

When selecting the *Isopropyl myristate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Isopropyl myristate       | 6      | 4      | 95     |

## Second-stage model

For differentiation of the substance/substance group *Isopropyl myristate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Isopropyl myristate*:

| Supplier | Substance           | Batch      | Sample ID | Spectra | Certificate |
|----------|---------------------|------------|-----------|---------|-------------|
| Caelo    | Isopropyl myrist... | 12171522   | 30977     | 80      | 1408077     |
| Caelo    | Isopropyl myrist... | 13144311   | 31363     | 40      | 1412539     |
| Caelo    | Isopropyl myrist... | 192333     | 34726     | 40      | 20190911*   |
| Euro OTC | Isopropyl myrist... | 1303034-03 | 31530     | 60      | 20130502    |
| Euro OTC | Isopropyl myrist... | 1508035    | 31774     | 60      | 20150907*   |
| Euro OTC | Isopropyl myrist... | 2008023    | 35081     | 40      | 20200916*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 320 spectra of 6 reference samples from the substance/substance group *Isopropyl myristate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 619 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Isopropyl myristate*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 4 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance           | Batch   | Sample ID | Spectra |
|----------|---------------------|---------|-----------|---------|
| Caelo    | Isopropyl myristate | 172729  | 33882     | 40      |
| Caelo    | Isopropyl myristate | 181308  | 34234     | 40      |
| Euro OTC | Isopropyl myristate | 1608039 | 32776     | 40      |
| Euro OTC | Isopropyl myristate | 1801035 | 33926     | 40      |

- 91 331 spectra from a total of 2012 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 499 spectra from 258 *Apo-Ident* customers from 98 batches from the substance/substance group *Isopropyl myristate*.
- Among them are spectra of independent samples from 95 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance           | Batch       | Spectra |
|-----------|---------------------|-------------|---------|
| AHD       | Isopropyl myristate | 1301992     | 1       |
| AHD       | Isopropyl myristate | 15438215    | 1       |
| AHD/Euro  | Isopropyl myristate | 1801035     | 1       |
| Anzag     | Isopropyl myristate | 120100801   | 1       |
| Caelo     | Isopropyl myristate | 15035907    | 1       |
| apo-ident | Isopropyl myristate | 1608039-01  | 1       |
| Bombastus | Isopropyl myristate | 19003290    | 1       |
| Caelo     | Isopropyl myristate | 12171518    | 1       |
| Caelo     | Isopropyl myristate | 13019902    | 2       |
| Caelo     | Isopropyl myristate | 13144308    | 7       |
| Caelo     | Isopropyl myristate | 14155909    | 7       |
| Caelo     | Isopropyl myristate | 1407015-01  | 1       |
| Caelo     | Isopropyl myristate | 14155902    | 1       |
| Caelo     | Isopropyl myristate | 30051502    | 1       |
| Caelo     | Isopropyl myristate | 15284807    | 2       |
| Caelo     | Isopropyl myristate | 15284804    | 1       |
| Caelo     | Isopropyl myristate | 15438204    | 5       |
| Caelo     | Isopropyl myristate | 15438024    | 1       |
| Caelo     | Isopropyl myristate | 15248304    | 4       |
| Caelo     | Isopropyl myristate | 15248306    | 6       |
| Caelo     | Isopropyl myristate | 1608039-01  | 2       |
| Caelo     | Isopropyl myristate | 2091713     | 1       |
| Caelo     | Isopropyl myristate | 15438215    | 7       |
| Caelo     | Isopropyl myristate | 21071805    | 1       |
| Caelo     | Isopropyl myristate | 1801035-01  | 3       |
| Caelo     | Isopropyl myristate | 192333001   | 1       |
| Caelo     | Isopropyl myristate | 192333005   | 1       |
| Caelo     | Isopropyl myristate | 20001753006 | 2       |
| Caelo     | Isopropyl myristate | 1508035-01  | 5       |
| Caelo     | Isopropyl myristate | 18130808    | 8       |
| Caelo     | Isopropyl myristate | 19059108    | 5       |
| Caelo     | Isopropyl myristate | 13019910    | 2       |
| Caelo     | Isopropyl myristate | 17272901    | 13      |
| Caelo     | Isopropyl myristate | 18130802-01 | 1       |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Caelo                      | Isopropyl myristate | 130034-02    | 2              |
| Caelo                      | Isopropyl myristate | 1303034-01   | 1              |
| Caelo                      | Isopropyl myristate | 18130803     | 20             |
| Caelo                      | Isopropyl myristate | 20001753001  | 4              |
| Caelo                      | Isopropyl myristate | 192333008    | 11             |
| Caelo                      | Isopropyl myristate | 1(18130801)  | 1              |
| Caelo                      | Isopropyl myristate | 15438206     | 1              |
| Caelo                      | Isopropyl myristate | 1932333004   | 1              |
| Caelo                      | Isopropyl myristate | 11178415     | 1              |
| Caelo                      | Isopropyl myristate | 17359501     | 8              |
| Caelo                      | Isopropyl myristate | 18130893     | 1              |
| Caelo                      | Isopropyl myristate | 19233304     | 1              |
| Caelo                      | Isopropyl myristate | 15035906     | 8              |
| Caelo                      | Isopropyl myristate | 1508035-02   | 1              |
| Caelo                      | Isopropyl myristate | 19059103     | 13             |
| Caelo                      | Isopropyl myristate | 192333004    | 4              |
| Caelo                      | Isopropyl myristate | 130303402    | 1              |
| Caelo                      | Isopropyl myristate | 14155914     | 1              |
| Caelo                      | Isopropyl myristate | 17272902     | 1              |
| Caesar & Lorenz GmbH       | Isopropyl myristate | 1905103      | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 13019902     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 18130803     | 2              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 18130801     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 18130808     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 19059103     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 19059108     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 19059104     | 1              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 192333004    | 3              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 20001753001  | 2              |
| Caesar & Loretz GmbH       | Isopropyl myristate | 20001753006  | 2              |
| Caesar & Loretz GmbH/An... | Isopropyl myristate | 18130808     | 1              |
| Caesar und Loretz GmbH     | Isopropyl myristate | 18130801     | 3              |
| Caesar&Loretz GmbH D-40... | Isopropyl myristate | 1201008-01   | 1              |
| Ebert & Jacobi             | Isopropyl myristate | 1801035-01   | 1              |
| EuRho                      | Isopropyl myristate | 12100801     | 1              |
| EuRho                      | Isopropyl myristate | 1201008-01   | 1              |
| EuRho                      | Isopropyl myristate | 1106026-01   | 1              |
| EuRho                      | Isopropyl myristate | 1303034-01   | 1              |
| EuRho                      | Isopropyl myristate | 1407015-02   | 1              |
| EuRho/Phönix               | Isopropyl myristate | 1212031-01   | 1              |
| EuRho/Phönix               | Isopropyl myristate | 1407015-03   | 1              |
| Euro OTC                   | Isopropyl myristate | 120100801    | 1              |
| Euro OTC                   | Isopropyl myristate | 1212031-01   | 4              |
| Euro OTC                   | Isopropyl myristate | 1407015_03   | 1              |
| Euro OTC                   | Isopropyl myristate | 1508035-1    | 1              |
| Euro OTC                   | Isopropyl myristate | 1508035-02   | 11             |
| Euro OTC                   | Isopropyl myristate | 1608039      | 1              |
| Euro OTC                   | Isopropyl myristate | 1608039-01   | 32             |
| Euro OTC                   | Isopropyl myristate | 1303034-01   | 5              |
| Euro OTC                   | Isopropyl myristate | 140701503    | 2              |
| Euro OTC                   | Isopropyl myristate | 1508035-01   | 21             |
| Euro OTC                   | Isopropyl myristate | 160839-02    | 1              |
| Euro OTC                   | Isopropyl myristate | 71142935     | 3              |
| Euro OTC                   | Isopropyl myristate | 41140874     | 1              |
| Euro OTC                   | Isopropyl myristate | 1303034-02   | 20             |
| Euro OTC                   | Isopropyl myristate | 1407015-03   | 12             |
| Euro OTC                   | Isopropyl myristate | 160803901    | 2              |
| Euro OTC                   | Isopropyl myristate | 1608039-02   | 16             |
| Euro OTC                   | Isopropyl myristate | 3515Q-02898  | 1              |
| Euro OTC                   | Isopropyl myristate | 4816Q-02898  | 1              |

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| Supplier                    | Substance           | Batch            | Spectra |
|-----------------------------|---------------------|------------------|---------|
| Euro OTC                    | Isopropyl myristate | 1303034          | 1       |
| Euro OTC                    | Isopropyl myristate | 1407015-02       | 3       |
| Euro OTC                    | Isopropyl myristate | 1608039-1        | 1       |
| Euro OTC                    | Isopropyl myristate | 160803902        | 1       |
| Euro OTC                    | Isopropyl myristate | 130303403        | 1       |
| Euro OTC                    | Isopropyl myristate | 180135-01        | 1       |
| Euro OTG                    | Isopropyl myristate | 1303034-02       | 1       |
| Euro/ Sanacorp              | Isopropyl myristate | 1303034-02       | 1       |
| Euro/ Sanacorp              | Isopropyl myristate | 1407015-01       | 1       |
| Euro/Phönix                 | Isopropyl myristate | 1303034-01       | 1       |
| Euro/Phönix                 | Isopropyl myristate | 1508035          | 1       |
| Euro/Phoenix                | Isopropyl myristate | 1303034-03       | 1       |
| Euro OTC                    | Isopropyl myristate | 1407015-01       | 6       |
| Euro OTC                    | Isopropyl myristate | 5217M-02898      | 1       |
| Euro OTC                    | Isopropyl myristate | 1801035-01       | 48      |
| Euro OTC                    | Isopropyl myristate | 18130803         | 1       |
| Euro OTC                    | Isopropyl myristate | 1801035          | 1       |
| Fagron                      | Isopropyl myristate | 16B09-B03        | 1       |
| Fagron                      | Isopropyl myristate | 13A17-B03-295774 | 2       |
| Fiebig 3.04.13 ek: 3,45EUR  | Isopropyl myristate | 121203101        | 2       |
| Fiebig ek: 3,00EUR 31.08.12 | Isopropyl myristate | 1201008-01       | 1       |
| Gehe                        | Isopropyl myristate | 140701502        | 1       |
| Gehe                        | Isopropyl myristate | 15035906         | 1       |
| Gehe                        | Isopropyl myristate | 15438215         | 1       |
| GEHE 26.11.2014             | Isopropyl myristate | 1303034-03       | 1       |
| Kehr                        | Isopropyl myristate | 19059108         | 1       |
| Kögl                        | Isopropyl myristate | 388310152916     | 1       |
| Kögl                        | Isopropyl myristate | 12402172817      | 1       |
| Kögl                        | Isopropyl myristate | 1800589          | 1       |
| Nachtestung-Verlängerung    | Isopropyl myristate | 349/18           | 1       |
| Noweda                      | Isopropyl myristate | 12171511         | 1       |
| Noweda                      | Isopropyl myristate | 1407015-01       | 1       |
| Noweda                      | Isopropyl myristate | 1801035-01       | 1       |
| Caelo                       | Isopropyl myristate | 15438210         | 5       |
| Euro OTC                    | Isopropyl myristate | 180103501        | 2       |
| Euro OTC                    | Isopropyl myristate | 130133402        | 1       |
| Euro OTC                    | Isopropyl myristate | 1106026-01       | 1       |
| Euro OTC                    | Isopropyl myristate | 1407015          | 1       |
| Euro OTC                    | Isopropyl myristate | 1201008-01       | 3       |
| Phoenix                     | Isopropyl myristate | 1407015-03       | 2       |
| Phoenix                     | Isopropyl myristate | 1608039-02       | 1       |
| Phoenix                     | Isopropyl myristate | 18130801         | 1       |
| Phoenix                     | Isopropyl myristate | 18130803         | 1       |
| Phönix                      | Isopropyl myristate | 13019910         | 1       |
| Phönix                      | Isopropyl myristate | 12171522         | 1       |
| Phönix                      | Isopropyl myristate | 1608039-01       | 1       |
| Phönix                      | Isopropyl myristate | 1801035-01       | 1       |
| Phönix                      | Isopropyl myristate | 20001753001      | 1       |
| Caelo                       | Isopropyl myristate | 18130801         | 17      |
| Phönix, 18.07.2013          | Isopropyl myristate | 130303401        | 1       |
| Caelo                       | Isopropyl myristate | 12248600         | 1       |
| Caelo                       | Isopropyl myristate | 2000001753006    | 1       |
| sanacorb                    | Isopropyl myristate | 180103501        | 1       |
| Sanacorp                    | Isopropyl myristate | 12171511         | 1       |
| Sanacorp                    | Isopropyl myristate | 18130801         | 1       |
| Caelo                       | Isopropyl myristate | 18310808         | 1       |
| Sanacorp/EuRho              | Isopropyl myristate | 1608039-02       | 1       |
| Sanacorp/EuRho              | Isopropyl myristate | 71142935         | 1       |
| Wolf-Apotheke               | Isopropyl myristate | 1508035-02       | 1       |
|                             | Isopropyl myristate | 1508035-02       | 1       |

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| Supplier | Substance           | Batch      | Spectra |
|----------|---------------------|------------|---------|
| Caelo    | Isopropyl myristate | 12171522   | 3       |
| Euro OTC | Isopropyl myristate | 1303034-03 | 10      |
| Euro OTC | Isopropyl myristate | 1508035    | 2       |

- 240 864 spectra from 1121 *Apo-Ident* customers from a total of 46 909 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Isopropyl myristate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Isopropyl myristate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 320           | 0              | 63 619        |
| <b>Type B</b> | 0              | 160           | 0              | 91 331        |
| <b>Type C</b> | 0              | 492           | 7              | 240 864       |

The substance/substance group *Isopropyl myristate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.1250 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.5972 % (> 97.9960 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Isopropyl myristate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in main model | Distance in second-stage model |
|---------------------------------------|------------------------|--------------------------------|
| Isopropyl palmitate                   | 12.96                  | —                              |
| Metronidazole 25% in white petrolatum | 19.65                  | —                              |
| Wool fat                              | 26.92                  | —                              |

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| Substanz                             | Distance in<br>main model | Distance in<br>second-stage model |
|--------------------------------------|---------------------------|-----------------------------------|
| Shea butter, refined                 | 28.43                     | —                                 |
| Triglycerides, medium-chain          | 32.97                     | —                                 |
| Camphor ointment                     | 33.57                     | —                                 |
| Pasta Cordes <sup>®</sup>            | 34.90                     | —                                 |
| Laurel oil                           | 39.31                     | —                                 |
| Softisan <sup>®</sup> 378            | 44.36                     | —                                 |
| Permethrin 25% solution              | 46.80                     | —                                 |
| Squalane                             | 48.63                     | —                                 |
| Emulsifying hydrophobic base gel DAC | 55.08                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Isopropyl myristate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30977     | 30977                  | 0.00                            | 29.47                              |
| 31363     | 31363                  | 0.00                            | 21.96                              |
| 31530     | 31774                  | 1.44                            | 25.22                              |
| 31774     | 31774                  | 0.00                            | 23.80                              |
| 34726     | 34726                  | 0.00                            | 24.81                              |
| 35081     | 35081                  | 0.00                            | 26.26                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Isopropyl palmitate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30868-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Isopropyl palmitate; Isopropylis palmitas

### Special notes

When selecting the *Isopropyl palmitate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Isopropyl palmitate       | 6      | 3      | 110    |

## Second-stage model

For differentiation of the substance/substance group *Isopropyl palmitate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Isopropyl palmitate*:

| Supplier  | Substance           | Batch    | Sample ID | Spectra | Certificate        |
|-----------|---------------------|----------|-----------|---------|--------------------|
| Bombastus | Isopropyl palmit... | 284060   | 31268     | 40      | 20131119           |
| Bombastus | Isopropyl palmit... | 306390   | 32995     | 40      | 20161219           |
| Bombastus | Isopropyl palmit... | 306390   | 33040     | 40      | 20161219           |
| Bombastus | Isopropyl palmit... | 19006540 | 35289     | 40      | 20191218           |
| Caelo     | Isopropyl palmit... | 12229109 | 30868     | 40      | 20120807           |
| Caelo     | Isopropyl palmit... | 14034806 | 31364     | 40      | AR-15-FG-000372-01 |
| Caelo     | Isopropyl palmit... | 20002049 | 35453     | 40      | 20200914*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 280 spectra of 7 reference samples from the substance/substance group *Isopropyl palmitate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 659 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Isopropyl palmitate*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance           | Batch    | Sample ID | Spectra |
|----------|---------------------|----------|-----------|---------|
| Caelo    | Isopropyl palmitate | 16091706 | 32570     | 40      |
| Caelo    | Isopropyl palmitate | 180672   | 34079     | 40      |
| Caelo    | Isopropyl palmitate | 192499   | 34727     | 40      |

- 91371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 713 spectra from 377 *Apo-Ident* customers from 117 batches from the substance/substance group *Isopropyl palmitate*.
- Among them are spectra of independent samples from 110 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance           | Batch           | Spectra |
|----------------------|---------------------|-----------------|---------|
| AHD                  | Isopropyl palmitate | 14034801        | 1       |
| AHD                  | Isopropyl palmitate | 288083          | 1       |
| Caelo                | Isopropyl palmitate | 18067201        | 23      |
| Allianz              | Isopropyl palmitate | 18067201        | 1       |
| Bombastus            | Isopropyl palmitate | 281766          | 6       |
| Anzag                | Isopropyl palmitate | 277740Bombastus | 1       |
| Anzag                | Isopropyl palmitate | 16333401        | 1       |
| Anzag 09.01.19       | Isopropyl palmitate | 18004344        | 1       |
| Audor Pharma         | Isopropyl palmitate | 285604          | 1       |
| Audor Pharma         | Isopropyl palmitate | 15169701        | 1       |
| Bambastus            | Isopropyl palmitate | 307838          | 1       |
| Bionorica/Kehr       | Isopropyl palmitate | 17000844        | 1       |
| Bomastus/Noweda      | Isopropyl palmitate | 19003913        | 1       |
| bomb                 | Isopropyl palmitate | 18001978        | 1       |
| Bomb/Gehe            | Isopropyl palmitate | 299989          | 1       |
| Bombas über Sanacorp | Isopropyl palmitate | 290363          | 1       |
| bombast/Px           | Isopropyl palmitate | 293140          | 1       |
| bombasts/ Po         | Isopropyl palmitate | 18001978        | 1       |
| Bombastus            | Isopropyl palmitate | 266038          | 3       |
| Bombastus            | Isopropyl palmitate | 269359          | 2       |
| Bombastus            | Isopropyl palmitate | 275014          | 6       |
| Bombastus            | Isopropyl palmitate | 273823          | 2       |
| Bombastus            | Isopropyl palmitate | 272307          | 3       |
| Bombastus            | Isopropyl palmitate | 277740          | 3       |
| Bombastus            | Isopropyl palmitate | 262190          | 1       |
| Bombastus            | Isopropyl palmitate | 276178          | 1       |
| Bombastus            | Isopropyl palmitate | 279468          | 4       |
| Bombastus            | Isopropyl palmitate | 281057          | 7       |
| Bombastus            | Isopropyl palmitate | 26041301        | 1       |
| Bombastus            | Isopropyl palmitate | 290363          | 4       |

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| <b>Supplier</b> | <b>Substance</b>    | <b>Batch</b>    | <b>Spectra</b> |
|-----------------|---------------------|-----------------|----------------|
| Bombastus       | Isopropyl palmitate | 299989          | 14             |
| Bombastus       | Isopropyl palmitate | 302669          | 25             |
| Bombastus       | Isopropyl palmitate | 307838          | 19             |
| Bombastus       | Isopropyl palmitate | 190005596       | 1              |
| Bombastus       | Isopropyl palmitate | 291043          | 10             |
| Bombastus       | Isopropyl palmitate | 19000596        | 11             |
| Bombastus       | Isopropyl palmitate | 285604          | 6              |
| Bombastus       | Isopropyl palmitate | 271265          | 2              |
| Bombastus       | Isopropyl palmitate | 170703IP/306390 | 1              |
| Bombastus       | Isopropyl palmitate | 60092401        | 3              |
| Bombastus       | Isopropyl palmitate | 293140          | 20             |
| Bombastus       | Isopropyl palmitate | 108611          | 2              |
| Bombastus       | Isopropyl palmitate | 20000637        | 7              |
| Bombastus       | Isopropyl palmitate | 4613Q-02899     | 1              |
| Bombastus       | Isopropyl palmitate | 1317001786      | 1              |
| Bombastus       | Isopropyl palmitate | 18005839        | 3              |
| Caelo           | Isopropyl palmitate | 19003913        | 2              |
| Bombastus       | Isopropyl palmitate | 293410          | 1              |
| Bombastus       | Isopropyl palmitate | 19003913        | 10             |
| Bombastus       | Isopropyl palmitate | 3015I-02899     | 1              |
| Bombastus       | Isopropyl palmitate | 309754          | 6              |
| Bombastus       | Isopropyl palmitate | 4816Q-02899     | 1              |
| Bombastus       | Isopropyl palmitate | 17000844        | 10             |
| Bombastus       | Isopropyl palmitate | 17001786        | 15             |
| Bombastus       | Isopropyl palmitate | 218U-02899      | 1              |
| Bombastus       | Isopropyl palmitate | 5218Q-02899     | 1              |
| Bombastus       | Isopropyl palmitate | 20002134        | 4              |
| Bombastus       | Isopropyl palmitate | 18003207        | 10             |
| Bombastus       | Isopropyl palmitate | 19002375        | 11             |
| Bombastus       | Isopropyl palmitate | 9082013B        | 1              |
| Bombastus       | Isopropyl palmitate | 170612183       | 1              |
| Bombastus       | Isopropyl palmitate | 288083          | 9              |
| Bombastus       | Isopropyl palmitate | 20001459        | 7              |
| Bombastus       | Isopropyl palmitate | 18001978        | 10             |
| Bombastus       | Isopropyl palmitate | 306390          | 1              |
| Brückenapotheke | Isopropyl palmitate | 285604          | 1              |
| Caelo           | Isopropyl palmitate | 4061201         | 1              |
| Caelo           | Isopropyl palmitate | 9324202         | 1              |
| Caelo           | Isopropyl palmitate | 14034801        | 1              |
| Caelo           | Isopropyl palmitate | 11207309        | 1              |
| Caelo           | Isopropyl palmitate | 17091205        | 1              |
| Caelo           | Isopropyl palmitate | 20210212-1      | 1              |
| Caelo           | Isopropyl palmitate | 11207301        | 6              |
| Caelo           | Isopropyl palmitate | 12014106        | 2              |
| Caelo           | Isopropyl palmitate | 25031302        | 1              |
| Caelo           | Isopropyl palmitate | 15071303        | 1              |
| Caelo           | Isopropyl palmitate | 13134903        | 3              |
| Caelo           | Isopropyl palmitate | 13134905        | 3              |
| Caelo           | Isopropyl palmitate | 28111309        | 1              |
| Caelo           | Isopropyl palmitate | 26021402        | 1              |
| Caelo           | Isopropyl palmitate | 13134909        | 1              |
| Caelo           | Isopropyl palmitate | 2081401         | 1              |
| Caelo           | Isopropyl palmitate | 16021504        | 1              |
| Caelo           | Isopropyl palmitate | 16071504        | 1              |
| Caelo           | Isopropyl palmitate | 15128803        | 10             |
| Caelo           | Isopropyl palmitate | 60092401        | 1              |
| Caelo           | Isopropyl palmitate | 15169702        | 2              |
| Caelo           | Isopropyl palmitate | 15169705        | 2              |
| Caelo           | Isopropyl palmitate | 1516975         | 1              |
| Caelo           | Isopropyl palmitate | 16091706        | 14             |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b>        | <b>Spectra</b> |
|----------------------------|---------------------|---------------------|----------------|
| Caelo                      | Isopropyl palmitate | 16333401            | 10             |
| Caelo                      | Isopropyl palmitate | 307838              | 3              |
| Caelo                      | Isopropyl palmitate | 10071702            | 1              |
| Caelo                      | Isopropyl palmitate | 16333404            | 14             |
| Caelo                      | Isopropyl palmitate | 28031801            | 1              |
| Caelo                      | Isopropyl palmitate | 9061814             | 1              |
| Caelo                      | Isopropyl palmitate | 16081808            | 1              |
| Caelo                      | Isopropyl palmitate | 21111820            | 1              |
| Caelo                      | Isopropyl palmitate | 18234501            | 8              |
| Caelo                      | Isopropyl palmitate | 192504001           | 17             |
| Caelo                      | Isopropyl palmitate | 18003207            | 1              |
| Caelo                      | Isopropyl palmitate | 20004041001         | 3              |
| Caelo                      | Isopropyl palmitate | 17001786            | 1              |
| Caelo                      | Isopropyl palmitate | 18067202            | 1              |
| Caelo                      | Isopropyl palmitate | 14034807            | 7              |
| Caelo                      | Isopropyl palmitate | 306390              | 1              |
| Caelo                      | Isopropyl palmitate | 291043              | 1              |
| Caelo                      | Isopropyl palmitate | 192504001P-200514-2 | 1              |
| Caelo                      | Isopropyl palmitate | 273823              | 2              |
| Caelo                      | Isopropyl palmitate | 3297                | 1              |
| Caelo                      | Isopropyl palmitate | 18234508            | 3              |
| Caelo                      | Isopropyl palmitate | 18234505            | 8              |
| Caelo                      | Isopropyl palmitate | 16091708            | 1              |
| Caelo                      | Isopropyl palmitate | 13134906            | 2              |
| Caelo                      | Isopropyl palmitate | 281766              | 2              |
| Caelo                      | Isopropyl palmitate | 293140              | 1              |
| Caelo                      | Isopropyl palmitate | 297284              | 1              |
| Caelo                      | Isopropyl palmitate | 15169701            | 13             |
| Caelo                      | Isopropyl palmitate | 1633401             | 1              |
| Caelo                      | Isopropyl palmitate | 20002049001         | 2              |
| Caelo                      | Isopropyl palmitate | 17346502            | 1              |
| Caelo                      | Isopropyl palmitate | 14213111            | 3              |
| Caelo                      | Isopropyl palmitate | 16091701            | 10             |
| Caelo                      | Isopropyl palmitate | 1721402             | 1              |
| Caelo                      | Isopropyl palmitate | 18001978            | 2              |
| Caelo                      | Isopropyl palmitate | 18067204            | 8              |
| Caelo                      | Isopropyl palmitate | 18234504            | 14             |
| Caelo                      | Isopropyl palmitate | 16091709            | 3              |
| Caelo                      | Isopropyl palmitate | 17021402            | 26             |
| Caelo                      | Isopropyl palmitate | 192504003           | 10             |
| Caeol/Phoenix              | Isopropyl palmitate | 15169701            | 1              |
| Caeolo/Gehe                | Isopropyl palmitate | 18067201            | 1              |
| Caesar & Loretz            | Isopropyl palmitate | 16333404            | 1              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 18234501            | 3              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 18234504            | 2              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 18234505            | 4              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 18234508            | 2              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 192504001           | 1              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 192504003           | 3              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 20002049001         | 4              |
| Caesar & Loretz GmbH       | Isopropyl palmitate | 20004041001         | 2              |
| Caesar & Loretz GmbH / ... | Isopropyl palmitate | 18234505            | 1              |
| Caesar & Loretz GmbH/AHD   | Isopropyl palmitate | 192504003           | 1              |
| Caesar & Loretz GmbH/Je... | Isopropyl palmitate | 20002049001         | 1              |
| Caesar & Loretz GmbH/Sa... | Isopropyl palmitate | 18234505            | 1              |
| Caesar & Loretz GmbH/Sa... | Isopropyl palmitate | 20002049001         | 1              |
| Caesar/Noweda              | Isopropyl palmitate | 16091701            | 1              |
| Caeolo/Sanacorp            | Isopropyl palmitate | 192504001           | 1              |
| Cealo / Otto Geilenkirc... | Isopropyl palmitate | 192504001           | 1              |
| Delta                      | Isopropyl palmitate | 307838              | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|---------------------|------------------|----------------|
| Euro OTC                   | Isopropyl palmitate | 299989           | 2              |
| Fagron                     | Isopropyl palmitate | 9G14-M08         | 1              |
| Fagron                     | Isopropyl palmitate | 293140           | 1              |
| Fiebig 21.08.13 EK5,60     | Isopropyl palmitate | 13134903         | 1              |
| Bombastus                  | Isopropyl palmitate | 18004344         | 11             |
| gehe                       | Isopropyl palmitate | 192504003        | 1              |
| Gehe                       | Isopropyl palmitate | 12229112         | 1              |
| Gehe                       | Isopropyl palmitate | 15128803         | 1              |
| Gehe                       | Isopropyl palmitate | 16091706         | 1              |
| Gehe                       | Isopropyl palmitate | 16091701         | 1              |
| Gehe                       | Isopropyl palmitate | 17021402         | 1              |
| Gehe                       | Isopropyl palmitate | 18001978         | 1              |
| GEHE                       | Isopropyl palmitate | 269359           | 1              |
| GEHE                       | Isopropyl palmitate | 18067201         | 1              |
| Caelo                      | Isopropyl palmitate | 18004344         | 1              |
| Caelo                      | Isopropyl palmitate | 16091706/1060217 | 1              |
| Gutenberg-Apotheke         | Isopropyl palmitate | 285604           | 1              |
| Hedinger                   | Isopropyl palmitate | 271265           | 1              |
| Ichthyl-Gesellschaft       | Isopropyl palmitate | 299989           | 1              |
| Lamotte/ Phönix            | Isopropyl palmitate | 302669           | 1              |
| Nachtestung-Verlängerung   | Isopropyl palmitate | 240/17           | 1              |
| Noweda                     | Isopropyl palmitate | 13134906         | 1              |
| Noweda                     | Isopropyl palmitate | 14213111         | 1              |
| Noweda                     | Isopropyl palmitate | 307838           | 1              |
| Noweda                     | Isopropyl palmitate | 16333404         | 1              |
| Noweda                     | Isopropyl palmitate | 309754           | 1              |
| Noweda                     | Isopropyl palmitate | 17000844         | 1              |
| Noweda                     | Isopropyl palmitate | 18003207         | 2              |
| Noweda                     | Isopropyl palmitate | 18067201         | 1              |
| Noweda                     | Isopropyl palmitate | 19000596         | 1              |
| Noweda                     | Isopropyl palmitate | 19003913         | 1              |
| Noweda                     | Isopropyl palmitate | 192504001        | 1              |
| Noweda                     | Isopropyl palmitate | 19006540         | 2              |
| Noweda                     | Isopropyl palmitate | 20002134         | 2              |
| Bombastus                  | Isopropyl palmitate | 297284           | 19             |
| Bombastus                  | Isopropyl palmitate | 19003919         | 1              |
| Bombastus                  | Isopropyl palmitate | 4082928          | 1              |
| Phoenix                    | Isopropyl palmitate | 281766           | 1              |
| Phoenix                    | Isopropyl palmitate | 16333401         | 1              |
| Phoenix                    | Isopropyl palmitate | 18067201         | 1              |
| Phoenix                    | Isopropyl palmitate | 19000596         | 1              |
| Phoenix                    | Isopropyl palmitate | 18234504         | 1              |
| Phonix                     | Isopropyl palmitate | 17001786         | 1              |
| phönix                     | Isopropyl palmitate | 299989           | 1              |
| Phönix                     | Isopropyl palmitate | 16333401         | 1              |
| Phönix                     | Isopropyl palmitate | 16333404         | 1              |
| Phönix                     | Isopropyl palmitate | 309754           | 1              |
| Phönix                     | Isopropyl palmitate | 18067201         | 1              |
| Phönix                     | Isopropyl palmitate | 19000596         | 1              |
| Phönix                     | Isopropyl palmitate | 19003913         | 1              |
| Sanacorp                   | Isopropyl palmitate | 273823           | 1              |
| Sanacorp                   | Isopropyl palmitate | 290363           | 1              |
| Sanacorp                   | Isopropyl palmitate | 14034807         | 1              |
| Sanacorp                   | Isopropyl palmitate | 15128803         | 1              |
| Sanacorp                   | Isopropyl palmitate | 16091701         | 2              |
| Sanacorp                   | Isopropyl palmitate | 17021402         | 1              |
| Sanacorp                   | Isopropyl palmitate | 18067201         | 1              |
| Sanacorp                   | Isopropyl palmitate | 192504001        | 1              |
| Sanacorp                   | Isopropyl palmitate | 18005839         | 1              |
| Sanacorp, 4,85EUR, 14.1.17 | Isopropyl palmitate | 302669           | 1              |

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| Supplier             | Substance           | Batch    | Spectra |
|----------------------|---------------------|----------|---------|
| VDL;4,53EUR;23.06.15 | Isopropyl palmitate | 29314    | 1       |
| Bombastus            | Isopropyl palmitate | 284060   | 7       |
| Bombastus            | Isopropyl palmitate | 306390   | 6       |
| Bombastus            | Isopropyl palmitate | 19006540 | 7       |
| Bombastus            | Isopropyl palmitate |          | 1       |
| Caelo                | Isopropyl palmitate | 12229109 | 2       |
| Caelo                | Isopropyl palmitate | 14034806 | 5       |
| Euro OTC             | Isopropyl palmitate |          | 1       |

- 240 650 spectra from 1121 *Apo-Ident* customers from a total of 46 892 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Isopropyl palmitate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Isopropyl palmitate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 280           | 0              | 63 659        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 711           | 2              | 240 650       |

The substance/substance group *Isopropyl palmitate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.8571 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.7195 % (> 99.2987 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Isopropyl palmitate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------------------------|---------------------------|-----------------------------------|
| Isopropyl myristate                   | 13.61                     | —                                 |
| Metronidazole 25% in white petrolatum | 15.88                     | —                                 |
| Wool fat                              | 19.66                     | —                                 |
| Shea butter, refined                  | 20.42                     | —                                 |
| Pasta Cordes <sup>®</sup>             | 24.15                     | —                                 |
| Softisan <sup>®</sup> 378             | 26.59                     | —                                 |
| Laurel oil                            | 26.72                     | —                                 |
| Camphor ointment                      | 37.62                     | —                                 |
| Permethrin 25% solution               | 38.11                     | —                                 |
| Triglycerides, medium-chain           | 38.86                     | —                                 |
| Paraffin, yellow                      | 40.89                     | —                                 |
| Emulsifying hydrophobic base gel DAC  | 41.93                     | —                                 |
| Peanut oil, refined                   | 46.01                     | —                                 |
| Wool alcohol ointment DAB             | 46.27                     | —                                 |
| Paraffin, white                       | 46.44                     | —                                 |
| Squalane                              | 47.42                     | —                                 |
| Paraffin, light liquid                | 47.66                     | —                                 |
| Olive oil, native                     | 48.16                     | —                                 |
| Avocado oil, refined                  | 53.11                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Isopropyl palmitate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30868     | 35453                  | 4.08                            | 15.88                              |
| 31268     | 31364                  | 2.70                            | 17.68                              |
| 31364     | 31364                  | 0.00                            | 18.38                              |
| 32995     | 35453                  | 11.69                           | 22.77                              |
| 33040     | 35453                  | 9.99                            | 21.90                              |
| 35289     | 35453                  | 1.39                            | 18.30                              |
| 35453     | 35453                  | 0.00                            | 17.89                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Juniper oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30711-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Juniper oil; Juniperi aetheroleum

### Special notes

When selecting the *Juniper oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Juniper oil               | 5      | 2      | 15     |

## Second-stage model

For differentiation of the substance/substance group *Juniper oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Juniper oil*:

| Supplier | Substance   | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------|----------|-----------|---------|-------------|
| Caelo    | Juniper oil | 11379007 | 30711     | 40      | 1404599     |
| Caelo    | Juniper oil | 13240811 | 31665     | 60      | 20130726    |
| Caelo    | Juniper oil | 16160703 | 32918     | 40      | 1708747     |
| Caelo    | Juniper oil | 171597   | 33311     | 40      | 20170601*   |
| Caelo    | Juniper oil | 192077   | 34618     | 40      | 20190801*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Juniper oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 50 spectra of 2 reference samples from the substance/substance group *Juniper oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance   | Batch    | Sample ID | Spectra |
|----------|-------------|----------|-----------|---------|
| Caelo    | Juniper oil | 13240807 | 31244     | 10      |
| Caelo    | Juniper oil | 15185205 | 32352     | 40      |

- 91 441 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 29 spectra from 22 *Apo-Ident* customers from 16 batches from the substance/substance group *Juniper oil*.
- Among them are spectra of independent samples from 15 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance   | Batch        | Spectra |
|----------------------------|-------------|--------------|---------|
| Caelo                      | Juniper oil | 11379012     | 2       |
| Caelo                      | Juniper oil | 11379006     | 1       |
| Caelo                      | Juniper oil | 18121306     | 1       |
| Caelo                      | Juniper oil | 12322707     | 1       |
| Caelo                      | Juniper oil | 11379003     | 1       |
| Caelo                      | Juniper oil | 18056101     | 6       |
| Caelo                      | Juniper oil | 16160702     | 1       |
| Caelo                      | Juniper oil | 111275       | 1       |
| Caelo                      | Juniper oil | 14115802     | 3       |
| Caelo                      | Juniper oil | 13240802     | 3       |
| Caelo                      | Juniper oil | 15141302     | 1       |
| Caesar & Loretz GmbH       | Juniper oil | 19207701     | 1       |
| Caesar & Loretz GmbH/AHD   | Juniper oil | 19207701     | 1       |
| Caesar & Loretz GmbH/Sa... | Juniper oil | 192077005    | 1       |
| Kögl                       | Juniper oil | 104204171714 | 1       |
| Caelo                      | Juniper oil | 15185205     | 1       |
| Sanacorp                   | Juniper oil | 11379012     | 1       |
| VDL;15.05.15;9,95EUR       | Juniper oil | 14115802     | 1       |
| Caelo                      | Juniper oil | 11379007     | 1       |

- 241 334 spectra from 1121 *Apo-Ident* customers from a total of 46 990 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Juniper oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Juniper oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 220           | 0              | 63 719        |
| Type B | 0              | 48            | 2              | 91 441        |
| Type C | 0              | 27            | 2              | 241 334       |

The substance/substance group *Juniper oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| Type B | 100.0000 % (> 99.9657 %) | 96.0000 % (> 90.0000 %)  |
| Type C | 100.0000 % (> 99.6852 %) | 93.1034 % (> 82.7586 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Juniper oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Dwarf pine oil                | 15.44                  | —                              |
| Cedar wood oil                | 25.87                  | —                              |
| Cypress oil                   | 26.00                  | —                              |
| Bergamot oil                  | 28.74                  | —                              |
| Spearmint oil                 | 29.28                  | —                              |
| Pine silvestris oil           | 31.90                  | —                              |
| Acorus oil                    | 31.91                  | —                              |
| Angelica root oil             | 31.94                  | —                              |
| Caraway oil                   | 32.92                  | —                              |
| Peppermint oil                | 38.64                  | —                              |
| Bitter orange oil             | 39.45                  | —                              |
| Citric oil                    | 41.35                  | —                              |
| Verbena oil, nature-identical | 41.96                  | —                              |
| Turpentine oil                | 47.07                  | —                              |
| Grapefruit oil                | 47.40                  | —                              |
| Myrtle oil                    | 47.86                  | —                              |
| Eucalyptus oil                | 47.94                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Juniper oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested



reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30711     | 30711               | 0.00                         | 29.02                           |
| 31665     | 30711               | 16.62                        | 26.00                           |
| 32918     | 32918               | 0.00                         | 31.94                           |
| 33311     | 33311               | 0.00                         | 25.68                           |
| 34618     | 34618               | 0.00                         | 27.39                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Lanette® ointment (conserved)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30499-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Lanette® ointment (conserved); Unguentum Lanette®

### Special notes

When selecting the *Lanette® ointment (conserved)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group     | Type A | Type B | Type C |
|-------------------------------|--------|--------|--------|
| Lanette® ointment (conserved) | 11     | 16     | 144    |

## Second-stage model

For differentiation of the substance/substance group *Lanette<sup>®</sup> ointment (conserved)* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Lanette<sup>®</sup> ointment (conserved)*:

| Supplier | Substance                       | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------------------|----------|-----------|---------|-------------|
| Caelo    | Lanette <sup>®</sup> ointmen... | 13257301 | 31166     | 37      | 1402587     |
| Caelo    | Lanette <sup>®</sup> ointmen... | 13257301 | 31225     | 40      | 1403113     |
| Caelo    | Lanette <sup>®</sup> ointmen... | 13393001 | 31454     | 40      | 20131206    |
| Caelo    | Lanette <sup>®</sup> ointmen... | 153481   | 31913     | 60      | 20151111*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 153482   | 31914     | 60      | 20151111*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 153483   | 31915     | 60      | 20151111*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 160894   | 32093     | 40      | 20160318*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 162580   | 32500     | 40      | 20160920*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 162580   | 32501     | 40      | 20160920*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 162581   | 32502     | 40      | 20160920*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 162581   | 32503     | 40      | 20160920*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 190107   | 34540     | 20      | 20190128*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 190508   | 34541     | 40      | 20190319*   |
| Caelo    | Lanette <sup>®</sup> ointmen... | 20003378 | 35220     | 40      | 20201113*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 597 spectra of 14 reference samples from the substance/substance group *Lanette<sup>®</sup> ointment (conserved)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 11 different batches.
- 63 342 spectra from a total of 1296 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 723 spectra of 19 reference samples from the substance/substance group *Lanette<sup>®</sup> ointment (conserved)*.
- Among them are spectra of independent samples from 16 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                                 | Batch    | Sample ID          | Spectra |
|----------|-------------------------------------------|----------|--------------------|---------|
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 162582   | 32504              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 170567   | 33144              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 170415   | 33145              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 172430   | 33752              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 172431   | 33753              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 173110   | 34008              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 180232   | 34196              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 180870   | 34197              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 181184   | 34198              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 182334   | 34263              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20002187 | 35102              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20003101 | 35168              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 21001236 | 35340              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 21001789 | 35525              | 50      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 21002597 | 35651              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 21002676 | 35652              | 50      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13257301 | 31166 <sup>†</sup> | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 162582   | 32505              | 40      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 190107   | 34540 <sup>†</sup> | 20      |

- 90 768 spectra from a total of 1998 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1015 spectra from 279 *Apo-Ident* customers from 148 batches from the substance/substance group *Lanette<sup>®</sup> ointment (conserved)*.
- Among them are spectra of independent samples from 144 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                                 | Batch       | Spectra |
|----------|-------------------------------------------|-------------|---------|
| AHD      | Lanette <sup>®</sup> ointment (conserved) | 14089801    | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20002187004 | 3       |

*continued on the next page*

<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

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| Supplier              | Substance                                 | Batch             | Spectra |
|-----------------------|-------------------------------------------|-------------------|---------|
| Alliance              | Lanette <sup>®</sup> ointment (conserved) | 13046701          | 1       |
| Alliance H.           | Lanette <sup>®</sup> ointment (conserved) | 19050802          | 1       |
| Anzah / Henry lamotte | Lanette <sup>®</sup> ointment (conserved) | 13257501          | 1       |
| Bombastus             | Lanette <sup>®</sup> ointment (conserved) | 16258001          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 12081301          | 6       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 12170301          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 20310812-5        | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 20110712-3        | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 12223801          | 6       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 12223701          | 4       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 12313102          | 2       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 20021309          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 1222380           | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 1231302           | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | U-150513-3        | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16102013C         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 13046802          | 4       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 13177301          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 28111311          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 6012014D          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 24022014C         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 13257402          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 13234007          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16071402          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 24062014A         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 13392901          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 14089601          | 5       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 20092014B         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 23012015C         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 14277101          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 8041502           | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 15048901          | 17      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 15048801          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 19082015C         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 15095902          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 152114021         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 15211401          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 15348201          | 9       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16089404          | 3       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16188701          | 2       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 160817UL          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | ChB280916         | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16184702          | 16      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 161104UL/16188701 | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16188801          | 4       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16258201          | 11      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 16184703          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 17133901          | 19      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 17134001          | 7       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 17243001          | 13      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 17243102          | 21      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 17311001          | 16      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 18023301          | 4       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 18118402          | 15      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 18233501          | 21      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 19010701          | 24      |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 18296701          | 6       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 19050803          | 1       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 19267101          | 4       |
| Caelo                 | Lanette <sup>®</sup> ointment (conserved) | 20000221002       | 1       |

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| Supplier | Substance                                 | Batch             | Spectra |
|----------|-------------------------------------------|-------------------|---------|
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20002187001       | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 2187003           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 2002187004        | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20003378001       | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1802302           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18233402          | 2       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13392701          | 11      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14089501          | 6       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20002187003       | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 16258001          | 30      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 15258001          | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 170530UL/16188801 | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 170710UL/16188801 | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 171107UL/17134001 | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 17133902          | 4       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 17311002          | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 152113001         | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18118401          | 9       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 170328UL/16188801 | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 117311002         | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14277401          | 20      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 19144401          | 7       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18233502          | 7       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1914401           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 153483301         | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1811402           | 2       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 130456601         | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 19144501          | 6       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13046601          | 5       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18(18087001)      | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 20000703001       | 15      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14277201          | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13046501          | 2       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14221601          | 2       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1339201           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14277301          | 5       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 16089402          | 23      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18087001          | 47      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 15211201          | 10      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 16089401          | 49      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13257501          | 9       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 16258101          | 12      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 309918023301      | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 18118502          | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13046701          | 15      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 12312101          | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 173111001         | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 180102UL/17134001 | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1807001           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 19010702          | 4       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 280714B           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 13191201          | 7       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 12312901          | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 12313001          | 3       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 1391201           | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 17133801          | 11      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 15348301          | 17      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 35151-03211       | 1       |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 15211301          | 22      |
| Caelo    | Lanette <sup>®</sup> ointment (conserved) | 14200601          | 8       |

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| Supplier                   | Substance                                 | Batch       | Spectra |
|----------------------------|-------------------------------------------|-------------|---------|
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 15211102    | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 15348202    | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 17041501    | 20      |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 1731002     | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 18023202    | 8       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 180870001   | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 18087101    | 2       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 19050802    | 3       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 19266903    | 9       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 20003379002 | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 14089801    | 13      |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 1420061     | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 18302001    | 13      |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 19067003    | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 21000607002 | 3       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 613Q-03211  | 1       |
| Caelo                      | Lanette <sup>®</sup> ointment (conserved) | 20000702001 | 6       |
| Caecolo/Sanacorp           | Lanette <sup>®</sup> ointment (conserved) | 18118401    | 1       |
| Caesar & Loretz            | Lanette <sup>®</sup> ointment (conserved) | 19050802    | 2       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 15348201    | 1       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 18302001    | 6       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 18233501    | 2       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 18296701    | 1       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19010701    | 3       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19050802    | 6       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19144301    | 8       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19144401    | 3       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 18087001    | 1       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19010702    | 1       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19267003    | 5       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 19266903    | 10      |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 20000703001 | 2       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 20000702001 | 2       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 20002187003 | 3       |
| Caesar & Loretz GmbH       | Lanette <sup>®</sup> ointment (conserved) | 20003379002 | 1       |
| Caesar & Loretz GmbH / ... | Lanette <sup>®</sup> ointment (conserved) | 15211301    | 1       |
| Caesar & Loretz GmbH / ... | Lanette <sup>®</sup> ointment (conserved) | 19050802    | 1       |
| Caesar & Loretz GmbH/ P... | Lanette <sup>®</sup> ointment (conserved) | 20002187004 | 1       |
| Caesar & Loretz GmbH/An... | Lanette <sup>®</sup> ointment (conserved) | 19144401    | 1       |
| Caesar & Loretz GmbH/Geh   | Lanette <sup>®</sup> ointment (conserved) | 20000703001 | 1       |
| Caesar & Loretz GmbH/Gehe  | Lanette <sup>®</sup> ointment (conserved) | 19267003    | 2       |
| Caesar & Loretz GmbH/Gehe  | Lanette <sup>®</sup> ointment (conserved) | 20002187004 | 1       |
| Caesar & Loretz GmbH/Ge... | Lanette <sup>®</sup> ointment (conserved) | 20002187003 | 1       |
| Caesar & Loretz GmbH/No... | Lanette <sup>®</sup> ointment (conserved) | 19144401    | 1       |
| Caesar & Loretz GmbH/Ph... | Lanette <sup>®</sup> ointment (conserved) | 19010702    | 1       |
| Caesar/Lorenz              | Lanette <sup>®</sup> ointment (conserved) | 13046701    | 1       |
| Caesar/Lorenz              | Lanette <sup>®</sup> ointment (conserved) | 13257301    | 2       |
| Caesar/Lorenz              | Lanette <sup>®</sup> ointment (conserved) | 12313102    | 1       |
| Caesar/Lorenz              | Lanette <sup>®</sup> ointment (conserved) | 13257501    | 1       |
| Cordes/Anzag               | Lanette <sup>®</sup> ointment (conserved) | 17041501    | 1       |
| Fagron                     | Lanette <sup>®</sup> ointment (conserved) | 15348201    | 1       |
| Fagron                     | Lanette <sup>®</sup> ointment (conserved) | 18087001    | 2       |
| Fagron                     | Lanette <sup>®</sup> ointment (conserved) | 13046601    | 1       |
| gehe                       | Lanette <sup>®</sup> ointment (conserved) | 13177501    | 1       |
| Gehe                       | Lanette <sup>®</sup> ointment (conserved) | 16258001    | 1       |
| GEHE                       | Lanette <sup>®</sup> ointment (conserved) | 13046701    | 1       |
| GEHE                       | Lanette <sup>®</sup> ointment (conserved) | 16184702    | 1       |
| GEHE                       | Lanette <sup>®</sup> ointment (conserved) | 9639910     | 1       |
| GEHE                       | Lanette <sup>®</sup> ointment (conserved) | 16258101    | 2       |
| GEHE                       | Lanette <sup>®</sup> ointment (conserved) | 18023202    | 1       |

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continued from previous page

| Supplier                | Substance                                 | Batch       | Spectra |
|-------------------------|-------------------------------------------|-------------|---------|
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 15049001    | 12      |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 19144301    | 19      |
| Hedinger                | Lanette <sup>®</sup> ointment (conserved) | 17133901    | 1       |
| Henry Lamotte Oils GmbH | Lanette <sup>®</sup> ointment (conserved) | 18087001    | 1       |
| Jenne                   | Lanette <sup>®</sup> ointment (conserved) | 19010702    | 1       |
| L12                     | Lanette <sup>®</sup> ointment (conserved) | 18087001    | 1       |
| L30                     | Lanette <sup>®</sup> ointment (conserved) | 16184702    | 1       |
| L30                     | Lanette <sup>®</sup> ointment (conserved) | 17133801    | 1       |
| Laborchemie/Gehe        | Lanette <sup>®</sup> ointment (conserved) | 19144301    | 2       |
| Noweda                  | Lanette <sup>®</sup> ointment (conserved) | 20000703001 | 1       |
| Phoenix                 | Lanette <sup>®</sup> ointment (conserved) | 14089501    | 1       |
| Phoenix                 | Lanette <sup>®</sup> ointment (conserved) | 16089402    | 2       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 12313101    | 7       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 17311101    | 10      |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 12223701    | 1       |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 17243102    | 1       |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 17133901    | 1       |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 20000703001 | 1       |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 19266903    | 1       |
| Phönix                  | Lanette <sup>®</sup> ointment (conserved) | 20003379002 | 1       |
| PHÖNIX                  | Lanette <sup>®</sup> ointment (conserved) | 17311101    | 1       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 19267003    | 26      |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 14089801    | 1       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 16089401    | 1       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 160258001   | 1       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 17133901    | 1       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 19266903    | 1       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 20000702001 | 2       |
| Sanacorp                | Lanette <sup>®</sup> ointment (conserved) | 20000708001 | 1       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 13177501    | 11      |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 40/AKD2     | 1       |
| VDL;3,33EUR;22.10.14    | Lanette <sup>®</sup> ointment (conserved) | 14089801    | 2       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 13257301    | 12      |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 13393001    | 17      |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) |             | 1       |
| Caelo                   | Lanette <sup>®</sup> ointment (conserved) | 162580      | 1       |

- 240 348 spectra from 1121 *Apo-Ident* customers from a total of 46 863 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Lanette<sup>®</sup> ointment (conserved)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Lanette<sup>®</sup> ointment (conserved)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 597           | 0              | 63 342        |
| <b>Type B</b> | 0              | 722           | 1              | 90 768        |
| <b>Type C</b> | 0              | 895           | 120            | 240 348       |

The substance/substance group *Lanette<sup>®</sup> ointment (conserved)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.9950 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.8617 % (> 99.4467 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 88.1773 % (> 87.8818 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Lanette<sup>®</sup> ointment (conserved)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                           | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|--------------------------------------------|-------------------------------|---------------------------------------|
| Anionic hydrophilic cream SR (NRF p.27)    | 15.20                         | —                                     |
| Wool alcohol cream SR                      | 16.25                         | 16.88                                 |
| Psorisol base cream Audor <sup>®</sup>     | 16.83                         | —                                     |
| Anionic hydrophilic cream DAB              | 16.96                         | —                                     |
| Non-ionic hydrophil ointment               | 19.88                         | 15.76                                 |
| Base cream DAC                             | 20.96                         | 27.18                                 |
| Eucerin <sup>®</sup> cum Aqua              | 21.59                         | 30.61                                 |
| Hydrophilic cream, non-ionic SR (NRF p...  | 22.96                         | —                                     |
| Anionic hydrophilic cream without prese... | 22.99                         | —                                     |
| Base cream, hydrophobic DAC                | 25.23                         | —                                     |
| Wool alcohol cream DAB                     | 26.53                         | 27.67                                 |
| Hydrophilic cream, non-ionic without p...  | 26.95                         | —                                     |
| Skin care ointment W/L SR (without pre...  | 29.31                         | —                                     |
| Anionic hydrophilic cream with propyle...  | 29.73                         | —                                     |
| Transdermal base cream                     | 33.55                         | —                                     |
| Glycolic acid 70%                          | 35.71                         | —                                     |
| Skin care ointment W/L SR                  | 39.12                         | —                                     |
| Potash soap DAC                            | 54.48                         | —                                     |
| ⋮                                          | ⋮                             | ⋮                                     |
| 2-ethylhexyl laurate                       | >50                           | 233.50                                |
| Squalane                                   | >50                           | 249.38                                |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Lanette<sup>®</sup> ointment (conserved)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested

reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31166     | 31166               | 0.00                         | 36.62                           |
| 31225     | 31225               | 0.00                         | 25.78                           |
| 31454     | 31225               | 2.50                         | 23.98                           |
| 31913     | 31913               | 0.00                         | 33.28                           |
| 31914     | 31914               | 0.00                         | 28.59                           |
| 31915     | 31915               | 0.00                         | 30.67                           |
| 32093     | 32093               | 0.00                         | 26.74                           |
| 32500     | 32500               | 0.00                         | 25.10                           |
| 32501     | 32501               | 0.00                         | 26.30                           |
| 32502     | 32502               | 0.00                         | 22.71                           |
| 32503     | 32503               | 0.00                         | 23.81                           |
| 34540     | 34540               | 0.00                         | 20.56                           |
| 34541     | 34541               | 0.00                         | 35.94                           |
| 35220     | 35220               | 0.00                         | 25.78                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Lanolin DAB**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30013-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Lanolin DAB; Lanolinum DAB

### Special notes

When selecting the *Lanolin DAB* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Lanolin DAB               | 12     | 25     | 504    |

## Second-stage model

For differentiation of the substance/substance group *Lanolin DAB* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Lanolin DAB*:

| Supplier      | Substance   | Batch            | Sample ID | Spectra | Certificate        |
|---------------|-------------|------------------|-----------|---------|--------------------|
| Bombastus     | Lanolin DAB | 294969           | 31795     | 60      | 20150611           |
| Bombastus     | Lanolin DAB | 19001199         | 34518     | 40      | 20190301           |
| Caelo         | Lanolin DAB | 13062501         | 31003     | 40      | 20130226           |
| Caelo         | Lanolin DAB | 14032001         | 31439     | 40      | AR-15-FG-008283-01 |
| Caelo         | Lanolin DAB | 15255201         | 31746     | 60      | 20150727           |
| Caelo         | Lanolin DAB | 15405502         | 31798     | 60      | 20151130           |
| Caelo         | Lanolin DAB | 163026           | 32863     | 40      | 20161028*          |
| Caelo         | Lanolin DAB | 21000935         | 35373     | 40      | 20210421*          |
| Caelo         | Lanolin DAB | 21001590         | 35643     | 50      | 20210615*          |
| Fagron        | Lanolin DAB | 15G02-T11-024155 | 31794     | 60      | AR-16-FG-004053-01 |
| Fagron        | Lanolin DAB | 18L18-T08-062838 | 34597     | 40      | 20190227           |
| Henry Lamotte | Lanolin DAB | 8005213004       | 34686     | 40      | 20190306           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 570 spectra of 12 reference samples from the substance/substance group *Lanolin DAB*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 12 different batches.
- 63 369 spectra from a total of 1295 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples:

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 1030 spectra of 25 reference samples from the substance/substance group *Lanolin DAB*.
- Among them are spectra of independent samples from 25 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier      | Substance   | Batch    | Sample ID | Spectra |
|---------------|-------------|----------|-----------|---------|
| Caelo         | Lanolin DAB | 163022   | 32859     | 40      |
| Caelo         | Lanolin DAB | 163023   | 32860     | 40      |
| Caelo         | Lanolin DAB | 163024   | 32861     | 40      |
| Caelo         | Lanolin DAB | 163025   | 32862     | 40      |
| Caelo         | Lanolin DAB | 163444   | 33181     | 40      |
| Caelo         | Lanolin DAB | 170184   | 33182     | 40      |
| Caelo         | Lanolin DAB | 170187   | 33183     | 40      |
| Caelo         | Lanolin DAB | 171351   | 33370     | 40      |
| Caelo         | Lanolin DAB | 171354   | 33371     | 40      |
| Caelo         | Lanolin DAB | 172965   | 34015     | 40      |
| Caelo         | Lanolin DAB | 180443   | 34151     | 40      |
| Caelo         | Lanolin DAB | 182302   | 34270     | 40      |
| Caelo         | Lanolin DAB | 191766   | 34816     | 40      |
| Caelo         | Lanolin DAB | 192252   | 34817     | 40      |
| Caelo         | Lanolin DAB | 20000836 | 34853     | 40      |
| Caelo         | Lanolin DAB | 20003100 | 35155     | 40      |
| Caelo         | Lanolin DAB | 20004309 | 35370     | 40      |
| Caelo         | Lanolin DAB | 20004311 | 35371     | 40      |
| Caelo         | Lanolin DAB | 20004312 | 35372     | 40      |
| Caelo         | Lanolin DAB | 21000936 | 35374     | 40      |
| Caelo         | Lanolin DAB | 21001189 | 35375     | 40      |
| Caelo         | Lanolin DAB | 21002198 | 35644     | 50      |
| Caelo         | Lanolin DAB | 21002199 | 35645     | 50      |
| Caelo         | Lanolin DAB | 21002476 | 35646     | 50      |
| Henry Lamotte | Lanolin DAB | 5264900  | 30922     | 40      |

- 90 461 spectra from a total of 1991 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4710 spectra from 848 *Apo-Ident* customers from 526 batches from the substance/substance group *Lanolin DAB*.
- Among them are spectra of independent samples from 502 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier   | Substance   | Batch    | Spectra |
|------------|-------------|----------|---------|
| Caelo      | Lanolin DAB | 1974001  | 1       |
| 26.07.2018 | Lanolin DAB | 17000364 | 1       |
| AHD        | Lanolin DAB | 5517200  | 1       |
| AHD        | Lanolin DAB | 16189401 | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| AHD                        | Lanolin DAB      | 16302501         | 1              |
| AHD                        | Lanolin DAB      | 17222601         | 1              |
| AHD                        | Lanolin DAB      | 19071101         | 1              |
| AHD                        | Lanolin DAB      | 19267802         | 1              |
| AHD                        | Lanolin DAB      | 20004312001      | 1              |
| AHD , 05.09.13             | Lanolin DAB      | 274414           | 1              |
| AHD 14.03.17 Ek:6,91       | Lanolin DAB      | 6003682006       | 1              |
| AHD 27.05.20               | Lanolin DAB      | 19267802         | 1              |
| AHD henry lamotte 05.04... | Lanolin DAB      | 8002875002       | 2              |
| AHD Henry Lamotte 05.10... | Lanolin DAB      | 8005213004       | 2              |
| AHD, 08.11.13              | Lanolin DAB      | 280111           | 1              |
| AHDE/Cael030.12.16 EUR5,33 | Lanolin DAB      | 16302401         | 1              |
| Alliance                   | Lanolin DAB      | 13102802         | 1              |
| Alliance H.                | Lanolin DAB      | 15405501         | 1              |
| Alliance health 12.01.15   | Lanolin DAB      | 14A06-T05-0002   | 1              |
| Alliance Healthcare        | Lanolin DAB      | 13062401         | 1              |
| Alliance Healthcare        | Lanolin DAB      | 5375500          | 1              |
| Alliance Healthcare        | Lanolin DAB      | 5447700          | 3              |
| Alte Apotheke              | Lanolin DAB      | 16189602         | 1              |
| anzag                      | Lanolin DAB      | 15255301         | 1              |
| Anzag                      | Lanolin DAB      | 11315101         | 1              |
| Anzag                      | Lanolin DAB      | 5264900          | 1              |
| Anzag                      | Lanolin DAB      | 15405501         | 1              |
| Anzag                      | Lanolin DAB      | 16189501         | 1              |
| Anzag                      | Lanolin DAB      | 17A03-T02-040001 | 1              |
| Anzag                      | Lanolin DAB      | 17222401         | 1              |
| Anzag                      | Lanolin DAB      | 19J09-T09-072602 | 1              |
| Anzag                      | Lanolin DAB      | 19H12-T03-070772 | 1              |
| ANZAG 01.01.143            | Lanolin DAB      | 14a06-t01-009011 | 1              |
| Anzag 10.04.13             | Lanolin DAB      | 5264900          | 1              |
| Anzag/                     | Lanolin DAB      | 12193901         | 1              |
| Bombastus                  | Lanolin DAB      | 277970           | 4              |
| Anzag/Henry Lamotte        | Lanolin DAB      | 5264900          | 1              |
| api-ident                  | Lanolin DAB      | 17296501         | 1              |
| Bombasatus                 | Lanolin DAB      | 288635           | 1              |
| Bombastus                  | Lanolin DAB      | 16189501         | 1              |
| Bombastus                  | Lanolin DAB      | 264723           | 1              |
| Bombastus                  | Lanolin DAB      | 266981           | 1              |
| Bombastus                  | Lanolin DAB      | 270443           | 1              |
| Bombastus                  | Lanolin DAB      | 270439           | 1              |
| Bombastus                  | Lanolin DAB      | 277968           | 1              |
| Bombastus                  | Lanolin DAB      | 280111           | 3              |
| Bombastus                  | Lanolin DAB      | 277969           | 1              |
| Bombastus                  | Lanolin DAB      | 282979           | 2              |
| Bombastus                  | Lanolin DAB      | 285097           | 4              |
| Bombastus                  | Lanolin DAB      | 286690           | 1              |
| Bombastus                  | Lanolin DAB      | 286691           | 2              |
| Bombastus                  | Lanolin DAB      | 285096           | 2              |
| Bombastus                  | Lanolin DAB      | 288636           | 2              |
| Bombastus                  | Lanolin DAB      | 290885           | 4              |
| Bombastus                  | Lanolin DAB      | 292906           | 4              |
| Bombastus                  | Lanolin DAB      | 292905           | 1              |
| Bombastus                  | Lanolin DAB      | 297583           | 7              |
| Bombastus                  | Lanolin DAB      | 299082           | 5              |
| Bombastus                  | Lanolin DAB      | 300144           | 2              |
| Bombastus                  | Lanolin DAB      | 301169           | 2              |
| Bombastus                  | Lanolin DAB      | 163023           | 1              |
| Bombastus                  | Lanolin DAB      | 60080101         | 4              |
| Bombastus                  | Lanolin DAB      | 304540           | 2              |
| Bombastus                  | Lanolin DAB      | 305440           | 1              |

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| <b>Supplier</b>          | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|--------------------------|------------------|------------------|----------------|
| Bombastus                | Lanolin DAB      | 305441           | 3              |
| Bombastus                | Lanolin DAB      | 306635           | 2              |
| Bombastus                | Lanolin DAB      | 17000364         | 10             |
| Bombastus                | Lanolin DAB      | 17222601         | 1              |
| Bombastus                | Lanolin DAB      | 18005862         | 6              |
| Bombastus                | Lanolin DAB      | 19000702         | 1              |
| Bombastus                | Lanolin DAB      | 288637           | 5              |
| Bombastus                | Lanolin DAB      | 17001447         | 12             |
| Bombastus                | Lanolin DAB      | 200000047        | 1              |
| Bombastus                | Lanolin DAB      | 20000047         | 8              |
| Bombastus                | Lanolin DAB      | 294968           | 1              |
| Bombastus                | Lanolin DAB      | 13173601         | 1              |
| Bombastus                | Lanolin DAB      | 277967           | 2              |
| Bombastus                | Lanolin DAB      | 124967           | 1              |
| Bombastus                | Lanolin DAB      | 286688           | 1              |
| Bombastus                | Lanolin DAB      | 294967           | 2              |
| Bombastus                | Lanolin DAB      | 18003635         | 5              |
| Bombastus                | Lanolin DAB      | 306633           | 4              |
| Bombastus                | Lanolin DAB      | 17000363         | 1              |
| Bombastus                | Lanolin DAB      | 18003634         | 1              |
| Bombastus                | Lanolin DAB      | 302808           | 2              |
| Bombastus                | Lanolin DAB      | 306634           | 2              |
| Bombastus                | Lanolin DAB      | 17001446         | 2              |
| Bombastus                | Lanolin DAB      | 20004373         | 2              |
| Bombastus                | Lanolin DAB      | 309000           | 7              |
| Bombastus                | Lanolin DAB      | 274413           | 1              |
| Bombastus                | Lanolin DAB      | 274412           | 1              |
| Bombastus                | Lanolin DAB      | 9/14             | 1              |
| Bombastus                | Lanolin DAB      | 1700000363       | 1              |
| Bombastus                | Lanolin DAB      | 16302401         | 1              |
| Bombastus                | Lanolin DAB      | 264721           | 1              |
| Bombastus                | Lanolin DAB      | 305411           | 2              |
| Bombastus                | Lanolin DAB      | 17000425         | 1              |
| Bombastus                | Lanolin DAB      | 18001869         | 1              |
| Bombastus                | Lanolin DAB      | 18003633         | 1              |
| Bombastus                | Lanolin DAB      | 18005860         | 1              |
| Bombastus                | Lanolin DAB      | 301170           | 5              |
| Bombastus                | Lanolin DAB      | 17018401         | 1              |
| Bombastus                | Lanolin DAB      | 20001455         | 2              |
| Bombastus                | Lanolin DAB      | 302809           | 7              |
| Bombastus                | Lanolin DAB      | 14032101         | 1              |
| Bombastus                | Lanolin DAB      | 14166001         | 1              |
| Bombastus                | Lanolin DAB      | 18D11-T03-054713 | 1              |
| Bombastus                | Lanolin DAB      | 292904           | 1              |
| Bombastus                | Lanolin DAB      | 304541           | 7              |
| Bombastus                | Lanolin DAB      | 302807           | 1              |
| Bombastus                | Lanolin DAB      | 18001870         | 9              |
| Bombstus                 | Lanolin DAB      | 273293           | 1              |
| caedo                    | Lanolin DAB      | 17296501         | 1              |
| Cael Sanacorp 05.02.2016 | Lanolin DAB      | 15255202         | 1              |
| Caela/all                | Lanolin DAB      | 19J09-072602     | 1              |
| Caelo                    | Lanolin DAB      | 14333601         | 1              |
| Caelo                    | Lanolin DAB      | 15255601         | 9              |
| Caelo                    | Lanolin DAB      | 20000838002      | 13             |
| Caelo                    | Lanolin DAB      | 11281702         | 2              |
| Caelo                    | Lanolin DAB      | 11281701         | 2              |
| Caelo                    | Lanolin DAB      | 10358301         | 1              |
| Caelo                    | Lanolin DAB      | 11315101         | 3              |
| Caelo                    | Lanolin DAB      | 12037401         | 4              |
| Caelo                    | Lanolin DAB      | 12037101         | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Lanolin DAB      | 7071205          | 1              |
| Caelo           | Lanolin DAB      | 12065102         | 1              |
| Caelo           | Lanolin DAB      | 12065101         | 5              |
| Caelo           | Lanolin DAB      | 20240912-1       | 1              |
| Caelo           | Lanolin DAB      | 12260301         | 5              |
| Caelo           | Lanolin DAB      | 14011304         | 1              |
| Caelo           | Lanolin DAB      | 213Q-01765       | 1              |
| Caelo           | Lanolin DAB      | 12H01-T02        | 1              |
| Caelo           | Lanolin DAB      | 713I-01765       | 1              |
| Caelo           | Lanolin DAB      | 12037002         | 1              |
| Caelo           | Lanolin DAB      | 12308601         | 6              |
| Caelo           | Lanolin DAB      | 13062401         | 13             |
| Caelo           | Lanolin DAB      | 13062701         | 6              |
| Caelo           | Lanolin DAB      | 13227701         | 18             |
| Caelo           | Lanolin DAB      | 14101306         | 1              |
| Caelo           | Lanolin DAB      | 13E07-T20-003399 | 1              |
| Caelo           | Lanolin DAB      | 1310802          | 1              |
| Caelo           | Lanolin DAB      | 9112013B         | 1              |
| Caelo           | Lanolin DAB      | 23326501         | 1              |
| Caelo           | Lanolin DAB      | 31121301         | 1              |
| Caelo           | Lanolin DAB      | 9011406          | 1              |
| Caelo           | Lanolin DAB      | 1096249          | 3              |
| Caelo           | Lanolin DAB      | 133326701        | 1              |
| Caelo           | Lanolin DAB      | 11011404         | 1              |
| Caelo           | Lanolin DAB      | 13326601         | 8              |
| Caelo           | Lanolin DAB      | 13345902         | 21             |
| Caelo           | Lanolin DAB      | 14032101         | 24             |
| Caelo           | Lanolin DAB      | 14032201         | 5              |
| Caelo           | Lanolin DAB      | 1042014A         | 1              |
| Caelo           | Lanolin DAB      | 9041401          | 1              |
| Caelo           | Lanolin DAB      | 13345901         | 1              |
| Caelo           | Lanolin DAB      | 26052014B        | 1              |
| Caelo           | Lanolin DAB      | 26061401         | 1              |
| Caelo           | Lanolin DAB      | 8072014A         | 1              |
| Caelo           | Lanolin DAB      | 14165901         | 34             |
| Caelo           | Lanolin DAB      | 8082014B         | 1              |
| Caelo           | Lanolin DAB      | 18092014B        | 1              |
| Caelo           | Lanolin DAB      | 14032302         | 2              |
| Caelo           | Lanolin DAB      | 14166001         | 16             |
| Caelo           | Lanolin DAB      | 16011501         | 1              |
| Caelo           | Lanolin DAB      | 23012015B        | 1              |
| Caelo           | Lanolin DAB      | 1433602          | 4              |
| Caelo           | Lanolin DAB      | 14334001         | 33             |
| Caelo           | Lanolin DAB      | 15024201         | 30             |
| Caelo           | Lanolin DAB      | 15024102         | 30             |
| Caelo           | Lanolin DAB      | 14K11-T01-016976 | 2              |
| Caelo           | Lanolin DAB      | 8071503          | 1              |
| Caelo           | Lanolin DAB      | 15c1903020815    | 1              |
| Caelo           | Lanolin DAB      | 17082015D        | 1              |
| Caelo           | Lanolin DAB      | 15193401         | 27             |
| Caelo           | Lanolin DAB      | 15255501         | 2              |
| Caelo           | Lanolin DAB      | 15255501         | 1              |
| Caelo           | Lanolin DAB      | 15255301         | 8              |
| Caelo           | Lanolin DAB      | 15405505         | 1              |
| Caelo           | Lanolin DAB      | 15405801         | 7              |
| Caelo           | Lanolin DAB      | 16054901         | 71             |
| Caelo           | Lanolin DAB      | 16054801         | 48             |
| Caelo           | Lanolin DAB      | 123456           | 1              |
| Caelo           | Lanolin DAB      | 1540502          | 1              |
| Caelo           | Lanolin DAB      | 15405702         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Lanolin DAB      | 16549                | 1              |
| Caelo           | Lanolin DAB      | 16189501             | 48             |
| Caelo           | Lanolin DAB      | 290316L              | 1              |
| Caelo           | Lanolin DAB      | 16189602             | 2              |
| Caelo           | Lanolin DAB      | 16189701             | 5              |
| Caelo           | Lanolin DAB      | 16302202             | 3              |
| Caelo           | Lanolin DAB      | 1602301              | 1              |
| Caelo           | Lanolin DAB      | 16302402             | 1              |
| Caelo           | Lanolin DAB      | 16189501/160314L     | 1              |
| Caelo           | Lanolin DAB      | 17018701             | 37             |
| Caelo           | Lanolin DAB      | 1634401              | 2              |
| Caelo           | Lanolin DAB      | 15344401             | 1              |
| Caelo           | Lanolin DAB      | 16302302             | 5              |
| Caelo           | Lanolin DAB      | 8061713              | 1              |
| Caelo           | Lanolin DAB      | 170184001            | 1              |
| Caelo           | Lanolin DAB      | 17134201             | 2              |
| Caelo           | Lanolin DAB      | 1735201              | 2              |
| Caelo           | Lanolin DAB      | 163444401            | 1              |
| Caelo           | Lanolin DAB      | 17222401             | 49             |
| Caelo           | Lanolin DAB      | 23121703             | 1              |
| Caelo           | Lanolin DAB      | 135302               | 1              |
| Caelo           | Lanolin DAB      | 17222701             | 11             |
| Caelo           | Lanolin DAB      | 172226015502         | 1              |
| Caelo           | Lanolin DAB      | 17H24-T04-047697     | 1              |
| Caelo           | Lanolin DAB      | 23051815             | 1              |
| Caelo           | Lanolin DAB      | 1796602              | 1              |
| Caelo           | Lanolin DAB      | 18044001             | 10             |
| Caelo           | Lanolin DAB      | 30081806             | 1              |
| Caelo           | Lanolin DAB      | 18107201             | 3              |
| Caelo           | Lanolin DAB      | 18107401             | 9              |
| Caelo           | Lanolin DAB      | 18107203             | 1              |
| Caelo           | Lanolin DAB      | 18242701             | 1              |
| Caelo           | Lanolin DAB      | 188044301            | 1              |
| Caelo           | Lanolin DAB      | 18D11-T04-054716     | 1              |
| Caelo           | Lanolin DAB      | 18242801             | 12             |
| Caelo           | Lanolin DAB      | 18107020             | 1              |
| Caelo           | Lanolin DAB      | 18320302             | 1              |
| Caelo           | Lanolin DAB      | 18124-T07-060227     | 1              |
| Caelo           | Lanolin DAB      | 18L18-To-062839      | 1              |
| Caelo           | Lanolin DAB      | 1900701              | 1              |
| Caelo           | Lanolin DAB      | 18L18-T08-062838     | 2              |
| Caelo           | Lanolin DAB      | 19000602             | 1              |
| Caelo           | Lanolin DAB      | 190000702            | 1              |
| Caelo           | Lanolin DAB      | 19071301             | 4              |
| Caelo           | Lanolin DAB      | 19071101             | 45             |
| Caelo           | Lanolin DAB      | 3431                 | 1              |
| Caelo           | Lanolin DAB      | 19176801             | 2              |
| Caelo           | Lanolin DAB      | 19201802             | 1              |
| Caelo           | Lanolin DAB      | 19225203             | 4              |
| Caelo           | Lanolin DAB      | 19225401             | 5              |
| Caelo           | Lanolin DAB      | 20000838001          | 5              |
| Caelo           | Lanolin DAB      | 19225303             | 1              |
| Caelo           | Lanolin DAB      | 2000084001           | 1              |
| Caelo           | Lanolin DAB      | 20003318001          | 3              |
| Caelo           | Lanolin DAB      | 20004311001          | 4              |
| Caelo           | Lanolin DAB      | 20004312001          | 8              |
| Caelo           | Lanolin DAB      | CH-B17222601         | 1              |
| Caelo           | Lanolin DAB      | 16302501             | 3              |
| Caelo           | Lanolin DAB      | 18044301-L20181115Ma | 1              |
| Caelo           | Lanolin DAB      | 13326502             | 6              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Lanolin DAB      | 15045502         | 1              |
| Caelo           | Lanolin DAB      | 17H24T01047688   | 1              |
| Caelo           | Lanolin DAB      | 16064901         | 1              |
| Caelo           | Lanolin DAB      | 4616M-01765      | 1              |
| Caelo           | Lanolin DAB      | 13102802         | 25             |
| Caelo           | Lanolin DAB      | 1807202          | 1              |
| Caelo           | Lanolin DAB      | 44(18107202)     | 1              |
| Caelo           | Lanolin DAB      | 1306501          | 1              |
| Caelo           | Lanolin DAB      | 1796501          | 1              |
| Caelo           | Lanolin DAB      | 17018503         | 6              |
| Caelo           | Lanolin DAB      | 4817E-01765      | 1              |
| Caelo           | Lanolin DAB      | 1726602          | 1              |
| Caelo           | Lanolin DAB      | 8072003          | 1              |
| Caelo           | Lanolin DAB      | 16189402         | 3              |
| Caelo           | Lanolin DAB      | 3285             | 1              |
| Caelo           | Lanolin DAB      | 3316             | 1              |
| Caelo           | Lanolin DAB      | 20003318002      | 14             |
| Caelo           | Lanolin DAB      | 12308801         | 1              |
| Caelo           | Lanolin DAB      | 80816            | 1              |
| Caelo           | Lanolin DAB      | 17A03-T03-040004 | 1              |
| Caelo           | Lanolin DAB      | 19176601         | 64             |
| Caelo           | Lanolin DAB      | 17K27-T07-050540 | 2              |
| Caelo           | Lanolin DAB      | 14333901         | 10             |
| Caelo           | Lanolin DAB      | 172966002        | 1              |
| Caelo           | Lanolin DAB      | 8004134012       | 1              |
| Caelo           | Lanolin DAB      | 19000701         | 13             |
| Caelo           | Lanolin DAB      | 19225301         | 30             |
| Caelo           | Lanolin DAB      | 20001974001      | 19             |
| Caelo           | Lanolin DAB      | 1735101          | 1              |
| Caelo           | Lanolin DAB      | 190000701        | 1              |
| Caelo           | Lanolin DAB      | 1917601          | 1              |
| Caelo           | Lanolin DAB      | 1717135101       | 1              |
| Caelo           | Lanolin DAB      | 12037301         | 2              |
| Caelo           | Lanolin DAB      | 13227601         | 25             |
| Caelo           | Lanolin DAB      | 2913U-01765      | 1              |
| Caelo           | Lanolin DAB      | 1515Q-01765      | 1              |
| Caelo           | Lanolin DAB      | 19267802         | 59             |
| Caelo           | Lanolin DAB      | 5651400          | 1              |
| Caelo           | Lanolin DAB      | 15405601         | 41             |
| Caelo           | Lanolin DAB      | 16344401         | 53             |
| Caelo           | Lanolin DAB      | 17135102         | 4              |
| Caelo           | Lanolin DAB      | 17A17296601      | 1              |
| Caelo           | Lanolin DAB      | 200008390001     | 1              |
| Caelo           | Lanolin DAB      | 12193901         | 13             |
| Caelo           | Lanolin DAB      | 13227801         | 6              |
| Caelo           | Lanolin DAB      | 160614           | 1              |
| Caelo           | Lanolin DAB      | 14032401         | 8              |
| Caelo           | Lanolin DAB      | 14A06-T01-009011 | 1              |
| Caelo           | Lanolin DAB      | 14333701         | 5              |
| Caelo           | Lanolin DAB      | 15024003         | 1              |
| Caelo           | Lanolin DAB      | 15024301         | 5              |
| Caelo           | Lanolin DAB      | 15255202         | 30             |
| Caelo           | Lanolin DAB      | 16054702         | 2              |
| Caelo           | Lanolin DAB      | 16302601         | 4              |
| Caelo           | Lanolin DAB      | 1701801          | 1              |
| Caelo           | Lanolin DAB      | 17296601         | 37             |
| Caelo           | Lanolin DAB      | 18044301         | 157            |
| Caelo           | Lanolin DAB      | 18001870         | 1              |
| Caelo           | Lanolin DAB      | 18230302         | 36             |
| Caelo           | Lanolin DAB      | 18K05-T04-061769 | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Lanolin DAB      | 19225302          | 21             |
| Caelo           | Lanolin DAB      | 2000439003        | 1              |
| Caelo           | Lanolin DAB      | 12308802          | 21             |
| Caelo           | Lanolin DAB      | 4413M01765        | 1              |
| Caelo           | Lanolin DAB      | 17K27-T07-0550540 | 1              |
| Caelo           | Lanolin DAB      | 20000839001       | 34             |
| Caelo           | Lanolin DAB      | 17135201          | 60             |
| Caelo           | Lanolin DAB      | 42(17222601)      | 1              |
| Caelo           | Lanolin DAB      | 43(17296602)      | 1              |
| Caelo           | Lanolin DAB      | 181072020         | 1              |
| Caelo           | Lanolin DAB      | 17018401          | 123            |
| Caelo           | Lanolin DAB      | 5113A-01765       | 1              |
| Caelo           | Lanolin DAB      | 15024101          | 2              |
| Caelo           | Lanolin DAB      | 15405501          | 26             |
| Caelo           | Lanolin DAB      | 16302301          | 74             |
| Caelo           | Lanolin DAB      | 17A03-T05-040010  | 1              |
| Caelo           | Lanolin DAB      | 170614181         | 1              |
| Caelo           | Lanolin DAB      | 17135101          | 74             |
| Caelo           | Lanolin DAB      | 170105186         | 1              |
| Caelo           | Lanolin DAB      | 18912181          | 1              |
| Caelo           | Lanolin DAB      | 17018502          | 3              |
| Caelo           | Lanolin DAB      | 18044101          | 62             |
| Caelo           | Lanolin DAB      | 17296701          | 3              |
| Caelo           | Lanolin DAB      | 18325501          | 42             |
| Caelo           | Lanolin DAB      | 19000703          | 1              |
| Caelo           | Lanolin DAB      | 18230303          | 3              |
| Caelo           | Lanolin DAB      | 19C28-T09-065459  | 1              |
| Caelo           | Lanolin DAB      | 200000838002      | 1              |
| Caelo           | Lanolin DAB      | 20000837001       | 4              |
| Caelo           | Lanolin DAB      | 20002426001       | 10             |
| Caelo           | Lanolin DAB      | 20004309003       | 1              |
| Caelo           | Lanolin DAB      | 17135401          | 5              |
| Fagron          | Lanolin DAB      | 18044101          | 1              |
| Fagron          | Lanolin DAB      | 19267701          | 1              |
| Caelo           | Lanolin DAB      | 12193701          | 23             |
| Caelo           | Lanolin DAB      | 12260302          | 3              |
| Caelo           | Lanolin DAB      | 16G01-T07-034861  | 1              |
| Caelo           | Lanolin DAB      | 17135302          | 5              |
| Caelo           | Lanolin DAB      | 17A03-T02-040001  | 1              |
| Caelo           | Lanolin DAB      | 17296501          | 51             |
| Caelo           | Lanolin DAB      | 17222691          | 1              |
| Caelo           | Lanolin DAB      | 19071201          | 78             |
| Caelo           | Lanolin DAB      | 19176701          | 37             |
| Caelo           | Lanolin DAB      | 14333602          | 40             |
| Caelo           | Lanolin DAB      | 17296602          | 87             |
| Caelo           | Lanolin DAB      | 12H01-T01         | 1              |
| Caelo           | Lanolin DAB      | 13062602          | 3              |
| Caelo           | Lanolin DAB      | 13326701          | 29             |
| Caelo           | Lanolin DAB      | 16054602          | 4              |
| Caelo           | Lanolin DAB      | 16189401          | 55             |
| Caelo           | Lanolin DAB      | 16302401          | 61             |
| Caelo           | Lanolin DAB      | 17222601          | 130            |
| Caelo           | Lanolin DAB      | 171351011         | 1              |
| Caelo           | Lanolin DAB      | 17296702          | 8              |
| Caelo           | Lanolin DAB      | 17222501          | 1              |
| Caelo           | Lanolin DAB      | 19000702          | 67             |
| Caelo           | Lanolin DAB      | 19267701          | 39             |
| Caelo           | Lanolin DAB      | 20000840001       | 11             |
| Caelo           | Lanolin DAB      | 2000083901        | 1              |
| Caelo           | Lanolin DAB      | 141666001         | 1              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|----------------------|------------------|---------------------|----------------|
| Caelo                | Lanolin DAB      | 170184              | 1              |
| Caelo                | Lanolin DAB      | 172960025649        | 1              |
| Caelo                | Lanolin DAB      | 180443015739        | 1              |
| Caelo                | Lanolin DAB      | 13326701-3455311103 | 1              |
| Caelo                | Lanolin DAB      | 14032301            | 11             |
| Caelo                | Lanolin DAB      | 14165701            | 4              |
| Caelo                | Lanolin DAB      | 1433001             | 1              |
| Caelo                | Lanolin DAB      | 15193501            | 30             |
| Caelo                | Lanolin DAB      | 1729651             | 1              |
| Caelo                | Lanolin DAB      | 18107202            | 71             |
| Caelo                | Lanolin DAB      | 18230201            | 53             |
| Caelo                | Lanolin DAB      | 2000083002          | 1              |
| Caelo                | Lanolin DAB      | 13062801            | 2              |
| Caelo                | Lanolin DAB      | 13227602            | 5              |
| Caelo                | Lanolin DAB      | 52111Q-01765        | 1              |
| Caelo                | Lanolin DAB      | 3613A-01765         | 1              |
| Caelo                | Lanolin DAB      | 18I24-T08-060230    | 1              |
| Caeol                | Lanolin DAB      | 7022014A            | 1              |
| Caeol/ Noweda        | Lanolin DAB      | 18230302            | 2              |
| Caeol/Phönix         | Lanolin DAB      | 19267802            | 2              |
| Caeolo/ Noweda       | Lanolin DAB      | 14333701            | 1              |
| Caeolo/Gehe          | Lanolin DAB      | 17135101            | 1              |
| Caeolo/Gehe          | Lanolin DAB      | 17296501            | 1              |
| Caeolo/Gehe          | Lanolin DAB      | 18044101            | 1              |
| Caeolo/Noweda        | Lanolin DAB      | 15193501            | 1              |
| Caeolo/Noweda        | Lanolin DAB      | 16302401            | 1              |
| caesar & Loretz      | Lanolin DAB      | 16054901            | 1              |
| Caesar & Loretz      | Lanolin DAB      | 16189401            | 1              |
| Caesar & Loretz      | Lanolin DAB      | 16302401            | 3              |
| Caesar & Loretz      | Lanolin DAB      | 16302301            | 1              |
| Caesar & Loretz      | Lanolin DAB      | 17296602            | 1              |
| Caesar & Loretz      | Lanolin DAB      | 18044301            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 12193701            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 13227601            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 14032001            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 14165601            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 15024102            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 16189401            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 16189501            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 16344401            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 17018701            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 17135101            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18044301            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18044101            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18230201            | 5              |
| Caesar & Loretz GmbH | Lanolin DAB      | 19000701            | 5              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18230302            | 9              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18107202            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18107401            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 19000702            | 35             |
| Caesar & Loretz GmbH | Lanolin DAB      | 19000602            | 4              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18325501            | 10             |
| Caesar & Loretz GmbH | Lanolin DAB      | 18242801            | 2              |
| Caesar & Loretz GmbH | Lanolin DAB      | 19071201            | 27             |
| Caesar & Loretz GmbH | Lanolin DAB      | 19071101            | 26             |
| Caesar & Loretz GmbH | Lanolin DAB      | 18L18-T08-062838    | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 18044001            | 1              |
| Caesar & Loretz GmbH | Lanolin DAB      | 19176602            | 3              |
| Caesar & Loretz GmbH | Lanolin DAB      | 19176601            | 23             |
| Caesar & Loretz GmbH | Lanolin DAB      | 19176701            | 10             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH       | Lanolin DAB      | 19176801         | 6              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19035701         | 3              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19225302         | 6              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19225301         | 6              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19071301         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19201802         | 3              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19267802         | 18             |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19267701         | 13             |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19225401         | 2              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19206301         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19225303         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 1926802          | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19267801         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 20000839001      | 22             |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19225203         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 19J09-T09-072602 | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 20001974001      | 6              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 20003318002      | 10             |
| Caesar & Loretz GmbH       | Lanolin DAB      | 20002426001      | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 200043112001     | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 20004312001      | 1              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 19225301         | 1              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 16189401         | 1              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 19267802         | 1              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 20000839001      | 2              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 18230302         | 2              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 19267802         | 1              |
| Caesar & Loretz GmbH / ... | Lanolin DAB      | 20000839001      | 1              |
| Caesar & Loretz GmbH Hi... | Lanolin DAB      | 16189401         | 1              |
| Caesar & Loretz GmbH, 4... | Lanolin DAB      | 12037101         | 1              |
| Caesar & Loretz GmbH, 4... | Lanolin DAB      | 12260301         | 1              |
| Caesar & Loretz GmbH, 4... | Lanolin DAB      | 13062401         | 1              |
| Caesar & Loretz GmbH/ N... | Lanolin DAB      | 19176601         | 1              |
| Caesar & Loretz GmbH/ N... | Lanolin DAB      | 19/09-T09-072602 | 1              |
| Caesar & Loretz GmbH/AEP   | Lanolin DAB      | 19071201         | 1              |
| Caesar & Loretz GmbH/AHD   | Lanolin DAB      | 19000702         | 1              |
| Caesar & Loretz GmbH/AHD   | Lanolin DAB      | 19225301         | 1              |
| Caesar & Loretz GmbH/An... | Lanolin DAB      | 19000702         | 1              |
| Caesar & Loretz GmbH/Gehe  | Lanolin DAB      | 19176601         | 1              |
| Caesar & Loretz GmbH/Gehe  | Lanolin DAB      | 19225301         | 1              |
| Caesar & Loretz GmbH/Gehe  | Lanolin DAB      | 20003318002      | 1              |
| Caesar & Loretz GmbH/Gehe  | Lanolin DAB      | 20004312001      | 1              |
| Caesar & Loretz GmbH/GEHE  | Lanolin DAB      | 18230302         | 1              |
| Caesar & Loretz GmbH/GEHE  | Lanolin DAB      | 19000702         | 2              |
| Caesar & Loretz GmbH/GEHE  | Lanolin DAB      | 19071101         | 1              |
| Caesar & Loretz GmbH/GEHE  | Lanolin DAB      | 19267701         | 1              |
| Caesar & Loretz GmbH/Ge... | Lanolin DAB      | 19071101         | 1              |
| Caesar & Loretz GmbH/Ge... | Lanolin DAB      | 19225302         | 2              |
| Caesar & Loretz GmbH/Ge... | Lanolin DAB      | 20002426001      | 1              |
| Caesar & Loretz GmbH/Go... | Lanolin DAB      | 19071101         | 1              |
| Caesar & Loretz GmbH/Gö... | Lanolin DAB      | 19000701         | 1              |
| Caesar & Loretz GmbH/Je... | Lanolin DAB      | 19267802         | 2              |
| Caesar & Loretz GmbH/Je... | Lanolin DAB      | 20000839001      | 1              |
| Caesar & Loretz GmbH/MI... | Lanolin DAB      | 19071201         | 1              |
| Caesar & Loretz GmbH/No... | Lanolin DAB      | 19176601         | 1              |
| Caesar & Loretz GmbH/No... | Lanolin DAB      | 18325501         | 1              |
| Caesar & Loretz GmbH/No... | Lanolin DAB      | 20001974001      | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 19267802         | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 20000839001      | 1              |
| Caesar & Loretz GmbH/ph... | Lanolin DAB      | 19176601         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH/ph... | Lanolin DAB      | 19267802         | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 18230302         | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 19000702         | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 19071201         | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 20000839001      | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 20001974001      | 1              |
| Caesar & Loretz GmbH/Ph... | Lanolin DAB      | 20003318001      | 2              |
| Caesar & Loretz GmbH/sa... | Lanolin DAB      | 19225301         | 1              |
| Caesar & Loretz GmbH/Sa... | Lanolin DAB      | 19267701         | 1              |
| Caesar & Loretz GmbHSan... | Lanolin DAB      | 20000839001      | 1              |
| Caesar & Loretz Hilden     | Lanolin DAB      | 19000701         | 1              |
| Caesar & Loretz Hilden     | Lanolin DAB      | 19176701         | 2              |
| Caesar & Loretz Hilden     | Lanolin DAB      | 20000840001      | 1              |
| Caesar & Loretz Hilden     | Lanolin DAB      | 20002426001      | 1              |
| Caesar & Loretz/ Noweda    | Lanolin DAB      | 17222601         | 1              |
| Caesar & Loretz/AHD        | Lanolin DAB      | 19071201         | 1              |
| Caesar & Loretz/Gehe       | Lanolin DAB      | 18325501         | 7              |
| Caesar & Loretz/Gehe       | Lanolin DAB      | 19225302         | 16             |
| Caesar & Loretz/Noweda     | Lanolin DAB      | 17018401         | 1              |
| Caesar & Loretz GmbH       | Lanolin DAB      | 12193701         | 1              |
| Caesar Loretz/Fiebig       | Lanolin DAB      | 17222601         | 1              |
| Caesar und Loretz GmbH     | Lanolin DAB      | 18044301         | 1              |
| Caesar&Lorenz / Gehe       | Lanolin DAB      | 19176601         | 2              |
| Caesar&lorenz,Phoenix      | Lanolin DAB      | 14333602         | 1              |
| caesar&lorenz,Phönix       | Lanolin DAB      | 15405502         | 1              |
| Caesar/Lorenz              | Lanolin DAB      | 14032001         | 1              |
| Caleo                      | Lanolin DAB      | 16302401         | 1              |
| Caleo/Gehe                 | Lanolin DAB      | 18044101         | 1              |
| Castor/Phönix              | Lanolin DAB      | 15255301         | 1              |
| Cealeo/Phönix              | Lanolin DAB      | 17222601         | 1              |
| cealo                      | Lanolin DAB      | 16054701         | 2              |
| Cealo                      | Lanolin DAB      | 16054701         | 1              |
| Cealo                      | Lanolin DAB      | 17222401         | 2              |
| Cealo/ AHD                 | Lanolin DAB      | 15405501         | 1              |
| Cealo/ AHD                 | Lanolin DAB      | 19267701         | 1              |
| Cealo/ Anzag               | Lanolin DAB      | 17135101         | 1              |
| Cealo/AHD                  | Lanolin DAB      | 16054801         | 2              |
| Cealo/AHD                  | Lanolin DAB      | 1634401          | 1              |
| Cealo/AHD                  | Lanolin DAB      | 18044301         | 1              |
| Cealo/Gehe                 | Lanolin DAB      | 17296602         | 1              |
| Cealo/Gehe                 | Lanolin DAB      | 19176701         | 1              |
| Cealo/Phoenix              | Lanolin DAB      | 17222601         | 1              |
| DAB 2008                   | Lanolin DAB      | 11281701         | 1              |
| Delta                      | Lanolin DAB      | 17222601         | 1              |
| Dr. Wolff/phönix           | Lanolin DAB      | 17222401         | 1              |
| E Plus                     | Lanolin DAB      | 17296602         | 1              |
| Ebert & Jacobi             | Lanolin DAB      | 15405502         | 1              |
| Ebert & Jacobi             | Lanolin DAB      | 18044301         | 1              |
| Ebert & Jacobi             | Lanolin DAB      | 19176601         | 1              |
| Eigene Herstellung         | Lanolin DAB      | 10052016         | 1              |
| EuRho                      | Lanolin DAB      | 17018401         | 2              |
| Euro OTC                   | Lanolin DAB      | 260416v1         | 1              |
| Euro OTC                   | Lanolin DAB      | 2781             | 1              |
| Euro OTC                   | Lanolin DAB      | 16189401         | 1              |
| Euro OTC                   | Lanolin DAB      | 11281901         | 2              |
| Euro OTC                   | Lanolin DAB      | 15405501         | 2              |
| Euro OTC                   | Lanolin DAB      | 17222401         | 2              |
| Euro OTC                   | Lanolin DAB      | 17K27-T07-050540 | 1              |
| Euro OTC                   | Lanolin DAB      | 4617A-01765      | 1              |
| Euro OTC                   | Lanolin DAB      | 306635           | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagon/Noweda    | Lanolin DAB      | T09-0726002       | 1              |
| Fagon/Noweda    | Lanolin DAB      | T12-0778005       | 1              |
| Fagon           | Lanolin DAB      | 13804-T22-0002    | 1              |
| Fagon           | Lanolin DAB      | 13E0760-0002      | 1              |
| Fagon           | Lanolin DAB      | 17H24t02047691    | 1              |
| Fagon           | Lanolin DAB      | 17k27-T07-050540  | 1              |
| Fagon           | Lanolin DAB      | 11k18-t01         | 1              |
| Fagon           | Lanolin DAB      | 12C06-T02         | 1              |
| Fagon           | Lanolin DAB      | 12E22-T04         | 4              |
| Fagon           | Lanolin DAB      | 12E22-T07         | 1              |
| Fagon           | Lanolin DAB      | 12H01-T04         | 2              |
| Fagon           | Lanolin DAB      | 13B04-T20-001084  | 3              |
| Fagon           | Lanolin DAB      | 13B04-T20-0010B4  | 1              |
| Fagon           | Lanolin DAB      | 13B04-T20-00108   | 1              |
| Fagon           | Lanolin DAB      | 13E07-Trg-oo3395  | 1              |
| Fagon           | Lanolin DAB      | 13H13T11-006183   | 1              |
| Fagon           | Lanolin DAB      | 13H13-T12-006187  | 3              |
| Fagon           | Lanolin DAB      | 13H13T11006184    | 1              |
| Fagon           | Lanolin DAB      | 13H13-T08-006173  | 1              |
| Fagon           | Lanolin DAB      | 13E07-T20-003401  | 1              |
| Fagon           | Lanolin DAB      | 14A06T02          | 3              |
| Fagon           | Lanolin DAB      | 14A06-T06-009028  | 1              |
| Fagon           | Lanolin DAB      | 14A06T01009011    | 1              |
| Fagon           | Lanolin DAB      | 14A06-T02-009014  | 2              |
| Fagon           | Lanolin DAB      | 13H13-T08_006173  | 1              |
| Fagon           | Lanolin DAB      | 14A06-T04-009021  | 1              |
| Fagon           | Lanolin DAB      | 14E06-T10         | 1              |
| Fagon           | Lanolin DAB      | 14E06-T11-012200  | 2              |
| Fagon           | Lanolin DAB      | 14E06T07          | 1              |
| Fagon           | Lanolin DAB      | 14E06-T09-012194  | 6              |
| Fagon           | Lanolin DAB      | 14E06-T10-012197  | 1              |
| Fagon           | Lanolin DAB      | 14K11-T03-016983  | 2              |
| Fagon           | Lanolin DAB      | 15C19T03          | 1              |
| Fagon           | Lanolin DAB      | 14E06-TT08-012190 | 1              |
| Fagon           | Lanolin DAB      | 15C19-T04-020818  | 1              |
| Fagon           | Lanolin DAB      | 15405601          | 1              |
| Fagon           | Lanolin DAB      | 15G02-T10-024152  | 2              |
| Fagon           | Lanolin DAB      | 15C19-T05-020821  | 1              |
| Fagon           | Lanolin DAB      | 16G01-T08-034867  | 5              |
| Fagon           | Lanolin DAB      | 15c19-t03-020815  | 1              |
| Fagon           | Lanolin DAB      | 16G01-T03-034847  | 7              |
| Fagon           | Lanolin DAB      | 16G01-T06         | 1              |
| Fagon           | Lanolin DAB      | 16G01-T05         | 1              |
| Fagon           | Lanolin DAB      | 17A03-T03-040004  | 2              |
| Fagon           | Lanolin DAB      | 17A03-T02-040010  | 1              |
| Fagon           | Lanolin DAB      | 17H24-T03-047694  | 2              |
| Fagon           | Lanolin DAB      | 17H24-T02-047691  | 6              |
| Fagon           | Lanolin DAB      | 17H24-T01-047688  | 5              |
| Fagon           | Lanolin DAB      | 17H24T04047697    | 1              |
| Fagon           | Lanolin DAB      | 17k27-t07-050540  | 2              |
| Fagon           | Lanolin DAB      | 18124-T07-060227  | 1              |
| Fagon           | Lanolin DAB      | 1824-T08-060230   | 1              |
| Fagon           | Lanolin DAB      | 18L18-T08-062839  | 7              |
| Fagon           | Lanolin DAB      | 18I24-T08-060230  | 1              |
| Fagon           | Lanolin DAB      | 19L18-T08-062839  | 1              |
| Fagon           | Lanolin DAB      | T09-0726003       | 1              |
| Fagon           | Lanolin DAB      | 19Jo9-To9-o726o2  | 1              |
| Fagon           | Lanolin DAB      | T12-0778005       | 2              |
| Fagon           | Lanolin DAB      | 19J09-T09-072603  | 2              |
| Fagon           | Lanolin DAB      | 20C19T12077805    | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Lanolin DAB      | 20E12-T07-080152  | 2              |
| Fagron          | Lanolin DAB      | 15C19-T01-0001    | 1              |
| Fagron          | Lanolin DAB      | 14A06-T01-009011  | 4              |
| Fagron          | Lanolin DAB      | 18D11-T04-054716  | 2              |
| Fagron          | Lanolin DAB      | 16G01-T04-034850  | 6              |
| Fagron          | Lanolin DAB      | 17018401          | 2              |
| Fagron          | Lanolin DAB      | 19H12-T03-070772  | 8              |
| Fagron          | Lanolin DAB      | 13E07-T21-003404  | 1              |
| Fagron          | Lanolin DAB      | 12H01-T01         | 1              |
| Fagron          | Lanolin DAB      | 15C19-T01-020809  | 1              |
| Fagron          | Lanolin DAB      | 12E22-T06         | 1              |
| Fagron          | Lanolin DAB      | 19C28-T09-065460  | 4              |
| Fagron          | Lanolin DAB      | 15255201          | 1              |
| Fagron          | Lanolin DAB      | 13H13-12          | 1              |
| Fagron          | Lanolin DAB      | 13B04-T22-001078  | 2              |
| Fagron          | Lanolin DAB      | 13B04-T21-001085  | 4              |
| Fagron          | Lanolin DAB      | 18D11-T03-054713  | 2              |
| Fagron          | Lanolin DAB      | 17A03-T02-040001  | 5              |
| Fagron          | Lanolin DAB      | 17H24-T04-047697  | 1              |
| Fagron          | Lanolin DAB      | 17-A03-T04-040007 | 1              |
| Fagron          | Lanolin DAB      | 17K27-T07-050540  | 38             |
| Fagron          | Lanolin DAB      | 20E12-T07-080151  | 1              |
| Fagron          | Lanolin DAB      | 19C28-T09-065459  | 10             |
| Fagron          | Lanolin DAB      | 15C19-T02-020812  | 8              |
| Fagron          | Lanolin DAB      | 17A03-T05-040010  | 3              |
| Fagron          | Lanolin DAB      | 19J09-T09072602   | 1              |
| Fagron          | Lanolin DAB      | 17A03-040004      | 1              |
| Fagron          | Lanolin DAB      | 17H24-To4-047697  | 1              |
| Fagron          | Lanolin DAB      | 18L18-T08         | 2              |
| Fagron          | Lanolin DAB      | 19C28-T09-065459  | 2              |
| Fagron          | Lanolin DAB      | 19H12-T03-070773  | 6              |
| Fagron          | Lanolin DAB      | 19J09-T-09-072602 | 1              |
| Fagron          | Lanolin DAB      | 20J14-T13-083295  | 1              |
| Fagron          | Lanolin DAB      | 13E07-T22-003407  | 1              |
| Fagron          | Lanolin DAB      | ngH12-T03-070773  | 1              |
| Fagron          | Lanolin DAB      | 19J09-T09         | 1              |
| Fagron          | Lanolin DAB      | 19C28-T09         | 1              |
| Fagron          | Lanolin DAB      | 20C19-T12-077805  | 6              |
| Fagron          | Lanolin DAB      | 15C19-T03-020815  | 6              |
| Fagron          | Lanolin DAB      | 15c19-t05-020821  | 1              |
| Fagron          | Lanolin DAB      | 15c19-t02-020812  | 1              |
| Fagron          | Lanolin DAB      | 15C-9-T02020812   | 1              |
| Fagron          | Lanolin DAB      | 16G01-T07-034861  | 6              |
| Fagron          | Lanolin DAB      | 17k27-t07-0550540 | 1              |
| Fagron          | Lanolin DAB      | 18K05-T05-061772  | 7              |
| Fagron          | Lanolin DAB      | 18118-T08-062838  | 2              |
| Fagron          | Lanolin DAB      | 19J09-T09-072602  | 9              |
| Fagron          | Lanolin DAB      | 13B12-T01-001087  | 2              |
| Fagron          | Lanolin DAB      | 16G01-T06-034857  | 2              |
| Fagron          | Lanolin DAB      | 17H24-T01         | 1              |
| Fagron          | Lanolin DAB      | 17H24-To1-047688  | 1              |
| Fagron          | Lanolin DAB      | 11K27-T07-050540  | 1              |
| Fagron          | Lanolin DAB      | 14166001          | 1              |
| Fagron          | Lanolin DAB      | 14E06-T07         | 1              |
| Fagron          | Lanolin DAB      | 14K11-T03-016984  | 2              |
| Fagron          | Lanolin DAB      | 16302401          | 2              |
| Fagron          | Lanolin DAB      | 18K05-T04-061769  | 5              |
| Fagron          | Lanolin DAB      | 19C28T09-065460   | 4              |
| Fagron          | Lanolin DAB      | 17135101          | 1              |
| Fagron          | Lanolin DAB      | 17A03-T04-040007  | 3              |

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| <b>Supplier</b>  | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|------------------|------------------|------------------|----------------|
| Fagron           | Lanolin DAB      | 17K17-T07-050540 | 1              |
| Fagron           | Lanolin DAB      | 1018E-01765      | 1              |
| Fagron           | Lanolin DAB      | 18K05-T04061769  | 1              |
| Fagron           | Lanolin DAB      | 17H24-T05-047700 | 1              |
| Fargo            | Lanolin DAB      | 19C28-Tog-065459 | 1              |
| Fargon           | Lanolin DAB      | 14k11-t01-016976 | 1              |
| Fargon/Noweda    | Lanolin DAB      | 17K27-T07-050540 | 1              |
| Fargon/Noweda    | Lanolin DAB      | 18K05-T05-061772 | 1              |
| Fargon/Phönix    | Lanolin DAB      | 19H-12T03-070773 | 2              |
| Fargon/Phönix    | Lanolin DAB      | T03-0707702      | 1              |
| Fargron/Noweda   | Lanolin DAB      | 15C19-T01-020809 | 1              |
| Fiebig           | Lanolin DAB      | 15405702         | 2              |
| Fiebig           | Lanolin DAB      | 16189701         | 1              |
| Fiebig           | Lanolin DAB      | 16344401         | 1              |
| Fiebig           | Lanolin DAB      | 17135201         | 1              |
| Fiebig           | Lanolin DAB      | 16302601         | 1              |
| Fiebig           | Lanolin DAB      | 17222401         | 1              |
| Fiebig           | Lanolin DAB      | 17222701         | 1              |
| Fiebig           | Lanolin DAB      | 17135401         | 1              |
| Fiebig           | Lanolin DAB      | 17296702         | 1              |
| Fiebig           | Lanolin DAB      | 18044301         | 4              |
| Fiebig           | Lanolin DAB      | 18044001         | 2              |
| Fiebig           | Lanolin DAB      | 18044101         | 1              |
| Fiebig           | Lanolin DAB      | 18107401         | 1              |
| Fiebig           | Lanolin DAB      | 181072202        | 1              |
| Fiebig           | Lanolin DAB      | 18107302         | 1              |
| Fiebig           | Lanolin DAB      | 18325501         | 4              |
| Fiebig           | Lanolin DAB      | 19176601         | 4              |
| Fragon / Phoenix | Lanolin DAB      | 19C28-Tog-065460 | 1              |
| Fragon / PhönixF | Lanolin DAB      | 18L18-T08-062838 | 1              |
| Gehe             | Lanolin DAB      | 12193701         | 1              |
| Gehe             | Lanolin DAB      | 13062501         | 1              |
| Gehe             | Lanolin DAB      | 13B04-T20-001084 | 1              |
| Gehe             | Lanolin DAB      | 13326601         | 2              |
| Gehe             | Lanolin DAB      | 14032001         | 1              |
| Gehe             | Lanolin DAB      | 14165601         | 1              |
| Gehe             | Lanolin DAB      | 14E06-T07-012186 | 1              |
| Gehe             | Lanolin DAB      | 15024102         | 1              |
| Gehe             | Lanolin DAB      | 15255201         | 2              |
| Gehe             | Lanolin DAB      | 15255202         | 1              |
| Gehe             | Lanolin DAB      | 16054701         | 1              |
| Gehe             | Lanolin DAB      | 16054801         | 1              |
| Gehe             | Lanolin DAB      | 16054602         | 1              |
| Gehe             | Lanolin DAB      | 16054702         | 1              |
| Gehe             | Lanolin DAB      | 16302301         | 1              |
| Gehe             | Lanolin DAB      | 301170           | 1              |
| Gehe             | Lanolin DAB      | 16344401         | 1              |
| Gehe             | Lanolin DAB      | 17018701         | 1              |
| Gehe             | Lanolin DAB      | 17018401         | 2              |
| Gehe             | Lanolin DAB      | 17135201         | 1              |
| Gehe             | Lanolin DAB      | 17000364         | 1              |
| Gehe             | Lanolin DAB      | 19000702         | 1              |
| Gehe             | Lanolin DAB      | 18230201         | 1              |
| Gehe             | Lanolin DAB      | 18325501         | 1              |
| Gehe             | Lanolin DAB      | 18L18To8062838   | 1              |
| Gehe             | Lanolin DAB      | 19071101         | 2              |
| Gehe             | Lanolin DAB      | 19267802         | 1              |
| Gehe             | Lanolin DAB      | 20000839001      | 1              |
| Gehe             | Lanolin DAB      | 17043202         | 1              |
| GEHE             | Lanolin DAB      | 14K11-T03-016984 | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| GEHE                       | Lanolin DAB      | 16189501         | 2              |
| GEHE                       | Lanolin DAB      | 17018701         | 1              |
| GEHE                       | Lanolin DAB      | 17018401         | 1              |
| GEHE                       | Lanolin DAB      | 309000           | 1              |
| GEHE                       | Lanolin DAB      | 17135101         | 1              |
| GEHE                       | Lanolin DAB      | 18044301         | 3              |
| GEHE                       | Lanolin DAB      | 18107202         | 2              |
| Fagron                     | Lanolin DAB      | 13E07-T18-003392 | 3              |
| GEHE 26.11.2014            | Lanolin DAB      | 14A06-T04-009021 | 1              |
| Gehe 29.07.14              | Lanolin DAB      | 14032001         | 1              |
| Gehe am 21.2.14            | Lanolin DAB      | 13326501         | 2              |
| Gehe amax                  | Lanolin DAB      | 18107202         | 1              |
| Gehe amax                  | Lanolin DAB      | 18230302         | 1              |
| Gehe amax                  | Lanolin DAB      | 19267802         | 1              |
| Caelo                      | Lanolin DAB      | 18107302         | 12             |
| Bombastus                  | Lanolin DAB      | 19002572         | 8              |
| Bombastus                  | Lanolin DAB      | 19005480         | 8              |
| Caelo                      | Lanolin DAB      | 18003635         | 1              |
| Caelo                      | Lanolin DAB      | 12194201         | 4              |
| Caelo                      | Lanolin DAB      | 13326501         | 27             |
| Caelo                      | Lanolin DAB      | 1230317          | 1              |
| Euro OTC                   | Lanolin DAB      | 16054901         | 2              |
| Fagron                     | Lanolin DAB      | 15E04-T01-022046 | 2              |
| H.Lamotte                  | Lanolin DAB      | 8002875002       | 1              |
| H.Lamotte                  | Lanolin DAB      | 8004134012       | 2              |
| harn                       | Lanolin DAB      | 17222601         | 1              |
| Hedinger                   | Lanolin DAB      | 16302301         | 2              |
| Hedinger                   | Lanolin DAB      | 19071201         | 1              |
| Henry                      | Lanolin DAB      | 5316400          | 1              |
| Henry Lamotte              | Lanolin DAB      | 5375500          | 2              |
| Henry Lamotte              | Lanolin DAB      | 5860800          | 1              |
| Henry Lamotte              | Lanolin DAB      | 16302401         | 1              |
| Henry Lamotte              | Lanolin DAB      | 8002875002       | 1              |
| Henry Lamotte /AHD         | Lanolin DAB      | 8004134012       | 2              |
| Henry Lamotte Oils         | Lanolin DAB      | 5264900          | 1              |
| Henry Lamotte Oils         | Lanolin DAB      | 5316400          | 1              |
| Henry Lamotte Oils / AHD   | Lanolin DAB      | 5375500          | 3              |
| Henry Lamotte Oils GmbH    | Lanolin DAB      | 6000746001       | 1              |
| Henry Lamotte Oils GmbH    | Lanolin DAB      | 6003682006       | 1              |
| Henry Lamotte Oils GmbH    | Lanolin DAB      | 8002875002       | 3              |
| Henry Lamotte Oils GmbH... | Lanolin DAB      | 5264900          | 1              |
| Henry Lamotte Oils GmbH... | Lanolin DAB      | 5375500          | 2              |
| Henry Lamotte Oils GmbH... | Lanolin DAB      | 6000746001       | 2              |
| Henry Lamotte Oils GmbH... | Lanolin DAB      | 5860800          | 1              |
| Henry Lamotte/ Noweda      | Lanolin DAB      | 5517200          | 1              |
| Henry Lamotte/ Noweda      | Lanolin DAB      | 5651400          | 2              |
| Henry Lamotte/ Noweda      | Lanolin DAB      | 6000746001       | 1              |
| Henry Lamotte/ Noweda      | Lanolin DAB      | 60000746001      | 1              |
| Henry Lamotte/Noweda       | Lanolin DAB      | 5860800          | 1              |
| Henry Lamotte/Noweda       | Lanolin DAB      | 6003682006       | 3              |
| Henry Lamotte/Noweda       | Lanolin DAB      | 8002875002       | 1              |
| Henry/AHD                  | Lanolin DAB      | 5651400          | 1              |
| Henry/Fiebig               | Lanolin DAB      | 5860800          | 3              |
| HenryLamotte/Alliance      | Lanolin DAB      | 5517200          | 1              |
| Hubertus Apotheke          | Lanolin DAB      | 16302401         | 1              |
| ichthyol                   | Lanolin DAB      | 14334001         | 1              |
| Ichthyol/Noveda            | Lanolin DAB      | 17135101         | 1              |
| Ichthyol-Gesellschaft      | Lanolin DAB      | 16054701         | 1              |
| Jenne                      | Lanolin DAB      | 17296501         | 1              |
| Jenne                      | Lanolin DAB      | 18044101         | 1              |

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| <b>Supplier</b>       | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------------|------------------|------------------|----------------|
| Jenne                 | Lanolin DAB      | 18044301         | 1              |
| Jenne                 | Lanolin DAB      | 18230201         | 1              |
| Kehr                  | Lanolin DAB      | 17135201         | 1              |
| Kehr                  | Lanolin DAB      | 17296501         | 1              |
| Kehr                  | Lanolin DAB      | 18003635         | 1              |
| Klosterring           | Lanolin DAB      | 16302202         | 1              |
| Krieger               | Lanolin DAB      | 133266012x       | 1              |
| Krieger               | Lanolin DAB      | 17222601         | 2              |
| Krieger               | Lanolin DAB      | 19176701         | 1              |
| L12                   | Lanolin DAB      | 17135101         | 1              |
| L12                   | Lanolin DAB      | 17222601         | 1              |
| L12                   | Lanolin DAB      | 18230302         | 1              |
| Lamotte               | Lanolin DAB      | 5651400          | 1              |
| Lamotte               | Lanolin DAB      | 5860800          | 1              |
| Lamotte               | Lanolin DAB      | 600746001        | 1              |
| Lamotte               | Lanolin DAB      | 6000746001       | 2              |
| Lamotte               | Lanolin DAB      | 5860900          | 1              |
| Lamotte / Anzag       | Lanolin DAB      | 8002875002       | 1              |
| Lamotte / AHC         | Lanolin DAB      | 8002875003       | 1              |
| Lamotte / AHC         | Lanolin DAB      | 8004134013       | 1              |
| Lamotte / AHD EK 6,75 | Lanolin DAB      | 5860800          | 1              |
| Lamotte GmbH          | Lanolin DAB      | 6000746001       | 1              |
| Lamotte/ Sanacorp     | Lanolin DAB      | 15405601         | 1              |
| Lamotte/Alliance      | Lanolin DAB      | 5517200          | 1              |
| Lamotte/Anzag         | Lanolin DAB      | 5447700          | 1              |
| Lamotte/Anzag         | Lanolin DAB      | 8004134012       | 1              |
| Lamotte/Noweda        | Lanolin DAB      | 5152000          | 1              |
| Lamotte/Noweda        | Lanolin DAB      | 5264900          | 1              |
| Lamotte/Noweda        | Lanolin DAB      | 5375500          | 1              |
| Lamotte/Noweda        | Lanolin DAB      | 8005213004       | 1              |
| Maros Arznei          | Lanolin DAB      | 18044101         | 1              |
| Midas                 | Lanolin DAB      | 17222601         | 1              |
| Midas                 | Lanolin DAB      | 18044101         | 1              |
| Midas                 | Lanolin DAB      | 18044301         | 1              |
| Nachprüfung           | Lanolin DAB      | 123456           | 1              |
| Noweda                | Lanolin DAB      | 12065101         | 1              |
| Noweda                | Lanolin DAB      | 13102802         | 1              |
| Noweda                | Lanolin DAB      | 7102013A         | 1              |
| Noweda                | Lanolin DAB      | 13227701         | 1              |
| Noweda                | Lanolin DAB      | 13345902         | 1              |
| Noweda                | Lanolin DAB      | 14032301         | 1              |
| Noweda                | Lanolin DAB      | 14333901         | 1              |
| Noweda                | Lanolin DAB      | 14165701         | 1              |
| Noweda                | Lanolin DAB      | 15255501         | 2              |
| Noweda                | Lanolin DAB      | 15C19-T02-020812 | 1              |
| Noweda                | Lanolin DAB      | 15255601         | 2              |
| Noweda                | Lanolin DAB      | 15405501         | 1              |
| Noweda                | Lanolin DAB      | 16189401         | 1              |
| Noweda                | Lanolin DAB      | 17018401         | 1              |
| Noweda                | Lanolin DAB      | 17135101         | 1              |
| Noweda                | Lanolin DAB      | 17A03-T02-040001 | 1              |
| Noweda                | Lanolin DAB      | 17222601         | 1              |
| Noweda                | Lanolin DAB      | 17296501         | 2              |
| Noweda                | Lanolin DAB      | 18044301         | 2              |
| Noweda                | Lanolin DAB      | 18107302         | 1              |
| Noweda                | Lanolin DAB      | 18230201         | 1              |
| Noweda                | Lanolin DAB      | 19071201         | 2              |
| Noweda                | Lanolin DAB      | 19071101         | 3              |
| Noweda                | Lanolin DAB      | 19176601         | 3              |
| Noweda                | Lanolin DAB      | 19225301         | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Noweda                     | Lanolin DAB      | 19267802         | 1              |
| Noweda                     | Lanolin DAB      | 19J09-T09-072603 | 1              |
| Noweda                     | Lanolin DAB      | 20000838002      | 1              |
| Noweda                     | Lanolin DAB      | 19J09-T09-072602 | 2              |
| Noweda                     | Lanolin DAB      | 20C19-T12-077805 | 2              |
| Noweda                     | Lanolin DAB      | 20001974001      | 1              |
| Noweda 5.6.2019            | Lanolin DAB      | 19000702         | 1              |
| Caelo                      | Lanolin DAB      | 18/24-T07-060227 | 1              |
| Bombastus                  | Lanolin DAB      | 276824           | 1              |
| Bombastus                  | Lanolin DAB      | 274414           | 1              |
| Caelo                      | Lanolin DAB      | 13H13-To8-006173 | 1              |
| Fagron                     | Lanolin DAB      | 14E06-T07-012186 | 5              |
| Fagron                     | Lanolin DAB      | 14A06-T03-009017 | 3              |
| Fagron                     | Lanolin DAB      | 14K11-T01-016976 | 5              |
| Fagron                     | Lanolin DAB      | 16G01-T05-034853 | 7              |
| Phoenix                    | Lanolin DAB      | 16054901         | 2              |
| Phoenix                    | Lanolin DAB      | 16189401         | 1              |
| Phoenix                    | Lanolin DAB      | 16302301         | 1              |
| Phoenix                    | Lanolin DAB      | 17018701         | 1              |
| Phoenix                    | Lanolin DAB      | 17018503         | 1              |
| Phoenix                    | Lanolin DAB      | 3111             | 1              |
| Phoenix                    | Lanolin DAB      | 3230             | 1              |
| Phoenix                    | Lanolin DAB      | 3234             | 1              |
| Phoenix                    | Lanolin DAB      | 1701870118044101 | 1              |
| Phoenix                    | Lanolin DAB      | 18107202         | 1              |
| Phoenix                    | Lanolin DAB      | 18242801         | 1              |
| Phoenix                    | Lanolin DAB      | 17222601         | 1              |
| Phoenix                    | Lanolin DAB      | 19071201         | 1              |
| Phoenix 05.07.2019 4,65EUR | Lanolin DAB      | 18L18-T08-062838 | 1              |
| Phoenix 10.04.2014         | Lanolin DAB      | 14032001         | 2              |
| Phoenix 16.06.2017 4,33EUR | Lanolin DAB      | 17018401         | 1              |
| Phoenix WE:04.11.17 100... | Lanolin DAB      | 17135101         | 1              |
| phönix                     | Lanolin DAB      | 34/AKD2          | 1              |
| phönix                     | Lanolin DAB      | 16189401         | 2              |
| phönix                     | Lanolin DAB      | 17135101         | 1              |
| Phönix                     | Lanolin DAB      | 13062401         | 1              |
| Phönix                     | Lanolin DAB      | 11113902         | 1              |
| Phönix                     | Lanolin DAB      | 5316400          | 1              |
| Phönix                     | Lanolin DAB      | 13326701         | 1              |
| Phönix                     | Lanolin DAB      | 14165601         | 1              |
| Phönix                     | Lanolin DAB      | 15024102         | 1              |
| Phönix                     | Lanolin DAB      | 16054901         | 1              |
| Phönix                     | Lanolin DAB      | 16344401         | 1              |
| Phönix                     | Lanolin DAB      | 17222601         | 1              |
| Phönix                     | Lanolin DAB      | 306635           | 2              |
| Phönix                     | Lanolin DAB      | 17000363         | 1              |
| Phönix                     | Lanolin DAB      | 17000364         | 1              |
| Phönix                     | Lanolin DAB      | 3171             | 1              |
| Phönix                     | Lanolin DAB      | 17K27-T07-050540 | 2              |
| Phönix                     | Lanolin DAB      | 18230201         | 1              |
| Phönix                     | Lanolin DAB      | 18230302         | 1              |
| Phönix                     | Lanolin DAB      | 18325501         | 2              |
| Phönix                     | Lanolin DAB      | 19071101         | 3              |
| Phönix                     | Lanolin DAB      | 19176701         | 2              |
| Phönix                     | Lanolin DAB      | 19267701         | 1              |
| Phönix                     | Lanolin DAB      | 200002426001     | 1              |
| PHÖNIX                     | Lanolin DAB      | 17222601         | 1              |
| PHÖNIX                     | Lanolin DAB      | 17296602         | 2              |
| Phönix 16.10.2019          | Lanolin DAB      | 19176601         | 1              |
| Phönix Gotha               | Lanolin DAB      | 12193901         | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|---------------------------|------------------|------------------|----------------|
| Phönix Gotha              | Lanolin DAB      | 12308802         | 1              |
| Phönix Gotha              | Lanolin DAB      | 13062401         | 2              |
| Phönix Gotha              | Lanolin DAB      | 13227701         | 2              |
| Phönix Gotha              | Lanolin DAB      | 14032101         | 1              |
| Phönix Gotha              | Lanolin DAB      | 14165901         | 2              |
| Phönix Gotha              | Lanolin DAB      | 14334001         | 1              |
| Phönix Gotha              | Lanolin DAB      | 15024201         | 2              |
| Phönix Gotha              | Lanolin DAB      | 15193401         | 1              |
| Phönix Gotha              | Lanolin DAB      | 18001870         | 1              |
| Phönix Gotha              | Lanolin DAB      | 19176701         | 1              |
| Caelo                     | Lanolin DAB      | 12193702         | 2              |
| Caelo                     | Lanolin DAB      | 14165601         | 39             |
| Caelo                     | Lanolin DAB      | 15C19-T01-020809 | 2              |
| Caelo                     | Lanolin DAB      | 1713510          | 1              |
| Rabenapotheke             | Lanolin DAB      | 288634           | 2              |
| Raben-Apotheke Mildenau   | Lanolin DAB      | 282976           | 1              |
| Reichelt                  | Lanolin DAB      | 17001447         | 1              |
| sanacorp                  | Lanolin DAB      | 14032001         | 1              |
| sanacorp                  | Lanolin DAB      | 14165901         | 1              |
| Sanacorp                  | Lanolin DAB      | 12193701         | 2              |
| Sanacorp                  | Lanolin DAB      | 12260301         | 1              |
| Sanacorp                  | Lanolin DAB      | 12308801         | 1              |
| Sanacorp                  | Lanolin DAB      | 12308802         | 2              |
| Sanacorp                  | Lanolin DAB      | 13062401         | 2              |
| Sanacorp                  | Lanolin DAB      | 13062501         | 1              |
| Sanacorp                  | Lanolin DAB      | 13227601         | 2              |
| Sanacorp                  | Lanolin DAB      | 34/AKD1          | 1              |
| Sanacorp                  | Lanolin DAB      | 14165901         | 1              |
| Sanacorp                  | Lanolin DAB      | 14032301         | 1              |
| Sanacorp                  | Lanolin DAB      | 14333602         | 2              |
| Sanacorp                  | Lanolin DAB      | 14334001         | 1              |
| Sanacorp                  | Lanolin DAB      | 15193401         | 1              |
| Sanacorp                  | Lanolin DAB      | 15255301         | 1              |
| Sanacorp                  | Lanolin DAB      | 16054801         | 1              |
| Sanacorp                  | Lanolin DAB      | 17078401         | 1              |
| Sanacorp                  | Lanolin DAB      | 305411           | 2              |
| Sanacorp                  | Lanolin DAB      | 306634           | 1              |
| Sanacorp                  | Lanolin DAB      | 17135101         | 2              |
| Sanacorp                  | Lanolin DAB      | 17018701         | 1              |
| Sanacorp                  | Lanolin DAB      | 17222601         | 3              |
| Sanacorp                  | Lanolin DAB      | 17222401         | 1              |
| Sanacorp                  | Lanolin DAB      | 17135302         | 1              |
| Sanacorp                  | Lanolin DAB      | 306635           | 1              |
| Sanacorp                  | Lanolin DAB      | 17000364         | 3              |
| Sanacorp                  | Lanolin DAB      | 17001447         | 4              |
| Sanacorp                  | Lanolin DAB      | 18044101         | 1              |
| Sanacorp                  | Lanolin DAB      | 18230201         | 1              |
| Sanacorp                  | Lanolin DAB      | 18003635         | 2              |
| Sanacorp                  | Lanolin DAB      | 19000701         | 1              |
| Sanacorp                  | Lanolin DAB      | 19000702         | 2              |
| Sanacorp                  | Lanolin DAB      | 18325501         | 3              |
| Sanacorp                  | Lanolin DAB      | 19071101         | 1              |
| Sanacorp                  | Lanolin DAB      | 19176601         | 3              |
| Sanacorp                  | Lanolin DAB      | 19225302         | 1              |
| Sanacorp                  | Lanolin DAB      | 19267802         | 3              |
| Sanacorp                  | Lanolin DAB      | 19267701         | 2              |
| Sanacorp                  | Lanolin DAB      | 19225301         | 1              |
| SANACORP                  | Lanolin DAB      | 19000702         | 2              |
| Sanacorp W.E: 31.03.20... | Lanolin DAB      | 17222601         | 1              |
| Sanacorp 31.12.14 EK 3,76 | Lanolin DAB      | 14333602         | 2              |

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| Supplier                   | Substance   | Batch            | Spectra |
|----------------------------|-------------|------------------|---------|
| Sanacorp henry lamotte ... | Lanolin DAB | 8004134012       | 2       |
| Sanacorp, 25.2.17, 4,30EUR | Lanolin DAB | 16302301         | 1       |
| Sanacorp,04.04.17, 4,30EUR | Lanolin DAB | 17018401         | 1       |
| Caelo                      | Lanolin DAB | 11315102         | 2       |
| Caelo                      | Lanolin DAB | 20000836002      | 1       |
| Sanacorp/ Henry Lamotte... | Lanolin DAB | 5651400          | 1       |
| Caelo                      | Lanolin DAB | 11282001         | 2       |
| Caelo                      | Lanolin DAB | 16054701         | 16      |
| Euro OTC                   | Lanolin DAB | 19000702         | 1       |
| SanacorpWE:12.12.2016 ...  | Lanolin DAB | 16189401         | 1       |
| SanacorpWE:27.01.2017 ...  | Lanolin DAB | 16302301         | 1       |
| Spangro_06.11.2018         | Lanolin DAB | 18044301         | 1       |
| Th. Geyer                  | Lanolin DAB | 17018701         | 2       |
| UNISAN                     | Lanolin DAB | 5651400          | 5       |
| VDL                        | Lanolin DAB | 12037301         | 1       |
| VDL                        | Lanolin DAB | 12065101/32      | 1       |
| WE:06.04.2016 Phönix       | Lanolin DAB | 16054901         | 3       |
| WE:18.03.2016 Sanacorp     | Lanolin DAB | 15405502         | 1       |
|                            | Lanolin DAB | 309000           | 1       |
| AHD 14.5.14, Preis 16,69   | Lanolin DAB |                  | 1       |
| Caelo                      | Lanolin DAB | 15255201         | 32      |
| Bombastus                  | Lanolin DAB | 19001199         | 7       |
| Caelo                      | Lanolin DAB | 13062501         | 11      |
| Caelo                      | Lanolin DAB | 14032001         | 25      |
| Caelo                      | Lanolin DAB | 15405502         | 37      |
| Caelo                      | Lanolin DAB |                  | 5       |
|                            | Lanolin DAB | 13H13-T10-006179 | 1       |
| Fagron                     | Lanolin DAB | 15G02-T11-024155 | 2       |
| Fagron                     | Lanolin DAB | 18L18-T08-062838 | 20      |
| Fagron                     | Lanolin DAB |                  | 1       |
| phönix                     | Lanolin DAB |                  | 1       |

- 236 653 spectra from 1121 *Apo-Ident* customers from a total of 46 491 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Lanolin DAB* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Lanolin DAB* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 560           | 10             | 63 369        |
| Type B | 0              | 1030          | 0              | 90 421        |
| Type C | 0              | 4544          | 166            | 236 653       |

The substance/substance group *Lanolin DAB* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 98.2456 % (> 97.7193 %)  |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 99.4175 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 96.4756 % (> 96.4119 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Lanolin DAB* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                        | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-----------------------------------------|-------------------------------|---------------------------------------|
| Cooling cream DAB                       | 18.90                         | —                                     |
| Cooling ointment DAB 6                  | 34.92                         | —                                     |
| Basis Cordes <sup>®</sup> RK            | 41.65                         | —                                     |
| Clotrimazole 10% Cordes <sup>®</sup> RK | 59.92                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Lanolin DAB* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31003            | 32863                      | 10.36                               | 25.31                                  |
| 31439            | 31439                      | 0.00                                | 36.94                                  |
| 31746            | 31794                      | 3.64                                | 26.51                                  |
| 31794            | 31794                      | 0.00                                | 26.09                                  |
| 31795            | 31794                      | 2.04                                | 26.93                                  |
| 31798            | 31794                      | 4.10                                | 27.69                                  |
| 32863            | 32863                      | 0.00                                | 27.57                                  |
| 34518            | 31794                      | 9.08                                | 22.53                                  |
| 34597            | 31794                      | 2.75                                | 22.50                                  |
| 34686            | 31794                      | 4.23                                | 24.87                                  |
| 35373            | 35373                      | 0.00                                | 21.72                                  |
| 35643            | 35643                      | 0.00                                | 24.77                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Lavender oil / Clary sage oil</b>                             |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30861-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Lavender oil / Clary sage oil; Clary sage oil; Lavandulae aetheroleum; Lavender oil; Oleum salviae sclarea

### Special notes

When selecting the *Lavender oil / Clary sage oil* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group     | Type A | Type B | Type C |
|-------------------------------|--------|--------|--------|
| Lavender oil / Clary sage oil | 15     | 13     | 466    |



## Second-stage model

For differentiation of the substance/substance group *Lavender oil* / *Clary sage oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Lavender oil* / *Clary sage oil*:

| Supplier | Substance      | Batch            | Sample ID | Spectra | Certificate        |
|----------|----------------|------------------|-----------|---------|--------------------|
| Caelo    | Clary sage oil | 13334802         | 31413     | 40      | 1509218            |
| Caelo    | Clary sage oil | 1431102          | 31668     | 60      | 20141031           |
| Caelo    | Lavender oil   | 12201206         | 30861     | 40      | 20120721           |
| Caelo    | Lavender oil   | 12201213         | 31237     | 30      | 20120721           |
| Caelo    | Lavender oil   | 12334514         | 31238     | 30      | 20121120           |
| Caelo    | Lavender oil   | 13252605         | 31416     | 40      | 20130802           |
| Caelo    | Lavender oil   | 13252207         | 31422     | 60      | 20130802           |
| Euro OTC | Lavender oil   | 1312008-01       | 31528     | 60      | AR-15-FG-000438-01 |
| Euro OTC | Lavender oil   | 1507031          | 31721     | 60      | 0000010673         |
| Euro OTC | Lavender oil   | 1510040          | 31800     | 60      | 20151119*          |
| Euro OTC | Lavender oil   | 1608026          | 32710     | 40      | 20160902*          |
| Euro OTC | Lavender oil   | 2008011          | 35120     | 40      | 20200929*          |
| Euro OTC | Lavender oil   | 2009022          | 35125     | 40      | 20201007*          |
| Fagron   | Lavender oil   | 13D24-N01        | 31223     | 40      | AR-15-FG-009308-01 |
| Fagron   | Lavender oil   | 15I03-B01-314158 | 32996     | 40      | 20150916           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 680 spectra of 15 reference samples from the substance/substance group *Lavender oil* / *Clary sage oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 15 different batches.
- 63 259 spectra from a total of 1292 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

*Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 520 spectra of 13 reference samples from the substance/substance group *Lavender oil / Clary sage oil*.
- Among them are spectra of independent samples from 13 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Clary sage oil | 16269902 | 33281     | 40      |
| Caelo    | Clary sage oil | 171087   | 33911     | 40      |
| Caelo    | Lavender oil   | 162922   | 32684     | 40      |
| Caelo    | Lavender oil   | 191847   | 34612     | 40      |
| Caelo    | Lavender oil   | 192713   | 34724     | 40      |
| Euro OTC | Lavender oil   | 1601053  | 31997     | 40      |
| Euro OTC | Lavender oil   | 1606004  | 32458     | 40      |
| Euro OTC | Lavender oil   | 1610029  | 32834     | 40      |
| Euro OTC | Lavender oil   | 1701005  | 32986     | 40      |
| Euro OTC | Lavender oil   | 1706003  | 33597     | 40      |
| Euro OTC | Lavender oil   | 1710038  | 33846     | 40      |
| Euro OTC | Lavender oil   | 1808034  | 34213     | 40      |
| Euro OTC | Lavender oil   | 2004016  | 35061     | 40      |

- 90 971 spectra from a total of 2003 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1664 spectra from 486 *Apo-Ident* customers from 479 batches from the substance/substance group *Lavender oil / Clary sage oil*.
- Among them are spectra of independent samples from 462 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                 | Substance      | Batch       | Spectra |
|--------------------------|----------------|-------------|---------|
| Caelo                    | Clary sage oil | 16269903    | 1       |
| Primavera/Phoenix        | Clary sage oil | 416L25      | 1       |
| Taoasis                  | Clary sage oil | 1700-125289 | 1       |
| ACM                      | Lavender oil   | 4683Pos2    | 1       |
| AHC 22.08.13 EK5,83 25ml | Lavender oil   | 12334516    | 1       |
| AHD                      | Lavender oil   | 15363302    | 1       |
| AHD                      | Lavender oil   | 16292214    | 1       |
| AHD 06.02.17 E.k:6,40    | Lavender oil   | 16023017    | 1       |
| AHD 15.10.14 EK 5,76     | Lavender oil   | 13252220    | 1       |
| AHD, 25.11.13            | Lavender oil   | 13G11-N04   | 1       |
| Bombastus                | Lavender oil   | 311261      | 4       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Anzag 10.04.13 ek: 5.83EUR | Lavender oil     | 12334510     | 1              |
| Anzag 10.04.13 ek: 9,57EUR | Lavender oil     | 273725       | 1              |
| Anzag 15.11.2012           | Lavender oil     | 270560       | 1              |
| Bombastus                  | Lavender oil     | 272797       | 4              |
| Beiersdorf/Geibo           | Lavender oil     | 16292214     | 1              |
| Bergland                   | Lavender oil     | K700033      | 1              |
| Bergland Pharma / Anzag    | Lavender oil     | K051367      | 1              |
| Bombastus                  | Lavender oil     | 18005208     | 1              |
| Bombastus                  | Lavender oil     | 273007       | 1              |
| Bombastus                  | Lavender oil     | 273980       | 2              |
| Bombastus                  | Lavender oil     | 276644       | 1              |
| Bombastus                  | Lavender oil     | 274960       | 1              |
| Bombastus                  | Lavender oil     | 276783       | 2              |
| Bombastus                  | Lavender oil     | 279919       | 6              |
| Bombastus                  | Lavender oil     | 281214       | 1              |
| Bombastus                  | Lavender oil     | 281980       | 1              |
| Bombastus                  | Lavender oil     | 287254       | 3              |
| Bombastus                  | Lavender oil     | 290711       | 1              |
| Bombastus                  | Lavender oil     | 297733       | 2              |
| Bombastus                  | Lavender oil     | 277773       | 1              |
| Bombastus                  | Lavender oil     | 295873       | 1              |
| Bombastus                  | Lavender oil     | 303335       | 2              |
| Bombastus                  | Lavender oil     | 306049       | 1              |
| Bombastus                  | Lavender oil     | 311260       | 1              |
| Bombastus                  | Lavender oil     | 18000        | 1              |
| Bombastus                  | Lavender oil     | 19003633     | 2              |
| Bombastus                  | Lavender oil     | 288979       | 5              |
| Bombastus                  | Lavender oil     | 273725       | 1              |
| Bombastus                  | Lavender oil     | 275898       | 1              |
| Bombastus                  | Lavender oil     | 18006811     | 1              |
| Bombastus                  | Lavender oil     | 307666       | 1              |
| Bombastus                  | Lavender oil     | 307859       | 1              |
| Bombastus                  | Lavender oil     | 284486       | 2              |
| Bombastus                  | Lavender oil     | 18004761     | 2              |
| Bombastus                  | Lavender oil     | 19005998     | 1              |
| Bombastus                  | Lavender oil     | 311562       | 6              |
| Bombastus                  | Lavender oil     | 303303       | 2              |
| Bombastus                  | Lavender oil     | 300666       | 3              |
| Bombastus                  | Lavender oil     | 180004761    | 1              |
| Bombastus                  | Lavender oil     | 297007       | 3              |
| Bombastus                  | Lavender oil     | 18004853     | 1              |
| Bombastus                  | Lavender oil     | 295738       | 3              |
| Bombastus                  | Lavender oil     | 308745       | 2              |
| Bombastus                  | Lavender oil     | 20000292     | 1              |
| Bombastus                  | Lavender oil     | 293661       | 4              |
| Bombastus                  | Lavender oil     | 295593       | 3              |
| Bombastus                  | Lavender oil     | 301109       | 1              |
| Bombastus                  | Lavender oil     | 18003212     | 2              |
| Caelo                      | Lavender oil     | 12334516     | 5              |
| Caelo                      | Lavender oil     | 13252220     | 9              |
| Caelo                      | Lavender oil     | 7111403      | 1              |
| Caelo                      | Lavender oil     | 14218310     | 2              |
| Caelo                      | Lavender oil     | 11053709     | 3              |
| Caelo                      | Lavender oil     | 11221308     | 1              |
| Caelo                      | Lavender oil     | 3091207      | 1              |
| Caelo                      | Lavender oil     | 16101203     | 1              |
| Caelo                      | Lavender oil     | 12056802     | 4              |
| Caelo                      | Lavender oil     | 4110E-01990  | 1              |
| Caelo                      | Lavender oil     | 213A-01990   | 1              |
| Caelo                      | Lavender oil     | 12056822     | 9              |

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| Supplier | Substance    | Batch            | Spectra |
|----------|--------------|------------------|---------|
| Caelo    | Lavender oil | 12334501         | 8       |
| Caelo    | Lavender oil | 12H15-N01        | 4       |
| Caelo    | Lavender oil | 12334507         | 3       |
| Caelo    | Lavender oil | 276783           | 1       |
| Caelo    | Lavender oil | 13071302         | 1       |
| Caelo    | Lavender oil | 12081301         | 1       |
| Caelo    | Lavender oil | 15081301         | 1       |
| Caelo    | Lavender oil | 30081301         | 1       |
| Caelo    | Lavender oil | 1245             | 1       |
| Caelo    | Lavender oil | 1234514          | 2       |
| Caelo    | Lavender oil | 123344514        | 1       |
| Caelo    | Lavender oil | 3011401          | 1       |
| Caelo    | Lavender oil | 1021403          | 1       |
| Caelo    | Lavender oil | 13133715         | 14      |
| Caelo    | Lavender oil | 13252202         | 7       |
| Caelo    | Lavender oil | 17051404         | 1       |
| Caelo    | Lavender oil | 2189             | 1       |
| Caelo    | Lavender oil | 13252206         | 3       |
| Caelo    | Lavender oil | 13252225         | 4       |
| Caelo    | Lavender oil | 13252611         | 2       |
| Caelo    | Lavender oil | 13252218         | 2       |
| Caelo    | Lavender oil | 15363304         | 6       |
| Caelo    | Lavender oil | 31031501         | 1       |
| Caelo    | Lavender oil | 17041502         | 1       |
| Caelo    | Lavender oil | 15043520         | 4       |
| Caelo    | Lavender oil | 15363001         | 5       |
| Caelo    | Lavender oil | 1510040-01       | 2       |
| Caelo    | Lavender oil | 123456           | 1       |
| Caelo    | Lavender oil | 559621           | 1       |
| Caelo    | Lavender oil | 15363311         | 1       |
| Caelo    | Lavender oil | 15363303         | 5       |
| Caelo    | Lavender oil | 15363004         | 7       |
| Caelo    | Lavender oil | 16023001         | 12      |
| Caelo    | Lavender oil | 911624           | 1       |
| Caelo    | Lavender oil | 16023017         | 16      |
| Caelo    | Lavender oil | 16023014         | 7       |
| Caelo    | Lavender oil | 18031703         | 1       |
| Caelo    | Lavender oil | 16292205         | 17      |
| Caelo    | Lavender oil | 15363011         | 1       |
| Caelo    | Lavender oil | 8061702          | 1       |
| Caelo    | Lavender oil | 15363016         | 2       |
| Caelo    | Lavender oil | 26081707         | 1       |
| Caelo    | Lavender oil | 17132702         | 2       |
| Caelo    | Lavender oil | 15111741         | 1       |
| Caelo    | Lavender oil | 1706003-01       | 4       |
| Caelo    | Lavender oil | 17132707         | 3       |
| Caelo    | Lavender oil | 16H01-B04-335775 | 1       |
| Caelo    | Lavender oil | 17132701         | 5       |
| Caelo    | Lavender oil | 17132711         | 41      |
| Caelo    | Lavender oil | 16H01-B04        | 1       |
| Caelo    | Lavender oil | 17132713         | 1       |
| Caelo    | Lavender oil | 30041807         | 1       |
| Caelo    | Lavender oil | 16H01-B04-337333 | 1       |
| Caelo    | Lavender oil | 17244101         | 11      |
| Caelo    | Lavender oil | 18066105         | 1       |
| Caelo    | Lavender oil | 16H01-B04-338189 | 1       |
| Caelo    | Lavender oil | 18128204         | 22      |
| Caelo    | Lavender oil | 16081806         | 1       |
| Caelo    | Lavender oil | 30081810         | 1       |
| Caelo    | Lavender oil | 30081811         | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Lavender oil     | 3218E-01990       | 1              |
| Caelo           | Lavender oil     | 18066104          | 1              |
| Caelo           | Lavender oil     | 18128205          | 1              |
| Caelo           | Lavender oil     | 31101803          | 1              |
| Caelo           | Lavender oil     | 18219004          | 23             |
| Caelo           | Lavender oil     | 17G20-B07-342691  | 1              |
| Caelo           | Lavender oil     | 18128302          | 1              |
| Caelo           | Lavender oil     | 18B26-B02-351972  | 1              |
| Caelo           | Lavender oil     | 182190009         | 1              |
| Caelo           | Lavender oil     | 18B26-B02-352706  | 1              |
| Caelo           | Lavender oil     | 18001512          | 1              |
| Caelo           | Lavender oil     | 17244104          | 2              |
| Caelo           | Lavender oil     | 18326203          | 1              |
| Caelo           | Lavender oil     | 18326201          | 10             |
| Caelo           | Lavender oil     | 18326208          | 1              |
| Caelo           | Lavender oil     | 18326211          | 1              |
| Caelo           | Lavender oil     | 18326213          | 11             |
| Caelo           | Lavender oil     | 18326216          | 3              |
| Caelo           | Lavender oil     | 8326201           | 1              |
| Caelo           | Lavender oil     | 19271301          | 2              |
| Caelo           | Lavender oil     | 19184702          | 4              |
| Caelo           | Lavender oil     | 191847010         | 8              |
| Caelo           | Lavender oil     | 12056821          | 2              |
| Caelo           | Lavender oil     | 12056816          | 2              |
| Caelo           | Lavender oil     | 13252212          | 1              |
| Caelo           | Lavender oil     | 16023015          | 1              |
| Caelo           | Lavender oil     | 17244109          | 1              |
| Caelo           | Lavender oil     | 20001640003       | 2              |
| Caelo           | Lavender oil     | 1536007           | 1              |
| Caelo           | Lavender oil     | 17G20-B07-344584  | 1              |
| Caelo           | Lavender oil     | 16292206          | 14             |
| Caelo           | Lavender oil     | 13252603          | 1              |
| Caelo           | Lavender oil     | 15363013          | 1              |
| Caelo           | Lavender oil     | 16292216          | 12             |
| Caelo           | Lavender oil     | 1712070L/16292216 | 1              |
| Caelo           | Lavender oil     | 191847008         | 7              |
| Caelo           | Lavender oil     | 1812204           | 1              |
| Caelo           | Lavender oil     | 13252224          | 1              |
| Caelo           | Lavender oil     | 15043516          | 2              |
| Caelo           | Lavender oil     | 15278102          | 4              |
| Caelo           | Lavender oil     | L12334511         | 1              |
| Caelo           | Lavender oil     | 13252607          | 1              |
| Caelo           | Lavender oil     | 14A07-B02-289955  | 1              |
| Caelo           | Lavender oil     | 1414-B02-302035   | 1              |
| Caelo           | Lavender oil     | 12056809          | 16             |
| Caelo           | Lavender oil     | 1234501           | 1              |
| Caelo           | Lavender oil     | 13133703          | 16             |
| Caelo           | Lavender oil     | 12201215          | 1              |
| Caelo           | Lavender oil     | 305280            | 1              |
| Caelo           | Lavender oil     | 12H15-No1         | 1              |
| Caelo           | Lavender oil     | 15363002          | 1              |
| Caelo           | Lavender oil     | 15363310          | 14             |
| Caelo           | Lavender oil     | 17132709          | 1              |
| Caelo           | Lavender oil     | 191847007         | 4              |
| Caelo           | Lavender oil     | 18219001          | 19             |
| Caelo           | Lavender oil     | 11221315          | 1              |
| Caelo           | Lavender oil     | 17G20-B07-342692  | 1              |
| Caelo           | Lavender oil     | 1421831           | 1              |
| Caelo           | Lavender oil     | 132552218         | 1              |
| Caelo           | Lavender oil     | 780162            | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Lavender oil     | 16023002         | 16             |
| Caelo           | Lavender oil     | 12056804         | 2              |
| Caelo           | Lavender oil     | 9229520          | 2              |
| Caelo           | Lavender oil     | 16292211         | 21             |
| Caelo           | Lavender oil     | 87(15363016)     | 1              |
| Caelo           | Lavender oil     | 20000744003      | 1              |
| Caelo           | Lavender oil     | 15363305         | 2              |
| Caelo           | Lavender oil     | 17132712         | 6              |
| Caelo           | Lavender oil     | 308745           | 2              |
| Caelo           | Lavender oil     | 311562           | 3              |
| Caelo           | Lavender oil     | 12334503         | 3              |
| Caelo           | Lavender oil     | 1313375          | 1              |
| Caelo           | Lavender oil     | 13252204         | 8              |
| Caelo           | Lavender oil     | 14218322         | 6              |
| Caelo           | Lavender oil     | 14218324         | 6              |
| Caelo           | Lavender oil     | 15043512         | 1              |
| Caelo           | Lavender oil     | 15043525         | 12             |
| Caelo           | Lavender oil     | 15043526         | 8              |
| Caelo           | Lavender oil     | 15363302         | 19             |
| Caelo           | Lavender oil     | 1629226          | 1              |
| Caelo           | Lavender oil     | 14218314         | 10             |
| Caelo           | Lavender oil     | 19184701         | 21             |
| Caelo           | Lavender oil     | 18128201         | 2              |
| Caelo           | Lavender oil     | 2001640003       | 1              |
| Caelo           | Lavender oil     | 273289           | 1              |
| Caelo           | Lavender oil     | 12334510         | 7              |
| Caelo           | Lavender oil     | 13202218         | 1              |
| Caelo           | Lavender oil     | 14218301         | 3              |
| Caelo           | Lavender oil     | 14218311         | 7              |
| Caelo           | Lavender oil     | 15043519         | 5              |
| Caelo           | Lavender oil     | 13252621         | 2              |
| Caelo           | Lavender oil     | 15043518         | 4              |
| Caelo           | Lavender oil     | 16A07-B01-32195  | 1              |
| Caelo           | Lavender oil     | 16292213         | 1              |
| Caelo           | Lavender oil     | 170531810        | 1              |
| Caelo           | Lavender oil     | 15363015         | 1              |
| Caelo           | Lavender oil     | 162992216        | 1              |
| Caelo           | Lavender oil     | 1710038-01       | 2              |
| Caelo           | Lavender oil     | 18127611         | 1              |
| Caelo           | Lavender oil     | 18326215         | 1              |
| Caelo           | Lavender oil     | 2000164003       | 1              |
| Caelo           | Lavender oil     | 13252201         | 5              |
| Caelo           | Lavender oil     | 15043504         | 7              |
| Caelo           | Lavender oil     | 16H01-B04-336278 | 4              |
| Caelo           | Lavender oil     | 18219012         | 17             |
| Caelo           | Lavender oil     | 16A07-B01-325888 | 2              |
| Caelo           | Lavender oil     | 16A07-B01-32196  | 1              |
| Caelo           | Lavender oil     | 13133706         | 19             |
| Caelo           | Lavender oil     | 15C26-B02-310275 | 5              |
| Caelo           | Lavender oil     | 15C26-B02-310775 | 2              |
| Caelo           | Lavender oil     | 305279           | 2              |
| Caelo           | Lavender oil     | 15363019         | 6              |
| Caelo           | Lavender oil     | 516Q-01990       | 1              |
| Caelo           | Lavender oil     | 18B26-B02-351906 | 1              |
| Caelo           | Lavender oil     | 15278101         | 13             |
| Caelo           | Lavender oil     | 18219005         | 4              |
| Caelo           | Lavender oil     | 12056814         | 5              |
| Caelo           | Lavender oil     | 12201201         | 1              |
| Caelo           | Lavender oil     | 13133705         | 2              |
| Caelo           | Lavender oil     | 14218321         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caelo                      | Lavender oil     | 15043505     | 10             |
| Caelo                      | Lavender oil     | 16023003     | 6              |
| Caelo                      | Lavender oil     | 15363007     | 3              |
| Caelo                      | Lavender oil     | 16023018     | 1              |
| Caelo                      | Lavender oil     | 16292209     | 5              |
| Caelo                      | Lavender oil     | 16292214     | 5              |
| Caelo                      | Lavender oil     | 1829004      | 1              |
| Caelo                      | Lavender oil     | 18326214     | 5              |
| Caecolo / Phönix           | Lavender oil     | 18326207     | 1              |
| Caesaer/Jenne              | Lavender oil     | 18128202     | 1              |
| Caesar & Loretz GmbH       | Lavender oil     | 18219012     | 3              |
| Caesar & Loretz GmbH       | Lavender oil     | 18326201     | 3              |
| Caesar & Loretz GmbH       | Lavender oil     | 18219004     | 1              |
| Caesar & Loretz GmbH       | Lavender oil     | 18326207     | 6              |
| Caesar & Loretz GmbH       | Lavender oil     | 17244101     | 1              |
| Caesar & Loretz GmbH       | Lavender oil     | 17244109     | 2              |
| Caesar & Loretz GmbH       | Lavender oil     | 18326214     | 3              |
| Caesar & Loretz GmbH       | Lavender oil     | 19184701     | 5              |
| Caesar & Loretz GmbH       | Lavender oil     | 18326215     | 1              |
| Caesar & Loretz GmbH       | Lavender oil     | 191847007    | 1              |
| Caesar & Loretz GmbH       | Lavender oil     | 191847010    | 3              |
| Caesar & Loretz GmbH / ... | Lavender oil     | 19184701     | 1              |
| Caesar & Loretz GmbH / ... | Lavender oil     | 18326213     | 1              |
| Caesar & Loretz GmbH D-... | Lavender oil     | 12334510     | 2              |
| Caesar & Loretz GmbH, 4... | Lavender oil     | 12056804     | 1              |
| Caesar & Loretz GmbH, 4... | Lavender oil     | 13133706     | 1              |
| Caesar & Loretz GmbH, 4... | Lavender oil     | 11355        | 1              |
| Caesar & Loretz GmbH/AHD   | Lavender oil     | 19184702     | 2              |
| Caesar & Loretz GmbH/Gehe  | Lavender oil     | 18219012     | 1              |
| Caesar & Loretz GmbH/Gehe  | Lavender oil     | 18326207     | 3              |
| Caesar & Loretz GmbH/je... | Lavender oil     | 19184701     | 4              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 18326207     | 1              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 17244109     | 1              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 191847008    | 1              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 19184702     | 1              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 9229520      | 1              |
| Caesar & Loretz GmbH/Sa... | Lavender oil     | 20003808010  | 1              |
| Caesar & Loretz/ Noweda    | Lavender oil     | 12056816     | 1              |
| Caesar&Loretz GmbH         | Lavender oil     | 17244104     | 1              |
| Caesar&Loretz GmbH         | Lavender oil     | 20000744003  | 1              |
| Caleo/ Noweda              | Lavender oil     | 17132710     | 1              |
| Cealo/ Sanacorp            | Lavender oil     | 17132711     | 1              |
| Caelo                      | Lavender oil     | 13B22-No2    | 1              |
| EuRho/ AHD                 | Lavender oil     | 16292206     | 1              |
| Euro OTC                   | Lavender oil     | 1601053-01   | 1              |
| Euro OTC                   | Lavender oil     | 1210031-01   | 1              |
| Euro OTC                   | Lavender oil     | 12334514     | 2              |
| Euro OTC                   | Lavender oil     | 1610029-01   | 3              |
| Euro OTC                   | Lavender oil     | 1701005-01   | 5              |
| Euro OTC                   | Lavender oil     | 1706003-01   | 1              |
| Euro OTC                   | Lavender oil     | 1710038-02   | 3              |
| Euro OTC                   | Lavender oil     | 1177388      | 1              |
| Euro OTC                   | Lavender oil     | 1503006-01   | 2              |
| Euro OTC                   | Lavender oil     | 15B10-B07    | 1              |
| Euro OTC                   | Lavender oil     | 1507031-01   | 1              |
| Euro OTC                   | Lavender oil     | 1910009-01   | 4              |
| Euro OTC                   | Lavender oil     | 15043525     | 2              |
| Euro OTC                   | Lavender oil     | 311562       | 1              |
| Euro OTC                   | Lavender oil     | 1808034-02   | 7              |
| Euro OTC                   | Lavender oil     | 1302023-01   | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Euro OTC        | Lavender oil     | 160105301         | 1              |
| Euro OTC        | Lavender oil     | 191000901         | 1              |
| Euro OTC        | Lavender oil     | 200811-01         | 1              |
| Euro OTC        | Lavender oil     | 1510040-01        | 2              |
| Euro OTC        | Lavender oil     | 2004016-01        | 2              |
| Euro OTC        | Lavender oil     | 16292214          | 1              |
| Fagron          | Lavender oil     | 15C26-B02-314159  | 4              |
| Fagron          | Lavender oil     | 19B20-B01-191699  | 6              |
| Fagron          | Lavender oil     | 11K17-N06         | 1              |
| Fagron          | Lavender oil     | 652607            | 1              |
| Fagron          | Lavender oil     | 12B16-N02         | 4              |
| Fagron          | Lavender oil     | 612211990         | 2              |
| Fagron          | Lavender oil     | 1601311990        | 1              |
| Fagron          | Lavender oil     | 13B22-N02         | 11             |
| Fagron          | Lavender oil     | 13D24-N01         | 1              |
| Fagron          | Lavender oil     | 13D24N01          | 3              |
| Fagron          | Lavender oil     | 13D24-0003        | 1              |
| Fagron          | Lavender oil     | 13E30-B01-285543  | 2              |
| Fagron          | Lavender oil     | 13J11B03          | 1              |
| Fagron          | Lavender oil     | 13J11-B03-289423  | 6              |
| Fagron          | Lavender oil     | 13G11N04          | 1              |
| Fagron          | Lavender oil     | 759243            | 1              |
| Fagron          | Lavender oil     | 13J11-B03-289424  | 1              |
| Fagron          | Lavender oil     | 780162            | 1              |
| Fagron          | Lavender oil     | 13/11-B03-289423  | 1              |
| Fagron          | Lavender oil     | 893241            | 3              |
| Fagron          | Lavender oil     | 15I03-B01-893241  | 1              |
| Fagron          | Lavender oil     | 14a07-B02         | 1              |
| Fagron          | Lavender oil     | 4A07-B02          | 1              |
| Fagron          | Lavender oil     | 14A07-B02-294931  | 4              |
| Fagron          | Lavender oil     | 14D14B02          | 1              |
| Fagron          | Lavender oil     | 794323            | 1              |
| Fagron          | Lavender oil     | 14A07B02          | 1              |
| Fagron          | Lavender oil     | 14D14-B02-302035  | 1              |
| Fagron          | Lavender oil     | 14D14-B02-302034  | 5              |
| Fagron          | Lavender oil     | 140120277773      | 1              |
| Fagron          | Lavender oil     | 15CV26-B02-309881 | 1              |
| Fagron          | Lavender oil     | 15B10-B07-304079  | 2              |
| Fagron          | Lavender oil     | 15B10-B07-309880  | 1              |
| Fagron          | Lavender oil     | 867858            | 1              |
| Fagron          | Lavender oil     | 16A07-B01         | 3              |
| Fagron          | Lavender oil     | 15I03-B01-317686  | 1              |
| Fagron          | Lavender oil     | 15I03-B01-317686  | 2              |
| Fagron          | Lavender oil     | 16A07-B01-322846  | 3              |
| Fagron          | Lavender oil     | 16A07-B01-32195   | 1              |
| Fagron          | Lavender oil     | 15/03-B01-317686  | 1              |
| Fagron          | Lavender oil     | 16A07-B01-321296  | 1              |
| Fagron          | Lavender oil     | 16H01-B04-329684  | 1              |
| Fagron          | Lavender oil     | 16292216          | 1              |
| Fagron          | Lavender oil     | 949399            | 2              |
| Fagron          | Lavender oil     | 17G20-b07-342692  | 1              |
| Fagron          | Lavender oil     | 16H01-B04-337333  | 2              |
| Fagron          | Lavender oil     | 16H01B04338189    | 1              |
| Fagron          | Lavender oil     | 17G20-B07-344584  | 5              |
| Fagron          | Lavender oil     | 17G20-B07         | 4              |
| Fagron          | Lavender oil     | 17G20-B07-349416  | 2              |
| Fagron          | Lavender oil     | 18B26-B02         | 8              |
| Fagron          | Lavender oil     | 18B26-B02-352706  | 1              |
| Fagron          | Lavender oil     | 18826-B02-352705  | 2              |
| Fagron          | Lavender oil     | 18K19-B01-356766  | 3              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Fagron          | Lavender oil     | 1061076              | 1              |
| Fagron          | Lavender oil     | 1104461              | 3              |
| Fagron          | Lavender oil     | 19B20-B01-191698     | 1              |
| Fagron          | Lavender oil     | 19L03-B01-197428     | 3              |
| Fagron          | Lavender oil     | 20C-12-B03-200430    | 1              |
| Fagron          | Lavender oil     | 11L22-N16            | 4              |
| Fagron          | Lavender oil     | 11F09-N07            | 1              |
| Fagron          | Lavender oil     | 12D05-N02            | 5              |
| Fagron          | Lavender oil     | 13G11-N04            | 12             |
| Fagron          | Lavender oil     | 13E30-B01-285544     | 5              |
| Fagron          | Lavender oil     | 13J11-B03-780162     | 1              |
| Fagron          | Lavender oil     | 16A07-B01-321295     | 4              |
| Fagron          | Lavender oil     | 16A07B01322846       | 1              |
| Fagron          | Lavender oil     | 16H01-B04-329685     | 8              |
| Fagron          | Lavender oil     | 12H15-N01            | 9              |
| Fagron          | Lavender oil     | 14A07-B02-289955     | 2              |
| Fagron          | Lavender oil     | 15043518             | 2              |
| Fagron          | Lavender oil     | 88(18B26-B02-352706) | 1              |
| Fagron          | Lavender oil     | 12334516             | 2              |
| Fagron          | Lavender oil     | 13B22N02             | 2              |
| Fagron          | Lavender oil     | 13J11-B03            | 4              |
| Fagron          | Lavender oil     | 13J11-BC3-289423     | 1              |
| Fagron          | Lavender oil     | 14A07-B02            | 4              |
| Fagron          | Lavender oil     | 16H01-B04-329684-201 | 1              |
| Fagron          | Lavender oil     | 18B26-B02-355045     | 3              |
| Fagron          | Lavender oil     | 911624               | 4              |
| Fagron          | Lavender oil     | 20C12-B03-200430     | 2              |
| Fagron          | Lavender oil     | 20C12-B03-201865     | 2              |
| Fagron          | Lavender oil     | 14D-B02-302034       | 1              |
| Fagron          | Lavender oil     | 1826-B02-355045      | 1              |
| Fagron          | Lavender oil     | 18B26-B02-352706     | 1              |
| Fagron          | Lavender oil     | 15810-B07-309880     | 2              |
| Fagron          | Lavender oil     | 13097R               | 1              |
| Fagron          | Lavender oil     | 19B20-B02-1917000    | 1              |
| Fagron          | Lavender oil     | 18B26-B02-352705     | 2              |
| Fagron          | Lavender oil     | 5013I1990            | 1              |
| Fagron          | Lavender oil     | 13e30-b01-285544     | 1              |
| Fagron          | Lavender oil     | 16H01-B04-338189     | 2              |
| Fagron          | Lavender oil     | 18B-26B02-351906     | 1              |
| Fagron          | Lavender oil     | 19103-B01-197428     | 1              |
| Fagron          | Lavender oil     | 16A07-B01-325888     | 3              |
| Fagron          | Lavender oil     | 19L03-B01            | 1              |
| Fagron          | Lavender oil     | 18B26-B02-652705     | 1              |
| Fagron          | Lavender oil     | 16H01-B04-335505     | 4              |
| Fagron          | Lavender oil     | B01-1974208          | 2              |
| Fagron          | Lavender oil     | 14d14-b02            | 1              |
| Fagron          | Lavender oil     | 15B10-B07-304078     | 2              |
| Fagron          | Lavender oil     | 15I03-B01-317687     | 3              |
| Fagron          | Lavender oil     | 1503B01317685        | 1              |
| Fagron          | Lavender oil     | 15I03-B01-314160     | 1              |
| Fagron          | Lavender oil     | 15/03-B01-317687     | 1              |
| Fagron          | Lavender oil     | 16A07-B01-322523     | 1              |
| Fagron          | Lavender oil     | 16H01-B04-327861     | 4              |
| Fagron          | Lavender oil     | 16H01-B04            | 4              |
| Fagron          | Lavender oil     | 16H01-B04-335506     | 2              |
| Fagron          | Lavender oil     | 16H01-B04-336278     | 3              |
| Fagron          | Lavender oil     | 17G20-B07-342693     | 2              |
| Fagron          | Lavender oil     | 17G20-B07-342691     | 2              |
| Fagron          | Lavender oil     | 17G20-B07-349418     | 1              |
| Fagron          | Lavender oil     | 18K19-B01-356767     | 2              |

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| <b>Supplier</b>         | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-------------------------|------------------|------------------|----------------|
| Fagron                  | Lavender oil     | 20C12-B03-201354 | 1              |
| Fagron                  | Lavender oil     | B03-2004300      | 1              |
| Fagron                  | Lavender oil     | 13E30-B01        | 4              |
| Fagron                  | Lavender oil     | 856973           | 1              |
| Fagron                  | Lavender oil     | 14A07-B02-294930 | 1              |
| Fagron                  | Lavender oil     | 14D14-B02        | 5              |
| Fagron                  | Lavender oil     | 15/03-B01-317685 | 1              |
| Fagron                  | Lavender oil     | 16A07-B01-324336 | 3              |
| Fagron                  | Lavender oil     | 192900-0004      | 1              |
| Fagron                  | Lavender oil     | 17G20-B07-349417 | 3              |
| Fagron                  | Lavender oil     | 18B26-B02-351972 | 4              |
| Fagron                  | Lavender oil     | 17G20-B07342691  | 1              |
| Fagron                  | Lavender oil     | 18826-B02-351972 | 1              |
| Fagron                  | Lavender oil     | 18K19-B01        | 2              |
| Fagron                  | Lavender oil     | 1177388          | 1              |
| Fagron                  | Lavender oil     | 15b10-b07        | 1              |
| Fagron                  | Lavender oil     | 15/03-B01-314158 | 3              |
| Fagron                  | Lavender oil     | 15C26-B02        | 1              |
| Fagron                  | Lavender oil     | 15I03-B01-317685 | 1              |
| Fagron                  | Lavender oil     | 16H01-B04-332352 | 4              |
| Fagron                  | Lavender oil     | 16H01-B04-335775 | 1              |
| Fargon                  | Lavender oil     | 16A07-B01        | 1              |
| Fiebi 29.09.12 ek:8,95  | Lavender oil     | 271465           | 1              |
| Fiebig                  | Lavender oil     | 266070           | 1              |
| Fiebig                  | Lavender oil     | 1812802          | 1              |
| Fiebig                  | Lavender oil     | 18219005         | 1              |
| Fiebig                  | Lavender oil     | 18005115         | 1              |
| Fiebig                  | Lavender oil     | 19184701         | 1              |
| Bombastus               | Lavender oil     | 18006865         | 6              |
| Frey & Lau / Gehe       | Lavender oil     | 18B26-B02-352705 | 1              |
| Frey & Lau GmbH/Phoenix | Lavender oil     | 14A07-B02-289955 | 1              |
| Gatt-Koller             | Lavender oil     | 1900739          | 1              |
| gehe                    | Lavender oil     | 15363019         | 1              |
| Gehe                    | Lavender oil     | 11221301         | 1              |
| Gehe                    | Lavender oil     | 12H15-N01        | 2              |
| Gehe                    | Lavender oil     | 13252601         | 1              |
| Gehe                    | Lavender oil     | 14A07B02294930   | 1              |
| Gehe                    | Lavender oil     | 13252220         | 1              |
| Gehe                    | Lavender oil     | 15043525         | 1              |
| Gehe                    | Lavender oil     | 15363302         | 1              |
| Gehe                    | Lavender oil     | 301109           | 1              |
| Gehe                    | Lavender oil     | 15C26-B02-310275 | 1              |
| Gehe                    | Lavender oil     | 306049           | 1              |
| Gehe                    | Lavender oil     | 16023017         | 1              |
| Gehe                    | Lavender oil     | 16292211         | 2              |
| Gehe                    | Lavender oil     | 16292216         | 1              |
| Gehe                    | Lavender oil     | 17132711         | 2              |
| Gehe                    | Lavender oil     | 18B26-B02-355045 | 1              |
| Gehe                    | Lavender oil     | 18219004         | 1              |
| Gehe                    | Lavender oil     | 19B20-B01-191699 | 1              |
| Gehe                    | Lavender oil     | 19271301         | 1              |
| Gehe                    | Lavender oil     | 18004761         | 1              |
| GEHE                    | Lavender oil     | 17132710         | 1              |
| Caelo                   | Lavender oil     | 18326231         | 1              |
| GEHE 17.05.2014         | Lavender oil     | 13133703         | 1              |
| Fagron                  | Lavender oil     | 15C26-B02-310775 | 3              |
| Caelo                   | Lavender oil     | 12056815         | 1              |
| Caelo                   | Lavender oil     | 16023002/1270217 | 1              |
| Gehe/EuRo               | Lavender oil     | 1601053-01       | 1              |
| geile                   | Lavender oil     | 12334516         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Hedinger                   | Lavender oil     | 273007           | 1              |
| InfectoPharm/Noweda        | Lavender oil     | 297733           | 1              |
| Jenne                      | Lavender oil     | 192900-0003      | 1              |
| Kehr                       | Lavender oil     | 16292216         | 1              |
| Kögl                       | Lavender oil     | 357910164416     | 1              |
| Kögl                       | Lavender oil     | 225506172617     | 1              |
| Kögl                       | Lavender oil     | 20172255         | 2              |
| Kögl                       | Lavender oil     | 180050           | 1              |
| Kögl                       | Lavender oil     | 1802634          | 3              |
| Krieger                    | Lavender oil     | 18326213         | 1              |
| Caelo                      | Lavender oil     | 188128202        | 1              |
| L10                        | Lavender oil     | 17244101         | 4              |
| L10/Bambastus              | Lavender oil     | 301109           | 1              |
| L12                        | Lavender oil     | 16A07-B01-322523 | 2              |
| L12                        | Lavender oil     | 18128204         | 1              |
| Fagron                     | Lavender oil     | 16A07-B01-321296 | 5              |
| Bombastus                  | Lavender oil     | 305279           | 1              |
| Lamotte / Gehe             | Lavender oil     | 13E30-B01-285544 | 1              |
| Noweda                     | Lavender oil     | 11221315         | 2              |
| Noweda                     | Lavender oil     | 11221309         | 1              |
| Noweda                     | Lavender oil     | 284691           | 1              |
| Noweda                     | Lavender oil     | 13252201         | 1              |
| Noweda                     | Lavender oil     | 293661           | 1              |
| Noweda                     | Lavender oil     | 15363011         | 1              |
| Noweda                     | Lavender oil     | 16H01-B04-338189 | 1              |
| Noweda                     | Lavender oil     | 17132711         | 1              |
| Noweda                     | Lavender oil     | 18128202         | 1              |
| Noweda                     | Lavender oil     | 18219004         | 5              |
| Noweda                     | Lavender oil     | 18219001         | 1              |
| Noweda                     | Lavender oil     | 1808094-02       | 1              |
| Noweda                     | Lavender oil     | 19B20-B01-191699 | 1              |
| NOWEDA                     | Lavender oil     | 18326207         | 1              |
| Caelo                      | Lavender oil     | 18128202         | 40             |
| Caelo                      | Lavender oil     | 181228202        | 1              |
| Caelo                      | Lavender oil     | 1818202          | 1              |
| Caelo                      | Lavender oil     | 13252616         | 4              |
| Caelo                      | Lavender oil     | 480435519        | 1              |
| Caelo                      | Lavender oil     | 1536016          | 1              |
| Caelo                      | Lavender oil     | 17132710         | 13             |
| Noweda/EuRho 05.02.21 E... | Lavender oil     | 2008011-01       | 1              |
| Fagron                     | Lavender oil     | 19L03-B01-197429 | 5              |
| Ph/Euro                    | Lavender oil     | 1910009-01       | 1              |
| Fagron                     | Lavender oil     | 1010548          | 2              |
| Fagron                     | Lavender oil     | 18826-B02-355045 | 1              |
| Phoenix                    | Lavender oil     | 3073             | 1              |
| Phoenix                    | Lavender oil     | 17G20-B07-342691 | 1              |
| PHOENIX 05.05.2014         | Lavender oil     | 130202301        | 1              |
| Phoenix 08.06.2017 6,38EUR | Lavender oil     | 16292211         | 1              |
| Fagron                     | Lavender oil     | 19L03-B01-197432 | 3              |
| phönix                     | Lavender oil     | 759243           | 1              |
| Phönix                     | Lavender oil     | 652607           | 1              |
| Phönix                     | Lavender oil     | 11L22-N16        | 1              |
| Phönix                     | Lavender oil     | 12D05-N02        | 1              |
| Phönix                     | Lavender oil     | 13252220         | 2              |
| Phönix                     | Lavender oil     | 18k19-b01-356766 | 1              |
| Phönix                     | Lavender oil     | 18B26-B02-355045 | 1              |
| PHÖNIX                     | Lavender oil     | 17132711         | 1              |
| Bombastus                  | Lavender oil     | 308369           | 2              |
| Caelo                      | Lavender oil     | 617A-01990       | 1              |
| Caelo                      | Lavender oil     | 18326207         | 11             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|------------------|--------------------|----------------|
| Fagron                     | Lavender oil     | 13B22-N02          | 1              |
| primavera                  | Lavender oil     | 1480513            | 1              |
| Primavera                  | Lavender oil     | 8508143            | 1              |
| Primavera                  | Lavender oil     | 16E27              | 1              |
| Primavera/Phoenix          | Lavender oil     | 163H26             | 1              |
| Primavera/Primavera        | Lavender oil     | 570L24             | 1              |
| Primavera/Sanacorp         | Lavender oil     | 184G26             | 1              |
| PVL                        | Lavender oil     | 1401110            | 1              |
| Sanacorp                   | Lavender oil     | 12056821           | 1              |
| Sanacorp                   | Lavender oil     | 12334513           | 1              |
| Sanacorp                   | Lavender oil     | 13133703           | 2              |
| Sanacorp                   | Lavender oil     | 13G11-N04          | 1              |
| Sanacorp                   | Lavender oil     | 15278102           | 1              |
| Sanacorp                   | Lavender oil     | 308369             | 2              |
| Sanacorp                   | Lavender oil     | 16292214           | 1              |
| Sanacorp                   | Lavender oil     | 17132713           | 1              |
| Sanacorp                   | Lavender oil     | 18128204           | 3              |
| Sanacorp                   | Lavender oil     | 15363302           | 1              |
| Sanacorp                   | Lavender oil     | 18128205           | 1              |
| Sanacorp                   | Lavender oil     | 1808034-02         | 1              |
| Sanacorp                   | Lavender oil     | 18326202           | 1              |
| Sanacorp                   | Lavender oil     | 1808034-03         | 1              |
| Sanacorp                   | Lavender oil     | 18326215           | 2              |
| Sanacorp                   | Lavender oil     | 19184703           | 2              |
| Sanacorp WE: 09.04.18 E... | Lavender oil     | 17132710           | 1              |
| Sanacorp WE:15.04.16 EK... | Lavender oil     | 15278101           | 1              |
| Sanacorp WE11.04.17 -15... | Lavender oil     | 16023018           | 1              |
| Bombastus                  | Lavender oil     | 18002108           | 2              |
| Caelo                      | Lavender oil     | 16292207           | 2              |
| Caelo                      | Lavender oil     | 16292217           | 2              |
| Caelo                      | Lavender oil     | 949399             | 1              |
| Caelo                      | Lavender oil     | 12334513           | 12             |
| Taoasis                    | Lavender oil     | 30560-108326       | 1              |
| Taoasis                    | Lavender oil     | 30560-110088       | 1              |
| Taoasis                    | Lavender oil     | 30560-111623       | 1              |
| Taoasis                    | Lavender oil     | 30560-113019       | 1              |
| Taoasis                    | Lavender oil     | 30560-113018       | 1              |
| Taoasis                    | Lavender oil     | 130201-115396      | 1              |
| Taoasis                    | Lavender oil     | 130201-115678      | 1              |
| Taoasis                    | Lavender oil     | 130201-116395      | 2              |
| Taoasis                    | Lavender oil     | 130201-116899      | 6              |
| Taoasis                    | Lavender oil     | 4651010-118091     | 1              |
| Taoasis                    | Lavender oil     | 4651010118091      | 1              |
| Taoasis                    | Lavender oil     | LOG2014-119488     | 2              |
| Taoasis                    | Lavender oil     | 30560-111202       | 1              |
| Taoasis                    | Lavender oil     | 22015-122102       | 1              |
| Taoasis                    | Lavender oil     | LOG2014-121513     | 2              |
| Taoasis                    | Lavender oil     | 43703-122404       | 1              |
| Taoasis                    | Lavender oil     | LOG2014-120278     | 1              |
| Taoasis                    | Lavender oil     | 22015-122995       | 2              |
| Taoasis                    | Lavender oil     | 66179-857          | 2              |
| Taoasis                    | Lavender oil     | 66179-128588       | 1              |
| Taoasis                    | Lavender oil     | 2015-2395          | 1              |
| Taoasis                    | Lavender oil     | 16082301/2016-2908 | 1              |
| Taoasis                    | Lavender oil     | 102366-3048        | 1              |
| Taoasis                    | Lavender oil     | 96336-4015         | 1              |
| Taoasis GmbH               | Lavender oil     | 30560              | 1              |
| Taoasis GmbH/ Taoasis      | Lavender oil     | S05-18-8043        | 2              |
| Taoasis/Noweda             | Lavender oil     | 130201-117994      | 1              |
| Taoasis/Taoasis            | Lavender oil     | 30560-112844       | 1              |

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| Supplier              | Substance    | Batch        | Spectra |
|-----------------------|--------------|--------------|---------|
| Taoasis/Taoasis       | Lavender oil | 22015-123165 | 1       |
| Taoasis/Taoasis       | Lavender oil | 66179-313    | 1       |
| VDL;15.12.14;20.19EUR | Lavender oil | 12201213     | 1       |
| VDL;7,53EUR;13.4.15   | Lavender oil | 13252611     | 2       |
| Bombastus             | Lavender oil |              | 1       |
| Caelo                 | Lavender oil | 13252605     | 1       |
| Caelo                 | Lavender oil | 12201206     | 2       |
| Caelo                 | Lavender oil | 12334514     | 6       |
| Caelo                 | Lavender oil | 13252207     | 4       |
| Caelo                 | Lavender oil |              | 2       |
| Caelo                 | Lavender oil | 12201213     | 2       |
| Fagron                | Lavender oil | 13D24-N01    | 3       |
| Noweda                | Lavender oil |              | 1       |
| Phönix                | Lavender oil |              | 1       |

- 239 699 spectra from 1121 *Apo-Ident* customers from a total of 46 534 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Lavender oil / Clary sage oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Lavender oil / Clary sage oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 680           | 0              | 63 259        |
| Type B | 0              | 520           | 0              | 90 971        |
| Type C | 0              | 1637          | 27             | 239 699       |

The substance/substance group *Lavender oil / Clary sage oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.1176 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.8462 %) |
| Type C | 100.0000 % (> 99.6849 %) | 98.3774 % (> 98.1971 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Lavender oil / Clary sage oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance     | Distance in<br>main model | Distance in<br>second-stage model |
|---------------|---------------------------|-----------------------------------|
| Coriander oil | 31.84                     | —                                 |
| Bergamot oil  | 45.77                     | —                                 |
| Acorus oil    | 56.45                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Lavender oil / Clary sage oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30861     | 32710                  | 17.85                           | 57.53                              |
| 31223     | 31223                  | 0.00                            | 57.87                              |
| 31237     | 32710                  | 17.10                           | 64.62                              |
| 31238     | 31721                  | 2.65                            | 55.74                              |
| 31413     | 31413                  | 0.00                            | 72.25                              |
| 31416     | 32710                  | 18.02                           | 59.66                              |
| 31422     | 31223                  | 1.96                            | 58.78                              |
| 31528     | 31528                  | 0.00                            | 62.04                              |
| 31668     | 31413                  | 7.09                            | 70.65                              |
| 31721     | 31721                  | 0.00                            | 59.95                              |
| 31800     | 31800                  | 0.00                            | 58.75                              |
| 32710     | 32710                  | 0.00                            | 59.33                              |
| 32996     | 31721                  | 3.37                            | 51.63                              |
| 35120     | 35120                  | 0.00                            | 58.42                              |
| 35125     | 35125                  | 0.00                            | 58.69                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Liniment ointments**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 10002320-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Liniment ointments; Hydrated liniment SR/DAC (NRF p.40); Linimentum aquosum N (NRF S. 39);  
Linimentum aquosum SR/DAC (NRF S.40); Non-ionic hydrous liniment SR/DAC (NRF P. 39)

### Special notes

When selecting the *Liniment ointments* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Liniment ointments        | 19     | 39     | 1488   |

## Second-stage model

For differentiation of the substance/substance group *Liniment ointments* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Liniment ointments*:

| Supplier    | Substance           | Batch     | Sample ID | Spectra | Certificate |
|-------------|---------------------|-----------|-----------|---------|-------------|
| apomix      | Hydrated linimen... | 73A041113 | 31170     | 40      | 1405106     |
| apomix      | Hydrated linimen... | 08B010216 | 32305     | 40      | 20160203    |
| apomix      | Hydrated linimen... | 32B090516 | 32727     | 30      | 20160509    |
| Caelo       | Hydrated linimen... | 14063201  | 31438     | 40      | 20140513    |
| Caelo       | Hydrated linimen... | 160217    | 31938     | 60      | 20160127*   |
| Caelo       | Hydrated linimen... | 153244    | 31939     | 60      | 20150922*   |
| Caelo       | Hydrated linimen... | 160217    | 32089     | 40      | 20160127*   |
| Caelo       | Hydrated linimen... | 20001810  | 35111     | 40      | 20200728*   |
| Caelo       | Hydrated linimen... | 21001310  | 35546     | 40      | 20210507*   |
| Leyh Pharma | Hydrated linimen... | 124611    | 30982     | 80      | 20121123    |
| Leyh Pharma | Hydrated linimen... | 191511    | 34505     | 40      | 20190423    |
| Bombastus   | Non-ionic hydrou... | 282335    | 31169     | 40      | 1405256     |
| Bombastus   | Non-ionic hydrou... | 297176    | 31830     | 60      | 20150909    |
| Caelo       | Non-ionic hydrou... | 14134601  | 31476     | 40      | 20140516    |
| Caelo       | Non-ionic hydrou... | 15420901  | 31827     | 60      | 20151221    |
| Caelo       | Non-ionic hydrou... | 153267    | 31943     | 60      | 20150922*   |
| Caelo       | Non-ionic hydrou... | 153342    | 31945     | 60      | 20151008*   |
| Caelo       | Non-ionic hydrou... | 153342    | 31946     | 60      | 20151008*   |
| Caelo       | Non-ionic hydrou... | 160216    | 31947     | 60      | 20160127*   |
| Caelo       | Non-ionic hydrou... | 161138    | 32090     | 40      | 20160415*   |
| Caelo       | Non-ionic hydrou... | 21002412  | 35615     | 50      | 20210819*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 1040 spectra of 21 reference samples from the substance/substance group *Liniment ointments*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 19 different batches.
- 62 899 spectra from a total of 1288 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 2300 spectra of 58 reference samples from the substance/substance group *Liniment ointments*.
- Among them are spectra of independent samples from 39 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch     | Sample ID          | Spectra |
|----------|---------------------------------|-----------|--------------------|---------|
| Caelo    | Hydrated liniment SR/DAC (NR... | 161824    | 32395              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 171989    | 33572              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 173334    | 34014              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 181848    | 34158              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 192964    | 34780              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 20003910  | 35219              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 21002123  | 35616              | 50      |
| Caelo    | Non-ionic hydrous liniment S... | 153341    | 31944              | 60      |
| Caelo    | Non-ionic hydrous liniment S... | 161139    | 32091              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161140    | 32092              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161767    | 32398              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161768    | 32401              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162035    | 32404              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162181    | 32605              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162182    | 32609              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162183    | 32611              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162584    | 32615              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162585    | 32616              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 163188    | 32874              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 171173    | 33400              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 171444    | 33401              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 171446    | 33402              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 171445    | 33403              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 172088    | 33569              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 172089    | 33570              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 172090    | 33571              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 172611    | 33746              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 172612    | 33747              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 173125    | 34013              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 180507    | 34146              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 180867    | 34147              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 181744    | 34148              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 182331    | 34254              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 182789    | 34355              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 192014    | 34782              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 20003002  | 35217              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 20003577  | 35218              | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 21001823  | 35544              | 50      |
| Caelo    | Non-ionic hydrous liniment S... | 21001822  | 35545              | 40      |
| apomix   | Hydrated liniment SR/DAC (NR... | 32B090516 | 32727 <sup>†</sup> | 10      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 161824    | 32396              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 161824    | 32397              | 40      |
| Caelo    | Hydrated liniment SR/DAC (NR... | 21001310  | 35546 <sup>†</sup> | 10      |
| Caelo    | Non-ionic hydrous liniment S... | 161767    | 32399              | 40      |

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| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Non-ionic hydrous liniment S... | 161767 | 32400     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161768 | 32402     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161768 | 32403     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162035 | 32405     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 161139 | 32604     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162181 | 32606     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162181 | 32607     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162181 | 32608     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162182 | 32610     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162183 | 32612     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162183 | 32613     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162183 | 32614     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162585 | 32617     | 40      |
| Caelo    | Non-ionic hydrous liniment S... | 162585 | 32618     | 40      |

- 89 191 spectra from a total of 1975 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 5428 spectra from 756 *Apo-Ident* customers from 1491 batches from the substance/substance group *Liniment ointments*.
- Among them are spectra of independent samples from 1448 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                 | Substance                       | Batch     | Spectra |
|--------------------------|---------------------------------|-----------|---------|
| 20.05.19/AHD/Leyh Pharma | Hydrated liniment SR/DAC (NR... | 191511    | 1       |
| Caelo                    | Hydrated liniment SR/DAC (NR... | 18233003  | 1       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 303961    | 3       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 307265    | 6       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 301992    | 2       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 302930    | 2       |
| AHD /LeyhPharma          | Hydrated liniment SR/DAC (NR... | 150321    | 1       |
| AHD PKH                  | Hydrated liniment SR/DAC (NR... | 62A021017 | 1       |
| AHD/23.07.14/Leyh Pharma | Hydrated liniment SR/DAC (NR... | 142231    | 1       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 297054    | 1       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 297053    | 2       |
| AHD/Leyh Pharma/25.10.14 | Hydrated liniment SR/DAC (NR... | 144031    | 1       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 294435    | 5       |
| Alli/Leyh                | Hydrated liniment SR/DAC (NR... | 191021    | 1       |
| Allianc. Health. /Apomix | Hydrated liniment SR/DAC (NR... | 297052    | 1       |
| Allianc. Health. /Apomix | Hydrated liniment SR/DAC (NR... | 299338    | 1       |
| Alliance                 | Hydrated liniment SR/DAC (NR... | 65A250918 | 1       |
| Bombastus                | Hydrated liniment SR/DAC (NR... | 289864    | 5       |
| Euro OTC                 | Hydrated liniment SR/DAC (NR... | 33A210513 | 1       |
| Alliance/ Apomix         | Hydrated liniment SR/DAC (NR... | 7A040220  | 1       |

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<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| AMH Niemann GmbH & Co KG   | Hydrated liniment SR/DAC (NR... | 46B240820 | 1       |
| AMH Niemann GmbH & Co KG   | Hydrated liniment SR/DAC (NR... | 38B200720 | 1       |
| AMH Niemann GmbH & Co. ... | Hydrated liniment SR/DAC (NR... | 28B240518 | 2       |
| AMH Niemann GmbH & Co. ... | Hydrated liniment SR/DAC (NR... | 45B120718 | 1       |
| AMH Niemann GmbH und Co... | Hydrated liniment SR/DAC (NR... | 30B040515 | 1       |
| AMH Niemann/ Phoenix       | Hydrated liniment SR/DAC (NR... | 59B030918 | 1       |
| AMH Niemann/Noweda         | Hydrated liniment SR/DAC (NR... | 83A021214 | 1       |
| AMH Niemann/Noweda         | Hydrated liniment SR/DAC (NR... | 26A130415 | 1       |
| AMH Niemann/Ph             | Hydrated liniment SR/DAC (NR... | 59B030918 | 2       |
| AMH Niemann/Sanacorp       | Hydrated liniment SR/DAC (NR... | 46B260514 | 1       |
| Angag Leyh                 | Hydrated liniment SR/DAC (NR... | 4580715   | 1       |
| Anzag                      | Hydrated liniment SR/DAC (NR... | 74B081012 | 2       |
| Anzag                      | Hydrated liniment SR/DAC (NR... | 30B130513 | 1       |
| Anzag                      | Hydrated liniment SR/DAC (NR... | 33A190515 | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19313903  | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19016402  | 1       |
| aopmix/Phoenix             | Hydrated liniment SR/DAC (NR... | 62A110814 | 1       |
| apo                        | Hydrated liniment SR/DAC (NR... | 56A240712 | 2       |
| apo                        | Hydrated liniment SR/DAC (NR... | 47A020919 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 6A180112  | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 60A020812 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 65B290812 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 69A120912 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 56A240712 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 80A061112 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 48A020712 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 27B230413 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 33A210513 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 23A020413 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 46B150713 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 72B041113 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 79A091213 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 13A110214 | 2       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 46B260514 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 36A120514 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 42A020614 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 62A110814 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 73B131014 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 67A010914 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 88A161214 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 88A061211 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 12A150212 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 63A120814 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 3B130115  | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 2A120115  | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 10B160215 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 37B010615 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 46A290615 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 68B210915 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 66A210915 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 81B071215 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 61A010915 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 14B220216 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 19A070316 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 428140616 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 17A290216 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 55A250716 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 53B140716 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 60A150816 | 1       |
| apomix                     | Hydrated liniment SR/DAC (NR... | 51A130716 | 1       |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| apomix   | Hydrated liniment SR/DAC (NR... | 83B051216    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 8A070217     | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 11A070217    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 18B030417    | 2       |
| apomix   | Hydrated liniment SR/DAC (NR... | 17B270317    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 27A150517    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 38B190617    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 48A170717    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 57A070917    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 62A021017    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 23A240417    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 5A150118     | 2       |
| apomix   | Hydrated liniment SR/DAC (NR... | 64A091017    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 11A270218    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 17A270318    | 2       |
| apomix   | Hydrated liniment SR/DAC (NR... | 28B240518    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | CHB12B190318 | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 34A180618    | 3       |
| apomix   | Hydrated liniment SR/DAC (NR... | 44A100718    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 49A300718    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 53A060818    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 73B101218    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 69B051118    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 31A17060619  | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 26B140519    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 34B240619    | 1       |
| apomix   | Hydrated liniment SR/DAC (NR... | 30B250520    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 35A290512    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 44A120612    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 58A010812    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 83A071112    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 5A210113     | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 72A011012    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 69A120912    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 5A210110     | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 10A260213    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 21A180313    | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 27A230413    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 33A210513    | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 17B050313    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 90A171212    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 49B170713    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 36B270513    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 20B180313    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 48A170713    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 51A230713    | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 42B240613    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 43A010713    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 70A071013    | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 56A120813    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 77A251113    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 6A2000114    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 62B050913    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 72B041113    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 9A270114     | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 3A070114     | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 25A310314    | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 12B110214    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 6A200114     | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 13A110214    | 1       |

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| Supplier | Substance                       | Batch      | Spectra |
|----------|---------------------------------|------------|---------|
| Apomix   | Hydrated liniment SR/DAC (NR... | 22A250314  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 45A170614  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 34B080514  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 61A110814  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 67A010914  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 72A220914  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 76A271014  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 16A070312  | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 76B1611012 | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 79A091213  | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 3B130115   | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 80A241114  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 10B160215  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 25B130415  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 33A190515  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 53030815   | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 64A140915  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 71A051015  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 85A281215  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 69A220915  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 45A270616  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 42B140616  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 63B050916  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 64A050916  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 45A270606  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 58A010816  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 4576872    | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 74B111016  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 1A020117   | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 75B191016  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 7B060217   | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 14A150317  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 16A200317  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 28B160517  | 3       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 36B130617  | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 18B030417  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 11A270217  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 41B140616  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 19B040417  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 42B030717  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 59B180917  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 22A180417  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 31A290517  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 44A040717  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 39A190617  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 62A021017  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 75A271217  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 8A050218   | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 74B271217  | 2       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 11A270218  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 20A100418  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 30A280518  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 16B270318  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 49A300718  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 23B080518  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 26B240518  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 41B090718  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 40A030718  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 42B090718  | 1       |
| Apomix   | Hydrated liniment SR/DAC (NR... | 56A130818  | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Apomix                     | Hydrated liniment SR/DAC (NR... | 43A090718  | 4       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 52A060818  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 75A171218  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 11A110319  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 9B25019    | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 3A140119   | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 35A240619  | 2       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 27B030619  | 2       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 42290719   | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 1913080419 | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 48B160919  | 3       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 47A020919  | 2       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 52A23919   | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 9B250219   | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 56B221019  | 2       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 45A200819  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 25B210420  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 20B310320  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 638091219  | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 1902004-03 | 1       |
| Apomix                     | Hydrated liniment SR/DAC (NR... | 33A090620  | 1       |
| ApoMix                     | Hydrated liniment SR/DAC (NR... | 4A110112   | 1       |
| ApoMix                     | Hydrated liniment SR/DAC (NR... | 12A150212  | 1       |
| apomix GEHE                | Hydrated liniment SR/DAC (NR... | 37B080719  | 1       |
| apomix / Phoenix / 03...   | Hydrated liniment SR/DAC (NR... | 20a150316  | 1       |
| apomix / Phoenix / 05...   | Hydrated liniment SR/DAC (NR... | 38a060616  | 1       |
| apomix 004                 | Hydrated liniment SR/DAC (NR... | 23A270312  | 1       |
| apomix PKH GmbH Halle      | Hydrated liniment SR/DAC (NR... | 19B100314  | 1       |
| apomix PKH GmbH Halle      | Hydrated liniment SR/DAC (NR... | 41A080615  | 1       |
| apomix PKH GmbH Halle      | Hydrated liniment SR/DAC (NR... | 71A051015  | 2       |
| apomix PKH GmbH Halle      | Hydrated liniment SR/DAC (NR... | 28A060416  | 1       |
| apomix / AHD               | Hydrated liniment SR/DAC (NR... | 3B090117   | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 46B170717  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 31A290517  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 72A041217  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 25A090518  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 40A030718  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 7B050218   | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 39A020718  | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 2B140119   | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 25A140519  | 2       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 10A25019   | 1       |
| Apomix / Alliance Healt... | Hydrated liniment SR/DAC (NR... | 35A240619  | 2       |
| apomix / Anzag             | Hydrated liniment SR/DAC (NR... | 64A050916  | 1       |
| Apomix / Anzag             | Hydrated liniment SR/DAC (NR... | 36B060720  | 1       |
| Apomix / Gehe              | Hydrated liniment SR/DAC (NR... | 42B090718  | 1       |
| Apomix / Gehe              | Hydrated liniment SR/DAC (NR... | 48B160919  | 2       |
| apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 83B051216  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 44A100718  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 43A090718  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 64A240918  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 13A180319  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 25A140519  | 1       |
| Apomix / Noweda            | Hydrated liniment SR/DAC (NR... | 4A270120   | 1       |
| apomix / Phoenix           | Hydrated liniment SR/DAC (NR... | 48A300718  | 1       |
| Apomix / Phoenix           | Hydrated liniment SR/DAC (NR... | 62A170918  | 1       |
| Apomix / Phoenix           | Hydrated liniment SR/DAC (NR... | 39A020718  | 1       |
| apomix / Phoenix / 17.0... | Hydrated liniment SR/DAC (NR... | 22a210316  | 1       |
| apomix / Phoenix / 19.0... | Hydrated liniment SR/DAC (NR... | 9A010216   | 1       |
| apomix / Phoenix / 25.0... | Hydrated liniment SR/DAC (NR... | 17A290216  | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| apomix / Phoenix 13.04.18  | Hydrated liniment SR/DAC (NR... | 3a080118   | 1       |
| apomix / Phoenix 13.04.18  | Hydrated liniment SR/DAC (NR... | 2a080118   | 1       |
| apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 85A281215  | 1       |
| apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 78A161115  | 1       |
| Apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 50A130715  | 1       |
| apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 64A140915  | 1       |
| apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 67A220915  | 1       |
| apomix / Phoenix Leipzi... | Hydrated liniment SR/DAC (NR... | 14a190318  | 1       |
| apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 61B021017  | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 38A040613  | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 12B110214  | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 47B170614  | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 3A140119   | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 38A080719  | 1       |
| Apomix / Phönix            | Hydrated liniment SR/DAC (NR... | 50A160919  | 1       |
| Apomix / Sanacorp          | Hydrated liniment SR/DAC (NR... | 32B180619  | 1       |
| Apomix / Sanacorp          | Hydrated liniment SR/DAC (NR... | 65B221019  | 2       |
| Apomix /Alliance           | Hydrated liniment SR/DAC (NR... | 3A070114   | 1       |
| Apomix /Alliance           | Hydrated liniment SR/DAC (NR... | 41A260514  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 43B040614  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 55A250716  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 66b120916  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 73A101016  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 5B040219   | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 51B060818  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 22B060519  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 32b180619  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 48b160919  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 47A020919  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 56B221019  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 18A230320  | 1       |
| Apomix /Noweda             | Hydrated liniment SR/DAC (NR... | 59A261020  | 1       |
| Apomix AMH Niemann GmbH    | Hydrated liniment SR/DAC (NR... | 28B240518  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 45A270616  | 2       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 60A150816  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 69A200916  | 2       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 84A271216  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 26A020517  | 2       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 40A200617  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 54A210817  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 62A021017  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 70A201117  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 8A050218   | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 17A270318  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 40A030718  | 3       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 72A031218  | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 16A0101419 | 1       |
| apomix AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 21A060519  | 1       |
| Apomix Anzag               | Hydrated liniment SR/DAC (NR... | 17A030314  | 1       |
| Apomix Anzag               | Hydrated liniment SR/DAC (NR... | 51B170712  | 2       |
| apomix GmbH/Phönix         | Hydrated liniment SR/DAC (NR... | 36A120514  | 1       |
| Apomix Noweda              | Hydrated liniment SR/DAC (NR... | 56B210817  | 1       |
| Apomix Noweda              | Hydrated liniment SR/DAC (NR... | 60B040918  | 1       |
| Apomix Phönix              | Hydrated liniment SR/DAC (NR... | 71A291013  | 1       |
| Apomix PKH GmbH            | Hydrated liniment SR/DAC (NR... | 79011215   | 1       |
| Apomix PKH Halle           | Hydrated liniment SR/DAC (NR... | 5B250121   | 1       |
| apomix, Kehr 23.07.2019    | Hydrated liniment SR/DAC (NR... | 26B140519  | 1       |
| Apomix, Phoenix 07.11.2... | Hydrated liniment SR/DAC (NR... | 60A180917  | 1       |
| apomix, Phoenix 26.10.2... | Hydrated liniment SR/DAC (NR... | 48a170717  | 1       |
| apomix, Phönix, 09.01.2... | Hydrated liniment SR/DAC (NR... | 64a091017  | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| apomix, Phönix, 29.12.2... | Hydrated liniment SR/DAC (NR... | 57a070917 | 1       |
| Apomix, PKH Halle          | Hydrated liniment SR/DAC (NR... | 47A020919 | 1       |
| Apomix, PKH Halle          | Hydrated liniment SR/DAC (NR... | 10A170220 | 1       |
| Apomix, PKH Halle          | Hydrated liniment SR/DAC (NR... | 59A261020 | 1       |
| apomix/ AHD                | Hydrated liniment SR/DAC (NR... | 39B150719 | 1       |
| Apomix/ Alliance Health... | Hydrated liniment SR/DAC (NR... | 38B020718 | 1       |
| Apomix/ Galenus Apotheke   | Hydrated liniment SR/DAC (NR... | 7A250116  | 1       |
| apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 15A250319 | 1       |
| apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 2A130120  | 1       |
| apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 31A250520 | 1       |
| apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 41A270720 | 1       |
| Apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 38B020718 | 1       |
| Apomix/ Gehe               | Hydrated liniment SR/DAC (NR... | 47B300718 | 1       |
| Apomix/ GEHE               | Hydrated liniment SR/DAC (NR... | 5A150118  | 1       |
| Apomix/ GEHE               | Hydrated liniment SR/DAC (NR... | 15A210318 | 1       |
| Apomix/ Gehe 05.06.19      | Hydrated liniment SR/DAC (NR... | 16A010419 | 1       |
| Apomix/ Gehe 10.01.2018    | Hydrated liniment SR/DAC (NR... | 70A201117 | 1       |
| apomix/ Gehe 18.09.2019    | Hydrated liniment SR/DAC (NR... | 35A240619 | 1       |
| apomix/ Noweda             | Hydrated liniment SR/DAC (NR... | 65B290812 | 1       |
| apomix/ Noweda             | Hydrated liniment SR/DAC (NR... | 41A270720 | 1       |
| apomix/ Phoenix / 01.11... | Hydrated liniment SR/DAC (NR... | 65a060916 | 2       |
| apomix/ Phoenix / 07.09... | Hydrated liniment SR/DAC (NR... | 57a010816 | 1       |
| apomix/ Phoenix / 11.11... | Hydrated liniment SR/DAC (NR... | 52a130716 | 1       |
| apomix/ Phoenix / 13.04... | Hydrated liniment SR/DAC (NR... | 84a141215 | 1       |
| apomix/ Phoenix 18.07.18   | Hydrated liniment SR/DAC (NR... | 29A280518 | 1       |
| apomix/ Phoenix Leipzig... | Hydrated liniment SR/DAC (NR... | 72a270916 | 1       |
| apomix/ Phoenix Leipzig... | Hydrated liniment SR/DAC (NR... | 72a101016 | 1       |
| apomix/ Phoenix Leipzig... | Hydrated liniment SR/DAC (NR... | 8a070217  | 1       |
| apomix/ Phoenix Leipzig... | Hydrated liniment SR/DAC (NR... | 58a180815 | 1       |
| apomix/ Phoenix Leipzig... | Hydrated liniment SR/DAC (NR... | 16a200317 | 1       |
| apomix/Aep                 | Hydrated liniment SR/DAC (NR... | 66A161017 | 2       |
| apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 4A090117  | 1       |
| Apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 73A041217 | 1       |
| Apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 17A270318 | 1       |
| Apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 20A100418 | 1       |
| Apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 31A290518 | 1       |
| Apomix/AHD                 | Hydrated liniment SR/DAC (NR... | 268140519 | 1       |
| apomix/Alliance            | Hydrated liniment SR/DAC (NR... | 44A100718 | 2       |
| apomix/Alliance            | Hydrated liniment SR/DAC (NR... | 41A270720 | 1       |
| apomix/AMH Niemann GmbH... | Hydrated liniment SR/DAC (NR... | 42B280720 | 1       |
| apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 11a270217 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 56B100815 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 24A290316 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 24A080518 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 60B040918 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 19B080419 | 1       |
| Apomix/Anzag               | Hydrated liniment SR/DAC (NR... | 73B101218 | 1       |
| Apomix/Ebert               | Hydrated liniment SR/DAC (NR... | 49A300718 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 33A070514 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 68A080914 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 81A251114 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 27A050416 | 6       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 46A280616 | 2       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 43A140616 | 5       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 60A150816 | 6       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 72A270916 | 4       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 18B030417 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 63A170918 | 1       |
| apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 49A300718 | 1       |
| Apomix/Gehe                | Hydrated liniment SR/DAC (NR... | 85A281112 | 1       |

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| Supplier               | Substance                       | Batch     | Spectra |
|------------------------|---------------------------------|-----------|---------|
| Apomix/Gehe            | Hydrated liniment SR/DAC (NR... | 86A161214 | 1       |
| Apomix/Gehe            | Hydrated liniment SR/DAC (NR... | 31A040515 | 2       |
| Apomix/Gehe            | Hydrated liniment SR/DAC (NR... | 18B030417 | 1       |
| Apomix/Gehe            | Hydrated liniment SR/DAC (NR... | 38A080719 | 1       |
| Apomix/Gehe            | Hydrated liniment SR/DAC (NR... | 36B060720 | 1       |
| apomix/Gehe 02.05.2018 | Hydrated liniment SR/DAC (NR... | 17A270318 | 1       |
| apomix/Gehe 27.08.2018 | Hydrated liniment SR/DAC (NR... | 40A030718 | 2       |
| apomix/Gehe/04.01.21   | Hydrated liniment SR/DAC (NR... | 60B171120 | 1       |
| Apomix/Gehe/12.05.14   | Hydrated liniment SR/DAC (NR... | 81A161213 | 1       |
| Apomix/Gotha           | Hydrated liniment SR/DAC (NR... | 33b180618 | 1       |
| Apomix/Gotha           | Hydrated liniment SR/DAC (NR... | 26B140519 | 1       |
| Apomix/Göttingen       | Hydrated liniment SR/DAC (NR... | 59B030918 | 3       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 9A020215  | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 32A120515 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 76A031115 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 35A170516 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 65A060916 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 48A300718 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 62A170918 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 72A031218 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 28A030619 | 1       |
| apomix/Holdermann      | Hydrated liniment SR/DAC (NR... | 55A221019 | 1       |
| Apomix/Jenne           | Hydrated liniment SR/DAC (NR... | 63A170918 | 1       |
| Apomix/Jenne           | Hydrated liniment SR/DAC (NR... | 3A140119  | 2       |
| Apomix/Jenne           | Hydrated liniment SR/DAC (NR... | 21A060519 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 29A060513 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 24A070415 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 16B190716 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 69A200916 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 44B120819 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 19B080419 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 51B230919 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 63B091219 | 1       |
| Apomix/Kehr            | Hydrated liniment SR/DAC (NR... | 45A170820 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 81A211116 | 6       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 80A211116 | 2       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 16A200317 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 68A301017 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 3A080118  | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 39A020718 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 16B270318 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 64A240918 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 15A250319 | 1       |
| apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 44B120819 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 40A170613 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 43A010713 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 12B110214 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 3A070114  | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 17A030314 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 75A131113 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 41A260514 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 35A080514 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 42A020614 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 67A010914 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 85A091214 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 84B021214 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 24A070415 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 33A190515 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 78A161115 | 1       |
| Apomix/Noweda          | Hydrated liniment SR/DAC (NR... | 9A010216  | 3       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 13A160216 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 2B090117  | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 33B120617 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 36B130617 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 64A091017 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 49B240717 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 73A041217 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 8A050218  | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 1B130120  | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 5B030220  | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 60B021219 | 1       |
| Apomix/Noweda              | Hydrated liniment SR/DAC (NR... | 36B060720 | 1       |
| Apomix/NOWEDA              | Hydrated liniment SR/DAC (NR... | 54A030815 | 1       |
| Apomix/NOWEDA              | Hydrated liniment SR/DAC (NR... | 47B300718 | 1       |
| Apomix/Phoenix             | Hydrated liniment SR/DAC (NR... | 51A230713 | 1       |
| Apomix/Phoenix             | Hydrated liniment SR/DAC (NR... | 306060    | 1       |
| Apomix/Phoenix             | Hydrated liniment SR/DAC (NR... | 42B030717 | 1       |
| apomix/Phoenix Leipzig ... | Hydrated liniment SR/DAC (NR... | 47a170717 | 1       |
| Apomix/Phoenix-Leipzig/... | Hydrated liniment SR/DAC (NR... | 29A160517 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 5A210113  | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 68A300913 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 22A250314 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 10A080216 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 81A211116 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 24A240417 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 57B030918 | 2       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 31A170619 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 43A290719 | 1       |
| apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 12A240220 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 25A220413 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 47B170614 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 59A050814 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 15A260813 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 22A231017 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 44A100718 | 1       |
| Apomix/Phönix              | Hydrated liniment SR/DAC (NR... | 11A110319 | 2       |
| Apomix/PKH Halle/Phönix    | Hydrated liniment SR/DAC (NR... | 37B020718 | 1       |
| Apomix/PKH Halle/Phönix    | Hydrated liniment SR/DAC (NR... | 31A290518 | 1       |
| Apomix/Sana                | Hydrated liniment SR/DAC (NR... | 66A210915 | 1       |
| apomix/Sanacorp            | Hydrated liniment SR/DAC (NR... | 34B120617 | 1       |
| Apomix/Sanacorp            | Hydrated liniment SR/DAC (NR... | 55A040815 | 1       |
| Apomix/Sanacorp            | Hydrated liniment SR/DAC (NR... | 35A120617 | 1       |
| Apomix/Sanacorp            | Hydrated liniment SR/DAC (NR... | 26B140519 | 1       |
| Apomix/Sanacorp            | Hydrated liniment SR/DAC (NR... | 12B180319 | 1       |
| apomix-Noweda              | Hydrated liniment SR/DAC (NR... | 36B250619 | 1       |
| Bomastus                   | Hydrated liniment SR/DAC (NR... | 19003408  | 1       |
| Bomastus Werke             | Hydrated liniment SR/DAC (NR... | 307265    | 1       |
| Bomastus Werke             | Hydrated liniment SR/DAC (NR... | 307264    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 265946    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 274772    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 275869    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 277782    | 2       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 279399    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 4A070114  | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 282885    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 285738    | 2       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 285740    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 286935    | 4       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 287412    | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 287411    | 1       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Bombastus       | Hydrated liniment SR/DAC (NR... | 287410       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 288535       | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 288538       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 288536       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 289863       | 6              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 292492       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 292621       | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 268572       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 270673       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 273773       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 281642       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 281646       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 282884       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 284340       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 284338       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 292493       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 293590       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 293591       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 294433       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 296504       | 6              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 295853       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 295857       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 295852       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 298572       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 299987       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 300966       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 301562       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 301995       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 301993       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 301558       | 9              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 304842       | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 304843       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 303959       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 307684       | 7              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 307683       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 308909       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 310644       | 18             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 308910       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18001660     | 10             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17001840     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18004548     | 11             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 61A040918    | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17000556     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18005582     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18006890     | 10             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18006889     | 18             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19001961     | 13             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19003408     | 11             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19003404     | 6              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19004638     | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19004637     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19006510     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20003070     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20004042     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 285737       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 280805       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 296589       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 308912       | 10             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 296503       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 303960       | 1              |

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| Supplier  | Substance                       | Batch           | Spectra |
|-----------|---------------------------------|-----------------|---------|
| Bombastus | Hydrated liniment SR/DAC (NR... | 19006512        | 6       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 284234          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 300968          | 9       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 269132          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 285792          | 3       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19006511        | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 20001414        | 4       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 20003073        | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 285739          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 286936          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18004547        | 11      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 281645          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 281562          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 294434          | 4       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 17000560        | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 17001841        | 13      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 299338          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 306060          | 4       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 310641          | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 310642          | 5       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 17001837        | 3       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 17001838        | 3       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18004546        | 10      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 278256          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 171207WL/310644 | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 171229WL/310644 | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 180305WL/307264 | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 307263          | 15      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18001658        | 8       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18002958        | 4       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 20003072        | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 277778          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 282882          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 287409          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 288533          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 306059          | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 280876          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 279400          | 5       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 305596          | 11      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 281644          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 275864          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 284339          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 301989          | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18001656        | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18002956        | 3       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 275792          | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18001659        | 5       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18005586        | 11      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18006980        | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 18005585        | 5       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19001958        | 13      |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19001959        | 6       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19001960        | 8       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19003405        | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19003407        | 8       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19004640        | 4       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 19006514        | 7       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 20001413        | 2       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 200014113       | 1       |
| Bombastus | Hydrated liniment SR/DAC (NR... | 20003071        | 4       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20005299     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 285838       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20001412     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 296506       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 299988       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 3048843      | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 295854       | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 303962       | 7              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 302933       | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 303963       | 9              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 307264       | 11             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 300965       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 308911       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17000557     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 4114E-03266  | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 300967       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 301561       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17001839     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18001655     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18001654     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18002959     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18004545     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 180004545    | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18006888     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19001957     | 7              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19002914     | 7              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19002913     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19006509     | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20001408     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 279397       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20004045     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 291866       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18002961     | 13             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18005583     | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 20005302     | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 292491       | 7              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 304841       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 304840       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 190782607    | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 191132210    | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 289862       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 277781       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 291867       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 299986       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 302931       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 304844       | 5              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17000559     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18002960     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 190420904    | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 18002957     | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 306362       | 12             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 17000558     | 4              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19003333     | 11             |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 273774       | 3              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 307680       | 2              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19003406     | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 19004641     | 6              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 285791       | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 26B0590416   | 1              |
| Bombastus       | Hydrated liniment SR/DAC (NR... | 310643       | 4              |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 18001657    | 8       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 18005584    | 4       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 88A161214   | 1       |
| Bombatus                   | Hydrated liniment SR/DAC (NR... | 18006888    | 5       |
| Bombatus                   | Hydrated liniment SR/DAC (NR... | 19001957    | 3       |
| Bombstus/ Sanacorp         | Hydrated liniment SR/DAC (NR... | 281643      | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 47B020712   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 287410      | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 20614       | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 15002302    | 5       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 15324402    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 34B170516   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 304842      | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 17064401    | 17      |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 70717       | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 52B010817   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18074403    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18109002    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18233002    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 63A170918   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18004548    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18313901    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19068803    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19296404    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 20002915001 | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18002961    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18005586    | 4       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 304844      | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 308912      | 3       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18002957    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18001658    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 5B040219    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 16182403    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 16330502    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19166302    | 5       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18001660    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 150321      | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 67A12092916 | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 20003910003 | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 70B191118   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 310641      | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 38A080719   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18050701    | 84      |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 14350002    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 17022202    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 43A030717   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 17333401    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 19068801    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 20000904003 | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 31a290517   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 30A280518   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 15324403    | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 17198903    | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 59b030918   | 1       |
| Caesar & Loretz GmbH       | Hydrated liniment SR/DAC (NR... | 18184802    | 1       |
| Caesar & Loretz GmbH       | Hydrated liniment SR/DAC (NR... | 18313902    | 3       |
| Caesar & Loretz GmbH       | Hydrated liniment SR/DAC (NR... | 20000904004 | 1       |
| Caesar & Loretz GmbH       | Hydrated liniment SR/DAC (NR... | 192827002   | 1       |
| Caesar & Loretz GmbH / ... | Hydrated liniment SR/DAC (NR... | 196512      | 1       |
| Caesar & Loretz GmbH/Je... | Hydrated liniment SR/DAC (NR... | 20001810003 | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caesar & Loretz GmbH/Sa... | Hydrated liniment SR/DAC (NR... | 20000904003 | 1       |
| Cealo                      | Hydrated liniment SR/DAC (NR... | 20000904002 | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 17A010419   | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 300968      | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 18004547    | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 18313901    | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 19004641    | 1       |
| Euro Pharmachem/Phönix     | Hydrated liniment SR/DAC (NR... | 110315      | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 310644      | 1       |
| Fagron                     | Hydrated liniment SR/DAC (NR... | 302933      | 1       |
| Fagron                     | Hydrated liniment SR/DAC (NR... | 16182403    | 1       |
| Fagron                     | Hydrated liniment SR/DAC (NR... | 289863      | 1       |
| Fagron                     | Hydrated liniment SR/DAC (NR... | 294434      | 1       |
| Fagron                     | Hydrated liniment SR/DAC (NR... | 17A030314   | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 284338      | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 6B260115    | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 310642      | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 310643      | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 17001841    | 3       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 17001837    | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 18002960    | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 18004546    | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 18005584    | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 19001959    | 3       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 191511      | 1       |
| Gehe                       | Hydrated liniment SR/DAC (NR... | 193521      | 1       |
| Gehe 09.01.15 Apomix       | Hydrated liniment SR/DAC (NR... | 67A010914   | 1       |
| Gehe 09.01.15/apomix       | Hydrated liniment SR/DAC (NR... | 74A131014   | 1       |
| Gehe amax                  | Hydrated liniment SR/DAC (NR... | 34B200515   | 1       |
| Gehe/18.08.14              | Hydrated liniment SR/DAC (NR... | 42A020614   | 3       |
| Gehe/Apomix                | Hydrated liniment SR/DAC (NR... | 77A251113   | 1       |
| Gehe/Apomix                | Hydrated liniment SR/DAC (NR... | 20A170315   | 1       |
| Gehe/Apomix                | Hydrated liniment SR/DAC (NR... | 84A271216   | 1       |
| Gehe/Apomix                | Hydrated liniment SR/DAC (NR... | 72A031218   | 1       |
| Gehe/Apomix                | Hydrated liniment SR/DAC (NR... | 16A140320   | 1       |
| Gehe/Apomix/06.11.2013     | Hydrated liniment SR/DAC (NR... | 21013       | 1       |
| Gehe/apomix/12.03.14       | Hydrated liniment SR/DAC (NR... | 79A091213   | 1       |
| GEHE/Apomix/29.04.14       | Hydrated liniment SR/DAC (NR... | 24A310314   | 1       |
| GEHE/LEYH Parma/09.04.2... | Hydrated liniment SR/DAC (NR... | 134211      | 2       |
| Gehe/Pharmachem /13.06...  | Hydrated liniment SR/DAC (NR... | 250412      | 1       |
| GEHE/Pharmachem/20.04.2... | Hydrated liniment SR/DAC (NR... | 91211       | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 20000904004 | 2       |
| Infectopharm / Noweda      | Hydrated liniment SR/DAC (NR... | 18001660    | 4       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 19006513    | 1       |
| Kehr                       | Hydrated liniment SR/DAC (NR... | 56B210817   | 1       |
| Leyh                       | Hydrated liniment SR/DAC (NR... | 124941      | 1       |
| Leyh                       | Hydrated liniment SR/DAC (NR... | 153511      | 1       |
| Leyh                       | Hydrated liniment SR/DAC (NR... | 162141      | 2       |
| Leyh Phama                 | Hydrated liniment SR/DAC (NR... | 154111      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 151621      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 155041      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 160551      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 161421      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 162141      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 162741      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 170631      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 171411      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 172121      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 173051      | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 174431      | 5       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 180141    | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 181151    | 2       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 182841    | 2       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 181831    | 1       |
| Leyh Pharma                | Hydrated liniment SR/DAC (NR... | 4580715   | 1       |
| Leyh Pharma / Alliance ... | Hydrated liniment SR/DAC (NR... | 153511    | 1       |
| Leyh Pharma / Phönix       | Hydrated liniment SR/DAC (NR... | 174431    | 1       |
| Leyh Pharma / Phönix       | Hydrated liniment SR/DAC (NR... | 183651    | 1       |
| Leyh Pharma / Phönix       | Hydrated liniment SR/DAC (NR... | 191511    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 110531    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 173041    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 181831    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 183731    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 183651    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 191021    | 2       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 193031    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 193521    | 2       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 201641    | 1       |
| Leyh Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 203951    | 1       |
| Leyh Pharma GmbH / Alli... | Hydrated liniment SR/DAC (NR... | 191511    | 1       |
| Leyh Pharma GmbH / Phönix  | Hydrated liniment SR/DAC (NR... | 181831    | 2       |
| Leyh Pharma GmbH / Phönix  | Hydrated liniment SR/DAC (NR... | 193521    | 3       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 191021    | 1       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 191511    | 1       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 193521    | 3       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 194721    | 1       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 203951    | 1       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 210211    | 1       |
| Leyh Pharma GmbH Brotte... | Hydrated liniment SR/DAC (NR... | 201641    | 3       |
| LEYH PHARMA GmbH/Allian... | Hydrated liniment SR/DAC (NR... | 202751    | 1       |
| leyh Pharma/ Sanacorp      | Hydrated liniment SR/DAC (NR... | 124941    | 1       |
| Leyh pharma/AHD/23.10.19   | Hydrated liniment SR/DAC (NR... | 193521    | 1       |
| Leyh Pharma/Anzag/16.12... | Hydrated liniment SR/DAC (NR... | 194721    | 1       |
| Leyh Pharma/Noweda         | Hydrated liniment SR/DAC (NR... | 164021    | 1       |
| Leyh Pharma/Phönix         | Hydrated liniment SR/DAC (NR... | 174431    | 1       |
| Leyh Pharma/Sanacorp       | Hydrated liniment SR/DAC (NR... | 164641    | 1       |
| Leyh/Gehe                  | Hydrated liniment SR/DAC (NR... | 131121    | 1       |
| Leyh-Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 142231    | 1       |
| Leyh-Pharma GmbH           | Hydrated liniment SR/DAC (NR... | 133721    | 1       |
| LeyhPharma/AlianceH.       | Hydrated liniment SR/DAC (NR... | 173051    | 1       |
| LeyhPharma/AlianceH.       | Hydrated liniment SR/DAC (NR... | 180141    | 1       |
| LeyhPharma/AllianceH.      | Hydrated liniment SR/DAC (NR... | 181151    | 1       |
| LeyhPharma/AllianceH.      | Hydrated liniment SR/DAC (NR... | 191021    | 1       |
| Leyhs                      | Hydrated liniment SR/DAC (NR... | 162231    | 1       |
| Leyhs                      | Hydrated liniment SR/DAC (NR... | 163541    | 1       |
| Leyhs                      | Hydrated liniment SR/DAC (NR... | 164541    | 2       |
| Leyhs Pharma GmbH          | Hydrated liniment SR/DAC (NR... | 161121    | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 15A040315 | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 74A261015 | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 304844    | 2       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 307263    | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 180141    | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 191021    | 1       |
| Noweda                     | Hydrated liniment SR/DAC (NR... | 39B150719 | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 287323    | 5       |
| Noweda /apomix             | Hydrated liniment SR/DAC (NR... | 69B051118 | 1       |
| Noweda PKH Halle           | Hydrated liniment SR/DAC (NR... | 31A290517 | 1       |
| Noweda PKH Halle           | Hydrated liniment SR/DAC (NR... | 31A170619 | 1       |
| Noweda PKH Halle           | Hydrated liniment SR/DAC (NR... | 55A221019 | 1       |
| Noweda PKH Halle           | Hydrated liniment SR/DAC (NR... | 7A040220  | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 288537    | 1       |
| noweda/anzag               | Hydrated liniment SR/DAC (NR... | 15A250319 | 1       |
| noweda/anzag               | Hydrated liniment SR/DAC (NR... | 38A080719 | 2       |
| Noweda/apomix              | Hydrated liniment SR/DAC (NR... | 12B180319 | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 297052    | 1       |
| Euro OTC                   | Hydrated liniment SR/DAC (NR... | 42B160615 | 1       |
| Pharmachem                 | Hydrated liniment SR/DAC (NR... | 160115    | 1       |
| Pharmachem                 | Hydrated liniment SR/DAC (NR... | 300415    | 1       |
| Pharmachem                 | Hydrated liniment SR/DAC (NR... | 190416    | 1       |
| Pharmachem                 | Hydrated liniment SR/DAC (NR... | 160129    | 1       |
| Pharmachem                 | Hydrated liniment SR/DAC (NR... | 41119     | 2       |
| Pharmachem / AHD           | Hydrated liniment SR/DAC (NR... | 307264    | 1       |
| Pharmachem Gmbh            | Hydrated liniment SR/DAC (NR... | 20614     | 2       |
| Pharmachem GmbH & Co KG    | Hydrated liniment SR/DAC (NR... | 100315    | 4       |
| Pharmachem GmbH Pößneck    | Hydrated liniment SR/DAC (NR... | 190416    | 1       |
| Pharmachem GmbH und Co.KG  | Hydrated liniment SR/DAC (NR... | 160129    | 1       |
| Pharmachem GmbH/Phönix     | Hydrated liniment SR/DAC (NR... | 30815     | 1       |
| Pharmachem Pößneck         | Hydrated liniment SR/DAC (NR... | 270918    | 1       |
| Pharmachem Pößneck GmbH... | Hydrated liniment SR/DAC (NR... | 250516    | 2       |
| Pharmachem Pößneck GmbH... | Hydrated liniment SR/DAC (NR... | 10916     | 1       |
| Pharmachem Pößneck GmbH... | Hydrated liniment SR/DAC (NR... | 141016    | 1       |
| Pharmachem/ Anzag          | Hydrated liniment SR/DAC (NR... | 301018    | 1       |
| Pharmachem/ Noweda         | Hydrated liniment SR/DAC (NR... | 310715    | 1       |
| Pharmachem/Alliance Hea... | Hydrated liniment SR/DAC (NR... | 70717     | 1       |
| Pharmachem/Anzag/10.07...  | Hydrated liniment SR/DAC (NR... | 60513     | 1       |
| Pharmachem/ANZAG/27.03...  | Hydrated liniment SR/DAC (NR... | 210113    | 1       |
| Pharmachem/Noweda          | Hydrated liniment SR/DAC (NR... | 10916     | 1       |
| Pharmachem/Phönix          | Hydrated liniment SR/DAC (NR... | 21013     | 1       |
| Pharmachem/Phönix          | Hydrated liniment SR/DAC (NR... | 160115    | 1       |
| Pharmachem/Phönix          | Hydrated liniment SR/DAC (NR... | 190416    | 1       |
| Pharmachem/Phönix          | Hydrated liniment SR/DAC (NR... | 50318     | 2       |
| PHK GmbH                   | Hydrated liniment SR/DAC (NR... | 66A160913 | 1       |
| PHK GmbH                   | Hydrated liniment SR/DAC (NR... | 71A291013 | 2       |
| Phoenix                    | Hydrated liniment SR/DAC (NR... | 17000560  | 2       |
| Phoenix                    | Hydrated liniment SR/DAC (NR... | 18002960  | 1       |
| Phoenix                    | Hydrated liniment SR/DAC (NR... | 18005585  | 1       |
| Phoenix                    | Hydrated liniment SR/DAC (NR... | 200842808 | 1       |
| Phoenix (PKH Halle)        | Hydrated liniment SR/DAC (NR... | 7A290113  | 1       |
| Phoenix (PKH Halle)        | Hydrated liniment SR/DAC (NR... | 5A210113  | 1       |
| Phoenix/apomix             | Hydrated liniment SR/DAC (NR... | 33B180618 | 1       |
| Phoenix/apomix             | Hydrated liniment SR/DAC (NR... | 51B230919 | 1       |
| Phoenix/Apomix             | Hydrated liniment SR/DAC (NR... | 71A291013 | 1       |
| Phönix                     | Hydrated liniment SR/DAC (NR... | 39A190617 | 1       |
| Phönix                     | Hydrated liniment SR/DAC (NR... | 67B301017 | 1       |
| Phönix                     | Hydrated liniment SR/DAC (NR... | 174431    | 1       |
| Phönix (PKH Halle)         | Hydrated liniment SR/DAC (NR... | 60A020812 | 1       |
| Phönix / Apomix            | Hydrated liniment SR/DAC (NR... | 24A080518 | 1       |
| Phönix / Apomix            | Hydrated liniment SR/DAC (NR... | 34A180618 | 2       |
| Phönix / Apomix            | Hydrated liniment SR/DAC (NR... | 57A041119 | 1       |
| Phönix / Apomix            | Hydrated liniment SR/DAC (NR... | 12A240220 | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 17198902  | 2       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 18109001  | 2       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 275789    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 274014    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 279496    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 174431    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 181831    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 182841    | 1       |
| Phönix Gotha               | Hydrated liniment SR/DAC (NR... | 191021    | 1       |
| Phönix/ Apomix             | Hydrated liniment SR/DAC (NR... | 64A240918 | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| phönix/Apomix              | Hydrated liniment SR/DAC (NR... | 25A090518   | 1       |
| Phönix/Apomix              | Hydrated liniment SR/DAC (NR... | 73A041217   | 1       |
| Phönix/Leyh Pharma         | Hydrated liniment SR/DAC (NR... | 182841      | 2       |
| Phönix/Leyh Pharma         | Hydrated liniment SR/DAC (NR... | 183651      | 1       |
| PhR Neidhard/Noweda        | Hydrated liniment SR/DAC (NR... | 7A040220    | 1       |
| PKH / Phoenix Leipzig      | Hydrated liniment SR/DAC (NR... | 14A040315   | 1       |
| PKH GmbH                   | Hydrated liniment SR/DAC (NR... | 35A120617   | 1       |
| PKH GmbH Apomix / Phönix   | Hydrated liniment SR/DAC (NR... | 69B071013   | 2       |
| PKH GmbH Apomix / Phönix   | Hydrated liniment SR/DAC (NR... | 28B110520   | 1       |
| PKH GmbH Halle/ AHD        | Hydrated liniment SR/DAC (NR... | 45A200819   | 1       |
| PKH GmbH/ Phönix           | Hydrated liniment SR/DAC (NR... | 23A020413   | 1       |
| PKH GmbH/ Sanacorp         | Hydrated liniment SR/DAC (NR... | 78B031213   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 56A120813   | 4       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 24A310314   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 42A020614   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 69A080914   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 85A281215   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 72A101016   | 1       |
| PKH Halle                  | Hydrated liniment SR/DAC (NR... | 30B250520   | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 15A050313   | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 71A291013   | 2       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 22A250314   | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 45A170614   | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 59A050814   | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 5A190115    | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 2A120115    | 1       |
| PKH Halle / Phoenix        | Hydrated liniment SR/DAC (NR... | 44A220615   | 1       |
| PKH Halle/ Alliance Hea... | Hydrated liniment SR/DAC (NR... | 11A270218   | 1       |
| PKH Halle/ Alliance Hea... | Hydrated liniment SR/DAC (NR... | 8A050218    | 1       |
| PKH Halle/ GEHE            | Hydrated liniment SR/DAC (NR... | 3A080118    | 1       |
| PKH Halle/ Noweda          | Hydrated liniment SR/DAC (NR... | 49A300718   | 1       |
| PKH Halle/ Noweda          | Hydrated liniment SR/DAC (NR... | 41A150719   | 1       |
| PKH Halle/ Noweda          | Hydrated liniment SR/DAC (NR... | 57A041119   | 2       |
| PKH Halle/ Phoenix / 12... | Hydrated liniment SR/DAC (NR... | 33a090516   | 1       |
| PKH Halle/ Phoenix Lepz... | Hydrated liniment SR/DAC (NR... | 47A060715   | 1       |
| pkh, Phönix                | Hydrated liniment SR/DAC (NR... | 14B170214   | 1       |
| pkh, Phönix                | Hydrated liniment SR/DAC (NR... | 32A120515   | 1       |
| PKH/ Phoenix Leipzig 04... | Hydrated liniment SR/DAC (NR... | 24a080518   | 1       |
| Rabenapotheke              | Hydrated liniment SR/DAC (NR... | 76A271014   | 1       |
| Raben-Apotheke Mildenau    | Hydrated liniment SR/DAC (NR... | 49A230614   | 1       |
| Raben-Apotheke Mildenau    | Hydrated liniment SR/DAC (NR... | 63A120814   | 2       |
| sanacorp                   | Hydrated liniment SR/DAC (NR... | 24A310314   | 1       |
| Sanacorp                   | Hydrated liniment SR/DAC (NR... | 2A120115    | 1       |
| Sanacorp                   | Hydrated liniment SR/DAC (NR... | 275869      | 1       |
| Sanacorp                   | Hydrated liniment SR/DAC (NR... | 16182403    | 1       |
| Sanacorp                   | Hydrated liniment SR/DAC (NR... | 18109002    | 1       |
| Sanacorp                   | Hydrated liniment SR/DAC (NR... | 21B060420   | 1       |
| Caelo                      | Hydrated liniment SR/DAC (NR... | 281646      | 1       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 19004642    | 7       |
| Bombastus                  | Hydrated liniment SR/DAC (NR... | 269848      | 2       |
| Sanacorp/ Leyh Pharma      | Hydrated liniment SR/DAC (NR... | 115051      | 1       |
| Sanacorp/ Leyh Pharma      | Hydrated liniment SR/DAC (NR... | 122141      | 1       |
| Sanacorp/ Leyh Pharma      | Hydrated liniment SR/DAC (NR... | 123011      | 1       |
| /Noweda                    | Non-ionic hydrous liniment S... | 281562      | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 20004406    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 19006547    | 2       |
| 10260682                   | Non-ionic hydrous liniment S... | 19055702    | 1       |
| 18050701                   | Non-ionic hydrous liniment S... | 17261201    | 1       |
| 20.05.19/AHD/apomix        | Non-ionic hydrous liniment S... | 19001299    | 1       |
| AEP                        | Non-ionic hydrous liniment S... | 20003577001 | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Bombastus                  | Non-ionic hydrous liniment S... | 301556     | 2       |
| Bombastus                  | Non-ionic hydrous liniment S... | 302284     | 3       |
| AHD                        | Non-ionic hydrous liniment S... | 17144401   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 18005138   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 18153501   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 18006450   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 19001295   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 19001297   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 19002434   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 19006548   | 1       |
| AHD                        | Non-ionic hydrous liniment S... | 19006547   | 1       |
| AHD 09.01.15/apomix        | Non-ionic hydrous liniment S... | 22A101114  | 1       |
| AHD 09.01.15/apomix        | Non-ionic hydrous liniment S... | A150914    | 1       |
| AHD 09.01.15/apomix        | Non-ionic hydrous liniment S... | 20A150914  | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 297177     | 10      |
| Bombastus                  | Non-ionic hydrous liniment S... | 300200     | 10      |
| Bombastus                  | Non-ionic hydrous liniment S... | 2002001    | 1       |
| Caelo                      | Non-ionic hydrous liniment S... | 16218201   | 17      |
| AHL                        | Non-ionic hydrous liniment S... | 17312501   | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 294211     | 8       |
| Allianc. Health. /Apomix   | Non-ionic hydrous liniment S... | 301558     | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 297175     | 4       |
| Alliance                   | Non-ionic hydrous liniment S... | 18005541   | 1       |
| Alliance                   | Non-ionic hydrous liniment S... | 19055702   | 1       |
| Alliance health            | Non-ionic hydrous liniment S... | 14350703   | 2       |
| Alliance Health 09.05.2... | Non-ionic hydrous liniment S... | 14134601   | 2       |
| Bombastus                  | Non-ionic hydrous liniment S... | 282332     | 4       |
| Bombastus                  | Non-ionic hydrous liniment S... | 20000425   | 5       |
| Anzag                      | Non-ionic hydrous liniment S... | 274016     | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 275786     | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 275788     | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 16021601   | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 17027801   | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 19001298   | 1       |
| Anzag                      | Non-ionic hydrous liniment S... | 19006137   | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 289207     | 1       |
| Anzag/Anzag 14.09.18       | Non-ionic hydrous liniment S... | 18003529   | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 18000059   | 15      |
| api-ident                  | Non-ionic hydrous liniment S... | 18050701   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 20A221012  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 10A1206013 | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 11A010713  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 20A051113  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 7A170414   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 13A040614  | 3       |
| apomix                     | Non-ionic hydrous liniment S... | 8A170412   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 24A101212  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 2A100215   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 3A100215   | 2       |
| apomix                     | Non-ionic hydrous liniment S... | 12A100615  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 15A150715  | 2       |
| apomix                     | Non-ionic hydrous liniment S... | 14A300615  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 16A050815  | 2       |
| apomix                     | Non-ionic hydrous liniment S... | 20A280915  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 26A281215  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 10A110515  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 6A310316   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 9A190516   | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 10A310516  | 1       |
| apomix                     | Non-ionic hydrous liniment S... | 8A100516   | 1       |

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| Supplier | Substance                       | Batch     | Spectra |
|----------|---------------------------------|-----------|---------|
| apomix   | Non-ionic hydrous liniment S... | 14A180716 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 17A220816 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 15A110717 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 14A260617 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 16A020817 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 9A230518  | 2       |
| apomix   | Non-ionic hydrous liniment S... | 13A260618 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 15A170718 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 17A020818 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 24A081018 | 3       |
| apomix   | Non-ionic hydrous liniment S... | 27A111218 | 2       |
| apomix   | Non-ionic hydrous liniment S... | 5A150419  | 1       |
| apomix   | Non-ionic hydrous liniment S... | 10C010719 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 12A200819 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 15B071019 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 18B140720 | 1       |
| apomix   | Non-ionic hydrous liniment S... | 7A300321  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 24A101212 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 11A010713 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 17A230913 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 15A260813 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 20A051113 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 23A111213 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 4A250214  | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 7A170414  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 286420    | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 12A270514 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 18A200814 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 16A040814 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 22A101114 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 15A300712 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 17A030912 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 25A021214 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 27A221214 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 2A100215  | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 5A110315  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 11B270515 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 16A050815 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 20A280915 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 23A181115 | 3       |
| Apomix   | Non-ionic hydrous liniment S... | 25A081215 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 2A020216  | 4       |
| Apomix   | Non-ionic hydrous liniment S... | 6A310316  | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 10A310516 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 9A190516  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 12A200616 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 19A010916 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 24A231116 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 1A100117  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 8A250417  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 6A290317  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 13A260617 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 17A140817 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 21A250917 | 3       |
| Apomix   | Non-ionic hydrous liniment S... | 27A181217 | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 4A190218  | 3       |
| Apomix   | Non-ionic hydrous liniment S... | 5A120318  | 1       |
| Apomix   | Non-ionic hydrous liniment S... | 17A020818 | 2       |
| Apomix   | Non-ionic hydrous liniment S... | 13A260618 | 3       |
| Apomix   | Non-ionic hydrous liniment S... | 13a260618 | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix                     | Non-ionic hydrous liniment S... | 13A26068  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 18A020818 | 2       |
| Apomix                     | Non-ionic hydrous liniment S... | 22A100918 | 3       |
| Apomix                     | Non-ionic hydrous liniment S... | 1A070119  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 24A081018 | 3       |
| Apomix                     | Non-ionic hydrous liniment S... | 2A290119  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 28A121218 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 27A111218 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 3A060319  | 3       |
| Apomix                     | Non-ionic hydrous liniment S... | 11A230719 | 2       |
| Apomix                     | Non-ionic hydrous liniment S... | 12A200819 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 16A081019 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 9A120619  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 52A230919 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 15B071019 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 18A031219 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 3A100220  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 2A200120  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 4A250220  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 15B160320 | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | 6A090320  | 1       |
| Apomix                     | Non-ionic hydrous liniment S... | apomix    | 1       |
| apomix / Phoenix / 05...   | Non-ionic hydrous liniment S... | 12a200616 | 1       |
| apomix / Phoenix / 24...   | Non-ionic hydrous liniment S... | 14a180716 | 1       |
| apomix PKH GmbH Halle      | Non-ionic hydrous liniment S... | 9A190516  | 1       |
| apomix / Anzag             | Non-ionic hydrous liniment S... | 13A040614 | 1       |
| apomix / Anzag             | Non-ionic hydrous liniment S... | 15A140714 | 1       |
| apomix / Anzag             | Non-ionic hydrous liniment S... | 22A101114 | 1       |
| apomix / Anzag             | Non-ionic hydrous liniment S... | 1A200115  | 1       |
| apomix / Gehe              | Non-ionic hydrous liniment S... | 18B010916 | 1       |
| Apomix / Gehe              | Non-ionic hydrous liniment S... | 6A310316  | 1       |
| Apomix / Gehe              | Non-ionic hydrous liniment S... | 1A100117  | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 15A170718 | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 27A111218 | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 24A081018 | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 3A060319  | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 9A120619  | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 11A230719 | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 10B010719 | 1       |
| apomix / Noweda            | Non-ionic hydrous liniment S... | 15B071019 | 2       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 14A260617 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 6A120318  | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 15A170718 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 18A020218 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 18A020818 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 22A100918 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 28A121218 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 2A290119  | 2       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 7A300419  | 2       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 11A230719 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 13A090919 | 2       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 16A081019 | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 20A301219 | 2       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 6A090320  | 1       |
| Apomix / Noweda            | Non-ionic hydrous liniment S... | 18A230320 | 1       |
| apomix / Phoenix           | Non-ionic hydrous liniment S... | 11A040618 | 1       |
| apomix / Phoenix           | Non-ionic hydrous liniment S... | 22A100918 | 2       |
| apomix / Phoenix           | Non-ionic hydrous liniment S... | 23A081018 | 1       |
| Apomix / Phoenix           | Non-ionic hydrous liniment S... | 10C070420 | 1       |
| apomix / Phoenix / 23.0... | Non-ionic hydrous liniment S... | 4a010316  | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| apomix / Phoenix Leipzi... | Non-ionic hydrous liniment S... | 18a070915 | 1       |
| apomix / Phoenix Leipzi... | Non-ionic hydrous liniment S... | 26A28125  | 1       |
| apomix / Phoenix Leipzi... | Non-ionic hydrous liniment S... | 23a181115 | 1       |
| apomix / Phoenix Leipzi... | Non-ionic hydrous liniment S... | 18A070915 | 1       |
| apomix / Phoenix Leipzi... | Non-ionic hydrous liniment S... | 5a120318  | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 15A260813 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 20A051113 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 23A111213 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 17A230913 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 25A191213 | 3       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 10A150514 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 15A140714 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 16A040814 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 24A271114 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 22A101114 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 12A100615 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 15A150715 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 16A050815 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 4A010316  | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 8A100516  | 3       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 21A241016 | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 2A010217  | 1       |
| Apomix / Phönix            | Non-ionic hydrous liniment S... | 10A070420 | 1       |
| Apomix 001                 | Non-ionic hydrous liniment S... | 10A150512 | 2       |
| apomix AHD                 | Non-ionic hydrous liniment S... | 23A181115 | 1       |
| Apomix Anzag               | Non-ionic hydrous liniment S... | 6A080413  | 1       |
| Apomix Anzag               | Non-ionic hydrous liniment S... | 12A270514 | 1       |
| apomix Ebert&Jacobi        | Non-ionic hydrous liniment S... | 8A250417  | 1       |
| Apomix PKH                 | Non-ionic hydrous liniment S... | 13A090919 | 1       |
| Apomix PKH GmbH            | Non-ionic hydrous liniment S... | 20A280915 | 1       |
| Apomix PKH GmbH            | Non-ionic hydrous liniment S... | 4A010316  | 1       |
| apomix, Kehr 07.11.2019    | Non-ionic hydrous liniment S... | 10C010719 | 1       |
| apomix, phoenix 02.05.2... | Non-ionic hydrous liniment S... | 4a190218  | 1       |
| Apomix, Phoenix 03.11.2... | Non-ionic hydrous liniment S... | 19A040917 | 1       |
| apomix, phoenix 28.05.2... | Non-ionic hydrous liniment S... | 6a120318  | 1       |
| apomix, Phoenix, 26.01...  | Non-ionic hydrous liniment S... | 25a071217 | 3       |
| apomix, Phönix, 09.01.2... | Non-ionic hydrous liniment S... | 22a231017 | 2       |
| Apomix, PKH Halle          | Non-ionic hydrous liniment S... | 16A081019 | 1       |
| Apomix, PKH Halle          | Non-ionic hydrous liniment S... | 3A100220  | 1       |
| Apomix, PKH Halle          | Non-ionic hydrous liniment S... | 31A250520 | 1       |
| Apomix, PKH Halle          | Non-ionic hydrous liniment S... | 18A140720 | 1       |
| apomix,Kehr 01.04.2020     | Non-ionic hydrous liniment S... | 6A090320  | 1       |
| apomix,Phönix, 23.11..2... | Non-ionic hydrous liniment S... | 19a040917 | 1       |
| Apomix/ Anzag              | Non-ionic hydrous liniment S... | 10A310516 | 1       |
| Apomix/ Gehe               | Non-ionic hydrous liniment S... | 3A060319  | 1       |
| apomix/ Gehe 06.03.19      | Non-ionic hydrous liniment S... | 27A111218 | 1       |
| apomix/ Gehe 13.09.2019    | Non-ionic hydrous liniment S... | 7A300419  | 1       |
| apomix/ Gehe 26.01.2018    | Non-ionic hydrous liniment S... | 25A071217 | 2       |
| Apomix/ Gehe 27.09.18      | Non-ionic hydrous liniment S... | 20A270818 | 1       |
| apomix/ Gehe 28.12.18      | Non-ionic hydrous liniment S... | 16A170718 | 1       |
| apomix/ Phoenix            | Non-ionic hydrous liniment S... | 6A120318  | 1       |
| apomix/ Phoenix            | Non-ionic hydrous liniment S... | 11A230719 | 1       |
| Apomix/ Phoenix            | Non-ionic hydrous liniment S... | 25A081215 | 1       |
| Apomix/ Phoenix            | Non-ionic hydrous liniment S... | 19004234  | 1       |
| apomix/ Phoenix / 07.04... | Non-ionic hydrous liniment S... | 25a081215 | 1       |
| apomix/ Phoenix / 24.10... | Non-ionic hydrous liniment S... | 8a100516  | 1       |
| apomix/ Phoenix 18.07.18   | Non-ionic hydrous liniment S... | 9A230518  | 3       |
| apomix/ Phoenix Leipzig... | Non-ionic hydrous liniment S... | 1a100117  | 1       |
| apomix/ Phoenix Leipzig... | Non-ionic hydrous liniment S... | 4a010317  | 1       |
| apomix/ Phoenix Leipzig... | Non-ionic hydrous liniment S... | 6A290317  | 1       |

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| Supplier               | Substance                       | Batch      | Spectra |
|------------------------|---------------------------------|------------|---------|
| Apomix/ Phönix         | Non-ionic hydrous liniment S... | 11A010713  | 1       |
| Apomix/ Phönix         | Non-ionic hydrous liniment S... | 25A081215  | 1       |
| Apomix//Gehe           | Non-ionic hydrous liniment S... | 24A151117  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 17A140817  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 24A151117  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 25A071217  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 25A181217  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 27A181217  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 6A120318   | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 16A170718  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 15A170718  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 17A020818  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 24A081018  | 2       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 27A111218  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 11A230719  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 10B010719  | 2       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 10C010719  | 1       |
| Apomix/AHD             | Non-ionic hydrous liniment S... | 6A090320   | 1       |
| apomix/Alliance        | Non-ionic hydrous liniment S... | 16A081019  | 1       |
| Apomix/Anzag           | Non-ionic hydrous liniment S... | 10C010719  | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 27A221214  | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 5A120318   | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 24A0801018 | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 16A081019  | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 13A090919  | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 7A070320   | 1       |
| Apomix/Gehe            | Non-ionic hydrous liniment S... | 20A120820  | 1       |
| Apomix/Gehe 11.06.19   | Non-ionic hydrous liniment S... | 3A060319   | 1       |
| apomix/Gehe 22.05.2018 | Non-ionic hydrous liniment S... | 6A120318   | 1       |
| apomix/Gehe 27.08.2018 | Non-ionic hydrous liniment S... | 13A260618  | 1       |
| apomix/Gehe 29.11.19   | Non-ionic hydrous liniment S... | 16A081019  | 1       |
| apomix/Geibo           | Non-ionic hydrous liniment S... | 10C070420  | 1       |
| Apomix/Gotha           | Non-ionic hydrous liniment S... | 28B160517  | 1       |
| Apomix/Jenne           | Non-ionic hydrous liniment S... | 11A040618  | 1       |
| Apomix/Jenne           | Non-ionic hydrous liniment S... | 20A301219  | 1       |
| Apomix/Kehr            | Non-ionic hydrous liniment S... | 11A230719  | 1       |
| Apomix/Kehr            | Non-ionic hydrous liniment S... | 24A280920  | 1       |
| apomix/Noweda          | Non-ionic hydrous liniment S... | 19A010916  | 1       |
| apomix/Noweda          | Non-ionic hydrous liniment S... | 25A071217  | 1       |
| apomix/Noweda          | Non-ionic hydrous liniment S... | 2A170118   | 1       |
| apomix/Noweda          | Non-ionic hydrous liniment S... | 1B200120   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 12A100713  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 3B180214   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 13A040614  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 1A200115   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 6B180315   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 2A020216   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 24A231116  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 2A010217   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 13A260617  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 5A120318   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 25A071217  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 17A020818  | 2       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 18A020818  | 2       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 20A270818  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 27A111218  | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 2A290119   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 3A060319   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 7A300419   | 1       |
| Apomix/Noweda          | Non-ionic hydrous liniment S... | 11A230719  | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 16A081019 | 1       |
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 3A100220  | 1       |
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 108070420 | 1       |
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 11A210420 | 1       |
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 14A180520 | 1       |
| Apomix/Noweda              | Non-ionic hydrous liniment S... | 17A130720 | 1       |
| Apomix/Phoenix             | Non-ionic hydrous liniment S... | 5A150419  | 1       |
| Apomix/Phoenix Leipzig ... | Non-ionic hydrous liniment S... | 14A260617 | 3       |
| apomix/Phoenix/03.01.2017  | Non-ionic hydrous liniment S... | 22a251016 | 2       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 17A030912 | 2       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 20A121211 | 1       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 5B170414  | 2       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 22A101114 | 1       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 8A080415  | 1       |
| apomix/Phönix              | Non-ionic hydrous liniment S... | 190182501 | 1       |
| Apomix/phönix              | Non-ionic hydrous liniment S... | 17A140817 | 1       |
| Apomix/Phönix              | Non-ionic hydrous liniment S... | 9A290513  | 1       |
| Apomix/Phönix              | Non-ionic hydrous liniment S... | 18B010916 | 1       |
| Apomix/Phönix              | Non-ionic hydrous liniment S... | 24A151117 | 1       |
| Apomix/Phönix              | Non-ionic hydrous liniment S... | 2A170118  | 1       |
| Apomix/Phönix              | Non-ionic hydrous liniment S... | 10C070420 | 1       |
| Apomix/Phönix 3.09.19      | Non-ionic hydrous liniment S... | 11A230719 | 1       |
| Apomix/PKH Halle/Phönix    | Non-ionic hydrous liniment S... | 16A020817 | 1       |
| Apomix/PKH Halle/Phönix    | Non-ionic hydrous liniment S... | 23A081018 | 1       |
| Apomix/PKH Halle/Phönix    | Non-ionic hydrous liniment S... | 2A290119  | 2       |
| aponorm/WEPA               | Non-ionic hydrous liniment S... | 18003534  | 1       |
| Audor Pharma               | Non-ionic hydrous liniment S... | 17312601  | 1       |
| Beiersdorf/Kehr            | Non-ionic hydrous liniment S... | 302849    | 1       |
| Bomastus                   | Non-ionic hydrous liniment S... | 19004514  | 1       |
| Bomastus/Noweda            | Non-ionic hydrous liniment S... | 19005453  | 1       |
| Bomastus/Phönix            | Non-ionic hydrous liniment S... | 290610    | 1       |
| bomb                       | Non-ionic hydrous liniment S... | 18005144  | 1       |
| Bombaltus/Sanac            | Non-ionic hydrous liniment S... | 279498    | 1       |
| Bombas/Phoenix             | Non-ionic hydrous liniment S... | 19002805  | 1       |
| Bombast/Phön               | Non-ionic hydrous liniment S... | 19006549  | 1       |
| BOMBASTU Gehe 29:01.18     | Non-ionic hydrous liniment S... | 170011409 | 1       |
| Bombastu/ Noweda           | Non-ionic hydrous liniment S... | 309802    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 310356    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 18005137  | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 267329    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 267339    | 3       |
| Bombastus                  | Non-ionic hydrous liniment S... | 269133    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 269843    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 269131    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 271236    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 271242    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 272615    | 4       |
| Bombastus                  | Non-ionic hydrous liniment S... | 273371    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 274016    | 2       |
| Bombastus                  | Non-ionic hydrous liniment S... | 273375    | 2       |
| Bombastus                  | Non-ionic hydrous liniment S... | 274813    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 274820    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 274815    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 275787    | 2       |
| Bombastus                  | Non-ionic hydrous liniment S... | 276525    | 5       |
| Bombastus                  | Non-ionic hydrous liniment S... | 275788    | 4       |
| Bombastus                  | Non-ionic hydrous liniment S... | 271302    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 273374    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 275790    | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 278255    | 1       |

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| Supplier  | Substance                       | Batch     | Spectra |
|-----------|---------------------------------|-----------|---------|
| Bombastus | Non-ionic hydrous liniment S... | 278259    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 278260    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 278258    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 276523    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 276524    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 279502    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 600991111 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 281563    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 282334    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 131648    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 282947    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 7021402   | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 229263    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 284237    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 285025    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 286421    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 287318    | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 288386    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 288453    | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 488451    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 288389    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 288454    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 289209    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 290611    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 291223    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 291286    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 291222    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 296584    | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 302852    | 11      |
| Bombastus | Non-ionic hydrous liniment S... | 310359    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 272647    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 287320    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 288452    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 290613    | 8       |
| Bombastus | Non-ionic hydrous liniment S... | 290612    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 291220    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 291861    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 292742    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 291860    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 294213    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 294277    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 294212    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 295073    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 292619    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 295910    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 296108    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 296106    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 15192502  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 297172    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 296111    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 296107    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 2764      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 297174    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 298468    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 298466    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 300196    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 300861    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 2809      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 301555    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 2819      | 1       |

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| Supplier  | Substance                       | Batch       | Spectra |
|-----------|---------------------------------|-------------|---------|
| Bombastus | Non-ionic hydrous liniment S... | 301557      | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 302851      | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 302849      | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 300858      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 304932      | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 303896      | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 304496      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 306361      | 16      |
| Bombastus | Non-ionic hydrous liniment S... | 30898       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 305594      | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 303893      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 306359      | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 308623      | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 308628      | 16      |
| Bombastus | Non-ionic hydrous liniment S... | 308624      | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 309791      | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 309795      | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 309803      | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 309797      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 310357      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 311041      | 14      |
| Bombastus | Non-ionic hydrous liniment S... | 311611      | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 17001405    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 17001406    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18001761    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 1800059     | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18001767    | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 18002335    | 19      |
| Bombastus | Non-ionic hydrous liniment S... | 18001766    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18002332    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18003534    | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 18003531    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 3249        | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18006450    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 18006449    | 8       |
| Bombastus | Non-ionic hydrous liniment S... | 18005540    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002441    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 19004232    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 25031-05-01 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 200000988   | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20001327    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 20002760    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 20003824    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 2003825     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18006451    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 20003826    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 273373      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 298465      | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 309794      | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 309796      | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18003529    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 308626      | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 311610      | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 18001762    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18002885    | 8       |
| Bombastus | Non-ionic hydrous liniment S... | 18002886    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 18004188    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 18006452    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 19000519    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 17001408    | 2       |

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| <b>Supplier</b> | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------------|--------------|----------------|
| Bombastus       | Non-ionic hydrous liniment S... | 24(125336)   | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19001298     | 18             |
| Bombastus       | Non-ionic hydrous liniment S... | 29(19000519) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 30(19001296) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 303898       | 8              |
| Bombastus       | Non-ionic hydrous liniment S... | 26(18005138) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 27(18006450) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 32(19002434) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 33(19001295) | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19005453     | 10             |
| Bombastus       | Non-ionic hydrous liniment S... | 279497       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 281564       | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 281561       | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 285023       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 289205       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 290121       | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 17144502     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 18002355     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 20002761     | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 19006549     | 5              |
| Bombastus       | Non-ionic hydrous liniment S... | 19005450     | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 20002983     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 295069       | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 308622       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19000520     | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 19006136     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19002438     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19004813     | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 20002986     | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 286419       | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 296109       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 296110       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 305595       | 6              |
| Bombastus       | Non-ionic hydrous liniment S... | 306358       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 309804       | 7              |
| Bombastus       | Non-ionic hydrous liniment S... | 311040       | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 18000057     | 5              |
| Bombastus       | Non-ionic hydrous liniment S... | 18000055     | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 18004191     | 8              |
| Bombastus       | Non-ionic hydrous liniment S... | 19002437     | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 20002989     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 19003334     | 5              |
| Bombastus       | Non-ionic hydrous liniment S... | 279498       | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 281558       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 282946       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 285790       | 2              |
| Bombastus       | Non-ionic hydrous liniment S... | 289206       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 291859       | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 272614       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 20000986     | 3              |
| Bombastus       | Non-ionic hydrous liniment S... | 284236       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 297171       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 5A150419     | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 276526       | 1              |
| Bombastus       | Non-ionic hydrous liniment S... | 300859       | 6              |
| Bombastus       | Non-ionic hydrous liniment S... | 19002439     | 4              |
| Bombastus       | Non-ionic hydrous liniment S... | 18005143     | 6              |
| Bombastus       | Non-ionic hydrous liniment S... | 19000521     | 10             |
| Bombastus       | Non-ionic hydrous liniment S... | 20003825     | 5              |
| Bombastus       | Non-ionic hydrous liniment S... | 288387       | 2              |

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| Supplier  | Substance                       | Batch        | Spectra |
|-----------|---------------------------------|--------------|---------|
| Bombastus | Non-ionic hydrous liniment S... | 274819       | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 304933       | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 284233       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 274869       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18002887     | 18      |
| Bombastus | Non-ionic hydrous liniment S... | 19001297     | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 19004815     | 10      |
| Bombastus | Non-ionic hydrous liniment S... | 17001403     | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 290610       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 295068       | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 299132       | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 300860       | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 20002987     | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 281560       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 271245       | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 279499       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 271249       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19004234     | 14      |
| Bombastus | Non-ionic hydrous liniment S... | 18005139     | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 302285       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 303895       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 279501       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 297178       | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 307681       | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 309799       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18(310355)   | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19(17000575) | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 418M-03266   | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 17001409     | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 20(17000575) | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 21(17001405) | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18000058     | 13      |
| Bombastus | Non-ionic hydrous liniment S... | 18000056     | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 23(18002332) | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19003330     | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 21000621     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20001330     | 13      |
| Bombastus | Non-ionic hydrous liniment S... | 296585       | 8       |
| Bombastus | Non-ionic hydrous liniment S... | 19004810     | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 275786       | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 304935       | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 306360       | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 305591       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 308627       | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 18005144     | 12      |
| Bombastus | Non-ionic hydrous liniment S... | 18005541     | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 19001295     | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 19005449     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19006135     | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 17001407     | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19002804     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 306357       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 309786       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 17000574     | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18002331     | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18004183     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19003332     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19004812     | 1       |
| Caelo     | Non-ionic hydrous liniment S... | 19006137     | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 268125       | 1       |

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| Supplier  | Substance                       | Batch              | Spectra |
|-----------|---------------------------------|--------------------|---------|
| Bombastus | Non-ionic hydrous liniment S... | 285024             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 274014             | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 308625             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18000054           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18003527           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18004182           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18004184           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18006453           | 10      |
| Bombastus | Non-ionic hydrous liniment S... | 18005536           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19000518           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002435           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19001224           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002842           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19001293           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19004230           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19006134           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20000417           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20002762           | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 310358-20180112Ma4 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002436           | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 285795             | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 20000989           | 15      |
| Bombastus | Non-ionic hydrous liniment S... | 20000424           | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 20001326           | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 17208901           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 309790             | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19001296           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 20001325           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 22(18000057)       | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 21002329           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 16318801           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18002333           | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 293578             | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 300863             | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 60091112           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 310355             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18001764           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18003533           | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 19002802           | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 19003331           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 3451               | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19006550           | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 20002003           | 10      |
| Bombastus | Non-ionic hydrous liniment S... | 2000988            | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20002988           | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 20002984           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 289208             | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 291221             | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 295070             | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 60091111           | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 298467             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 299133             | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 300198             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 15421002           | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 302287             | 12      |
| Bombastus | Non-ionic hydrous liniment S... | 303894             | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 303897             | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 17001410           | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 180000058          | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 18001768           | 6       |

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| Supplier  | Substance                       | Batch     | Spectra |
|-----------|---------------------------------|-----------|---------|
| Bombastus | Non-ionic hydrous liniment S... | 18005145  | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 18005140  | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 190793007 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20000988  | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 304936    | 10      |
| Bombastus | Non-ionic hydrous liniment S... | 275789    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 279496    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 280877    | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 287321    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 293579    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 295072    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 295911    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 300862    | 7       |
| Bombastus | Non-ionic hydrous liniment S... | 302286    | 13      |
| Bombastus | Non-ionic hydrous liniment S... | 302283    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 304934    | 6       |
| Bombastus | Non-ionic hydrous liniment S... | 305593    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 307685    | 10      |
| Bombastus | Non-ionic hydrous liniment S... | 18003530  | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18004190  | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 18005142  | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18004187  | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19001299  | 21      |
| Bombastus | Non-ionic hydrous liniment S... | 19002805  | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 190641906 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002801  | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 19002803  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19004233  | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19004811  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20001329  | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 20000423  | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 20000987  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20002001  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 20003817  | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 284231    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 19002440  | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 279500    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 282333    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 286417    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 286418    | 8       |
| Bombastus | Non-ionic hydrous liniment S... | 286420    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 293574    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 98434     | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 300197    | 5       |
| Bombastus | Non-ionic hydrous liniment S... | 300199    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 311609    | 3       |
| Bombastus | Non-ionic hydrous liniment S... | 311039    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 18004185  | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 108006454 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 198001299 | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 275626    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 288390    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 295071    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 300195    | 4       |
| Bombastus | Non-ionic hydrous liniment S... | 309798    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 19002806  | 9       |
| Bombastus | Non-ionic hydrous liniment S... | 258820    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 264191    | 1       |
| Bombastus | Non-ionic hydrous liniment S... | 269847    | 2       |
| Bombastus | Non-ionic hydrous liniment S... | 271304    | 2       |

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| <b>Supplier</b>        | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|------------------------|---------------------------------|--------------|----------------|
| Bombastus              | Non-ionic hydrous liniment S... | 275785       | 2              |
| Bombastus              | Non-ionic hydrous liniment S... | 293577       | 3              |
| Bombastus              | Non-ionic hydrous liniment S... | 29715        | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 302887       | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 309792       | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 17000575     | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 17001412     | 8              |
| Bombastus              | Non-ionic hydrous liniment S... | 18174401     | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 18006454     | 22             |
| Bombastus              | Non-ionic hydrous liniment S... | 18005539     | 2              |
| Bombastus              | Non-ionic hydrous liniment S... | 9A120619     | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 19006137     | 11             |
| Bombastus              | Non-ionic hydrous liniment S... | 20003823     | 6              |
| Bombastus              | Non-ionic hydrous liniment S... | 292618       | 3              |
| Bombastus              | Non-ionic hydrous liniment S... | 297173       | 2              |
| Bombastus              | Non-ionic hydrous liniment S... | 17000577     | 10             |
| Bombastus              | Non-ionic hydrous liniment S... | 18002884     | 4              |
| Bombastus              | Non-ionic hydrous liniment S... | 26A281216    | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 307682       | 1              |
| Bombastus              | Non-ionic hydrous liniment S... | 285793       | 4              |
| Bombastus              | Non-ionic hydrous liniment S... | 288451       | 4              |
| Bombastus              | Non-ionic hydrous liniment S... | 20002000     | 2              |
| Bombastus              | Non-ionic hydrous liniment S... | 20004408     | 2              |
| Bombastus              | Non-ionic hydrous liniment S... | 19003335     | 4              |
| Bombastu-Werke AG/Gehe | Non-ionic hydrous liniment S... | 281564       | 1              |
| Bombastu-Werke AG/Gehe | Non-ionic hydrous liniment S... | 282947       | 1              |
| Bombastu-Werke AG/Gehe | Non-ionic hydrous liniment S... | 285025       | 1              |
| Bombastu-Werke AG/Gehe | Non-ionic hydrous liniment S... | 288452       | 1              |
| Bombstus               | Non-ionic hydrous liniment S... | 300199       | 1              |
| Bombstus/ Gehe         | Non-ionic hydrous liniment S... | 19004234     | 1              |
| Cael/Phönix            | Non-ionic hydrous liniment S... | 15326702     | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 288454       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 307685       | 2              |
| Caelo                  | Non-ionic hydrous liniment S... | 123304       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 21A201113    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 102600630    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 285791       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 14328402     | 3              |
| Caelo                  | Non-ionic hydrous liniment S... | 15192391     | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 15096001     | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 300199       | 3              |
| Caelo                  | Non-ionic hydrous liniment S... | 15279702     | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 15096101     | 8              |
| Caelo                  | Non-ionic hydrous liniment S... | 24A271114    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 10A110515    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 14092015A    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 295072       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 295070       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 1519252      | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 15420902     | 5              |
| Caelo                  | Non-ionic hydrous liniment S... | 15421002     | 4              |
| Caelo                  | Non-ionic hydrous liniment S... | 16113801     | 12             |
| Caelo                  | Non-ionic hydrous liniment S... | 16114002     | 17             |
| Caelo                  | Non-ionic hydrous liniment S... | 300863       | 2              |
| Caelo                  | Non-ionic hydrous liniment S... | 16218301     | 12             |
| Caelo                  | Non-ionic hydrous liniment S... | 16258501     | 18             |
| Caelo                  | Non-ionic hydrous liniment S... | 302287       | 2              |
| Caelo                  | Non-ionic hydrous liniment S... | 302285       | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 16B190716    | 1              |
| Caelo                  | Non-ionic hydrous liniment S... | 1625801      | 1              |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Non-ionic hydrous liniment S... | 304936       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16318802     | 9       |
| Caelo    | Non-ionic hydrous liniment S... | 1625401      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 1631880      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 307658       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17144401     | 25      |
| Caelo    | Non-ionic hydrous liniment S... | 1744401      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17144502     | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 309791       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17209001     | 26      |
| Caelo    | Non-ionic hydrous liniment S... | 310359       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 311611       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17208802     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17261101     | 16      |
| Caelo    | Non-ionic hydrous liniment S... | 17313201     | 12      |
| Caelo    | Non-ionic hydrous liniment S... | 1761201      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17A140817    | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 1805702      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18153602     | 5       |
| Caelo    | Non-ionic hydrous liniment S... | 18002886     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18002885     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18106503     | 26      |
| Caelo    | Non-ionic hydrous liniment S... | 18174501     | 13      |
| Caelo    | Non-ionic hydrous liniment S... | 18233101     | 3       |
| Caelo    | Non-ionic hydrous liniment S... | 19004501     | 20      |
| Caelo    | Non-ionic hydrous liniment S... | 190555703    | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 191367012x   | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 270819Mo     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 19201401     | 31      |
| Caelo    | Non-ionic hydrous liniment S... | 20003002001  | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 20003577001  | 3       |
| Caelo    | Non-ionic hydrous liniment S... | 21000510003  | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18003534     | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 26A281216    | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16A050815    | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 6A290317     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 13A260617    | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 18050702     | 19      |
| Caelo    | Non-ionic hydrous liniment S... | 11A040618    | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 200618       | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 140918       | 4       |
| Caelo    | Non-ionic hydrous liniment S... | 291286       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18233201     | 33      |
| Caelo    | Non-ionic hydrous liniment S... | 19000521     | 4       |
| Caelo    | Non-ionic hydrous liniment S... | 22A100918    | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 5A110315     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16113901     | 13      |
| Caelo    | Non-ionic hydrous liniment S... | 302283       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17027801     | 26      |
| Caelo    | Non-ionic hydrous liniment S... | 297171       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 19055703     | 44      |
| Caelo    | Non-ionic hydrous liniment S... | 15192502     | 9       |
| Caelo    | Non-ionic hydrous liniment S... | 296585       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17209901     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 19136702     | 15      |
| Caelo    | Non-ionic hydrous liniment S... | 31(19136701) | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18086702     | 13      |
| Caelo    | Non-ionic hydrous liniment S... | 170644       | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16021601     | 20      |
| Caelo    | Non-ionic hydrous liniment S... | 17027901     | 13      |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Caelo    | Non-ionic hydrous liniment S... | 18278801         | 9       |
| Caelo    | Non-ionic hydrous liniment S... | 15192301         | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 3269             | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 3291             | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 3305             | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 3331             | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 14276002         | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 18000058         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18055703         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 19004815         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 20002513001      | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 18002887         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 300862           | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 310355           | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 21001823001      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18278901         | 28      |
| Caelo    | Non-ionic hydrous liniment S... | 9A230518         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 15014601         | 8       |
| Caelo    | Non-ionic hydrous liniment S... | 15326703         | 8       |
| Caelo    | Non-ionic hydrous liniment S... | 16318801         | 52      |
| Fagron   | Non-ionic hydrous liniment S... | 14350703         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16113902         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 16176701         | 24      |
| Caelo    | Non-ionic hydrous liniment S... | 15192401         | 10      |
| Caelo    | Non-ionic hydrous liniment S... | 16258401         | 9       |
| Caelo    | Non-ionic hydrous liniment S... | 1290617/17064402 | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 20170829Ma1      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 4717Q-03266      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17261201         | 27      |
| Caelo    | Non-ionic hydrous liniment S... | 19004301         | 3       |
| Caelo    | Non-ionic hydrous liniment S... | 19136704         | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 200002511004     | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17312501         | 27      |
| Caelo    | Non-ionic hydrous liniment S... | 17312601         | 25      |
| Caelo    | Non-ionic hydrous liniment S... | 19201301         | 6       |
| Caelo    | Non-ionic hydrous liniment S... | 20002511004      | 7       |
| Caelo    | Non-ionic hydrous liniment S... | 17175201         | 18      |
| Caelo    | Non-ionic hydrous liniment S... | 20002511003      | 3       |
| Caelo    | Non-ionic hydrous liniment S... | 20003002003      | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 23A111213        | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 281562           | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 287323           | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 289208           | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 22A101114        | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 1616701          | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 1621821          | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 303898           | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 162258402        | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17064402         | 43      |
| Caelo    | Non-ionic hydrous liniment S... | 10260682         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 17053187         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 123test          | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18005144         | 2       |
| Caelo    | Non-ionic hydrous liniment S... | 180050701        | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 18001760         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 19136701         | 53      |
| Caelo    | Non-ionic hydrous liniment S... | 18266401         | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 278260           | 1       |
| Caelo    | Non-ionic hydrous liniment S... | 14350703         | 3       |
| Caelo    | Non-ionic hydrous liniment S... | 295910           | 1       |

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| Supplier             | Substance                       | Batch        | Spectra |
|----------------------|---------------------------------|--------------|---------|
| Caelo                | Non-ionic hydrous liniment S... | 298466       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 297175       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 1676802      | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 16248301     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 18153501     | 27      |
| Caelo                | Non-ionic hydrous liniment S... | 19055702     | 12      |
| Caelo                | Non-ionic hydrous liniment S... | 19002441     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 291222       | 3       |
| Caelo                | Non-ionic hydrous liniment S... | 16176802     | 4       |
| Caelo                | Non-ionic hydrous liniment S... | 275787       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 282333       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 18174401     | 9       |
| Caelo                | Non-ionic hydrous liniment S... | 297178       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 299133       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 10A310516    | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 17117303     | 2       |
| Caelo                | Non-ionic hydrous liniment S... | 17208901     | 11      |
| Caelo                | Non-ionic hydrous liniment S... | 17001404     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 17001409     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 181065035784 | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 275785       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 122304       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 14024104     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 14024102     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 14209501     | 8       |
| Caelo                | Non-ionic hydrous liniment S... | 14173601     | 3       |
| Caelo                | Non-ionic hydrous liniment S... | 293579       | 2       |
| Caelo                | Non-ionic hydrous liniment S... | 60091111     | 2       |
| Caelo                | Non-ionic hydrous liniment S... | 300864       | 3       |
| Caelo                | Non-ionic hydrous liniment S... | 306362       | 2       |
| Caelo                | Non-ionic hydrous liniment S... | 311039       | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 17313102     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 18086801     | 2       |
| Caelo                | Non-ionic hydrous liniment S... | 1823301      | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 19002435     | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 2002511004   | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 4617M-03366  | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 24A081018    | 1       |
| Caelo                | Non-ionic hydrous liniment S... | 15326702     | 12      |
| Caerol/ Noweda       | Non-ionic hydrous liniment S... | 16318801     | 1       |
| Caerol/Phornix       | Non-ionic hydrous liniment S... | 17261201     | 1       |
| Caerolo / Anzag      | Non-ionic hydrous liniment S... | 308627       | 1       |
| Caesar & Loretz      | Non-ionic hydrous liniment S... | 17313201     | 1       |
| Caesar & Loretz      | Non-ionic hydrous liniment S... | 18086702     | 1       |
| Caesar & Loretz      | Non-ionic hydrous liniment S... | 19136701     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18153501     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18278901     | 3       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18174503     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18233201     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19004501     | 5       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19004301     | 5       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19055702     | 3       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18233101     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19055703     | 8       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19136702     | 9       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19136701     | 16      |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19136704     | 1       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19201301     | 3       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 19201401     | 2       |
| Caesar & Loretz GmbH | Non-ionic hydrous liniment S... | 18307406     | 1       |

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| <b>Supplier</b>             | <b>Substance</b>                | <b>Batch</b>  | <b>Spectra</b> |
|-----------------------------|---------------------------------|---------------|----------------|
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 19006549      | 1              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20000989      | 1              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20002511003   | 1              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20002511004   | 3              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20003002001   | 3              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20003002003   | 1              |
| Caesar & Loretz GmbH        | Non-ionic hydrous liniment S... | 20003577001   | 2              |
| Caesar & Loretz GmbH / ...  | Non-ionic hydrous liniment S... | 3114041       | 1              |
| Caesar & Loretz GmbH/ A...  | Non-ionic hydrous liniment S... | 19201401      | 1              |
| Caesar & Loretz GmbH/ A...  | Non-ionic hydrous liniment S... | 19136701      | 1              |
| Caesar & Loretz GmbH//G...  | Non-ionic hydrous liniment S... | 19201401      | 2              |
| Caesar & Loretz GmbH/Fi...  | Non-ionic hydrous liniment S... | 19136702      | 3              |
| Caesar & Loretz GmbH/Gehe   | Non-ionic hydrous liniment S... | 19004501      | 1              |
| Caesar & Loretz GmbH/Je...  | Non-ionic hydrous liniment S... | 19136702      | 1              |
| Caesar & Loretz GmbH/Kr...  | Non-ionic hydrous liniment S... | 19136702      | 2              |
| Caesar & Loretz GmbH/No...  | Non-ionic hydrous liniment S... | 19136701      | 1              |
| Caesar & Loretz GmbH/Ph...  | Non-ionic hydrous liniment S... | 19136701      | 2              |
| Caesar & Loretz GmbH/AHD    | Non-ionic hydrous liniment S... | 19055703      | 1              |
| Caesar & Loretz GmbH/Fie... | Non-ionic hydrous liniment S... | 19055702      | 1              |
| Caesar & Loretz/ Noweda     | Non-ionic hydrous liniment S... | 278260        | 1              |
| Caesar und Loretz GmbH      | Non-ionic hydrous liniment S... | 18050701      | 1              |
| Caesar/Noweda               | Non-ionic hydrous liniment S... | 14173601      | 1              |
| Caesar/Noweda               | Non-ionic hydrous liniment S... | 15326703      | 1              |
| Caleo/Alliance              | Non-ionic hydrous liniment S... | 18278801      | 1              |
| Cealo / Otto Geilenkirc...  | Non-ionic hydrous liniment S... | 19136701      | 2              |
| Cealo/ Anzag                | Non-ionic hydrous liniment S... | 17144401      | 2              |
| Cealo/Noweda                | Non-ionic hydrous liniment S... | 15096101      | 1              |
| Cealo/Noweda                | Non-ionic hydrous liniment S... | 17027801      | 1              |
| Celo                        | Non-ionic hydrous liniment S... | 16113801      | 1              |
| Chiesi/Phoenix              | Non-ionic hydrous liniment S... | 18050701      | 1              |
| Delta                       | Non-ionic hydrous liniment S... | 18050701      | 1              |
| E Plus                      | Non-ionic hydrous liniment S... | 309802        | 1              |
| E Plus                      | Non-ionic hydrous liniment S... | 18001767      | 1              |
| E Plus                      | Non-ionic hydrous liniment S... | 18002887      | 1              |
| Ebert & Jacobi              | Non-ionic hydrous liniment S... | 18005541      | 1              |
| Ebert u. Jacobi 16.0...     | Non-ionic hydrous liniment S... | 300864        | 1              |
| Caelo                       | Non-ionic hydrous liniment S... | 308627        | 2              |
| Eigene Herstellung          | Non-ionic hydrous liniment S... | 1546          | 1              |
| Eigene Herstellung          | Non-ionic hydrous liniment S... | 1567          | 1              |
| Eigenherstellung            | Non-ionic hydrous liniment S... | RD200731-0001 | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 6A120318      | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 4A190218      | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 309802        | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 15192401      | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 16218301      | 2              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 16C190716     | 1              |
| Euro OTC                    | Non-ionic hydrous liniment S... | 18050701      | 2              |
| Fagron                      | Non-ionic hydrous liniment S... | 257210        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 125304        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 27301         | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 16113901      | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 307684        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 311038        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 311040        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 17001403      | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 18086801      | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 18233201      | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 18278801      | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 288452        | 1              |
| Fagron                      | Non-ionic hydrous liniment S... | 17027801      | 1              |

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| Supplier | Substance                       | Batch     | Spectra |
|----------|---------------------------------|-----------|---------|
| Fagron   | Non-ionic hydrous liniment S... | 18174501  | 2       |
| Fagron   | Non-ionic hydrous liniment S... | 123304    | 2       |
| Fagron   | Non-ionic hydrous liniment S... | 5A110315  | 1       |
| Fagron   | Non-ionic hydrous liniment S... | 296111    | 2       |
| Fagron   | Non-ionic hydrous liniment S... | 301558    | 1       |
| Fagron   | Non-ionic hydrous liniment S... | 311041    | 1       |
| Fagron   | Non-ionic hydrous liniment S... | 258210    | 1       |
| Fagron   | Non-ionic hydrous liniment S... | 122304    | 1       |
| Fiebig   | Non-ionic hydrous liniment S... | 17312601  | 1       |
| Fiebig   | Non-ionic hydrous liniment S... | 18153501  | 1       |
| Fiebig   | Non-ionic hydrous liniment S... | 18050701  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 269845    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 271303    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 272611    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 274014    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 278253    | 2       |
| Gehe     | Non-ionic hydrous liniment S... | 275792    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 280873    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 280877    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 282335    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 285024    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 269846    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 279498    | 2       |
| Gehe     | Non-ionic hydrous liniment S... | 289205    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 15192401  | 2       |
| Gehe     | Non-ionic hydrous liniment S... | 15326702  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 16021601  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 16318801  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 17027801  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 17064404  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 306361    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 17064402  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 17175201  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 310641    | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 17312501  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 25A071217 | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 2A1700118 | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 18050702  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 18050701  | 2       |
| Gehe     | Non-ionic hydrous liniment S... | 1815301   | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 18174501  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 18278801  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 1823201   | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 19055703  | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 81019     | 1       |
| Gehe     | Non-ionic hydrous liniment S... | 19136701  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 24A231116 | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 2A010217  | 3       |
| GEHE     | Non-ionic hydrous liniment S... | 14A260617 | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 16A020817 | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 21A250917 | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 307684    | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 17312501  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 27A181217 | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 18000054  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 18050701  | 2       |
| GEHE     | Non-ionic hydrous liniment S... | 2A170118  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 17001403  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 18002332  | 1       |
| GEHE     | Non-ionic hydrous liniment S... | 18003529  | 1       |

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| Supplier           | Substance                       | Batch         | Spectra |
|--------------------|---------------------------------|---------------|---------|
| GEHE               | Non-ionic hydrous liniment S... | 18004188      | 1       |
| GEHE               | Non-ionic hydrous liniment S... | 18006450      | 1       |
| GEHE               | Non-ionic hydrous liniment S... | 19001296      | 3       |
| Bombastus          | Non-ionic hydrous liniment S... | 310358        | 7       |
| Bombastus          | Non-ionic hydrous liniment S... | 18003532      | 7       |
| Bombastus          | Non-ionic hydrous liniment S... | 20002004      | 18      |
| Gehe / PKH         | Non-ionic hydrous liniment S... | 5A150419      | 1       |
| Gehe 18.08.14      | Non-ionic hydrous liniment S... | 288387        | 4       |
| Gehe amax          | Non-ionic hydrous liniment S... | 18005144      | 1       |
| Gehe amax          | Non-ionic hydrous liniment S... | 19001298      | 1       |
| Gehe amax          | Non-ionic hydrous liniment S... | 19002806      | 1       |
| Gehe amax          | Non-ionic hydrous liniment S... | 19004234      | 1       |
| Gehe Kassel        | Non-ionic hydrous liniment S... | 15014601      | 2       |
| Gehe/Apomix        | Non-ionic hydrous liniment S... | 286417        | 1       |
| Bombastus          | Non-ionic hydrous liniment S... | 282945        | 2       |
| Bombastus          | Non-ionic hydrous liniment S... | 268124        | 1       |
| Bombastus          | Non-ionic hydrous liniment S... | 287319        | 2       |
| Caelo              | Non-ionic hydrous liniment S... | 4063101       | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 17175301      | 19      |
| Caelo              | Non-ionic hydrous liniment S... | 10260630      | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 19004303      | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 18233302      | 2       |
| Bombastus          | Non-ionic hydrous liniment S... | 17001411      | 6       |
| Hedinger           | Non-ionic hydrous liniment S... | P2018/118     | 1       |
| Hedinger           | Non-ionic hydrous liniment S... | 107312501     | 1       |
| Henry Lamotte Oils | Non-ionic hydrous liniment S... | 284234        | 1       |
| hochhaus-Apotheke  | Non-ionic hydrous liniment S... | 16318801      | 1       |
| hochhaus-Apotheke  | Non-ionic hydrous liniment S... | 2116617027801 | 1       |
| Ichthyol/Phönix    | Non-ionic hydrous liniment S... | 16113901      | 2       |
| jenne              | Non-ionic hydrous liniment S... | 18050701      | 2       |
| jenne              | Non-ionic hydrous liniment S... | 297176        | 2       |
| Kehr               | Non-ionic hydrous liniment S... | 14A260617     | 1       |
| Kehr               | Non-ionic hydrous liniment S... | 22A231017     | 1       |
| Kehr               | Non-ionic hydrous liniment S... | 16A170718     | 1       |
| Kehr/ PKH GmbH     | Non-ionic hydrous liniment S... | 14A260617     | 1       |
| Kehr/ PKH GmbH     | Non-ionic hydrous liniment S... | 15A170718     | 1       |
| Lamotte/Sanacorp   | Non-ionic hydrous liniment S... | 18106503      | 1       |
| Leyh Pharma        | Non-ionic hydrous liniment S... | 153811        | 1       |
| Leyh Pharma GmbH   | Non-ionic hydrous liniment S... | 27A111218     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19055703      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 271243        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 274820        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 281562        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 25A191213     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 285795        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 287323        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 10A150514     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 22A101114     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 292618        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 8A080415      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 15096002      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 296109        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 15192502      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 15420902      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 15421002      | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 16258401      | 2       |
| Noweda             | Non-ionic hydrous liniment S... | 16318802      | 2       |
| Noweda             | Non-ionic hydrous liniment S... | 308628        | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 17208901      | 2       |
| Noweda             | Non-ionic hydrous liniment S... | 18050702      | 2       |

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| Supplier           | Substance                       | Batch        | Spectra |
|--------------------|---------------------------------|--------------|---------|
| Noweda             | Non-ionic hydrous liniment S... | 18086801     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18002335     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18003532     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18050701     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18278801     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18005143     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18278901     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18233201     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 18006453     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19004501     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19004301     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19000521     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19136701     | 2       |
| Noweda             | Non-ionic hydrous liniment S... | 7A300419     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19136702     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 10C010719    | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 19006550     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 7A070320     | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 200002511004 | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 20003002001  | 1       |
| Noweda             | Non-ionic hydrous liniment S... | 20004409     | 1       |
| Bombastus          | Non-ionic hydrous liniment S... | 192621       | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 294211       | 2       |
| Noweda / PKH GmbH  | Non-ionic hydrous liniment S... | 10C070420    | 1       |
| Noweda 27.08.15    | Non-ionic hydrous liniment S... | 15192301     | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 276526       | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 19002801     | 1       |
| Noweda/AEP         | Non-ionic hydrous liniment S... | 309802       | 1       |
| noweda/anzag       | Non-ionic hydrous liniment S... | 2A292119     | 1       |
| Noweda/apomix      | Non-ionic hydrous liniment S... | 12A100615    | 1       |
| Noweda/Apomix      | Non-ionic hydrous liniment S... | 6B180315     | 1       |
| Noweda/Apomix      | Non-ionic hydrous liniment S... | 10C070420    | 1       |
| Bombastus          | Non-ionic hydrous liniment S... | 300864       | 9       |
| Bombastus          | Non-ionic hydrous liniment S... | 309802       | 7       |
| Bombastus          | Non-ionic hydrous liniment S... | 19004264     | 1       |
| Caelo              | Non-ionic hydrous liniment S... | 284237       | 1       |
| Noweda/Noweda      | Non-ionic hydrous liniment S... | 20002988     | 1       |
| Noweda/pharmachem  | Non-ionic hydrous liniment S... | 18233201     | 1       |
| Pharmachem         | Non-ionic hydrous liniment S... | 309802       | 1       |
| PharmaChem         | Non-ionic hydrous liniment S... | 140814       | 1       |
| Pharmachem / Gehe  | Non-ionic hydrous liniment S... | 91118        | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 10218        | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 110418       | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 200618       | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 91118        | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 290419       | 1       |
| Pharmachem/Phoenix | Non-ionic hydrous liniment S... | 10819        | 1       |
| phoenix            | Non-ionic hydrous liniment S... | 309791       | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 300860       | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 302283       | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 303895       | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 16318801     | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 3027         | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 17261101     | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 3128         | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 110418       | 2       |
| Phoenix            | Non-ionic hydrous liniment S... | 18050701     | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 3196         | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 18086702     | 1       |
| Phoenix            | Non-ionic hydrous liniment S... | 91118        | 2       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| Phoenix                    | Non-ionic hydrous liniment S... | 18233201  | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 19001298  | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 3371      | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 3373      | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 19201401  | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 191312111 | 1       |
| Phoenix                    | Non-ionic hydrous liniment S... | 200132101 | 1       |
| Phoenix 21.06.2017 2,78EUR | Non-ionic hydrous liniment S... | 17064402  | 1       |
| Phoenix 24.04.2018 4,68EUR | Non-ionic hydrous liniment S... | 18000058  | 1       |
| Phoenix 24.04.2019 2,65EUR | Non-ionic hydrous liniment S... | 19055703  | 1       |
| Phoenix 25.04.2018 4,63EUR | Non-ionic hydrous liniment S... | 18000058  | 1       |
| phönix                     | Non-ionic hydrous liniment S... | 17027801  | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 16318801  | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 307684    | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 17175201  | 2       |
| Phönix                     | Non-ionic hydrous liniment S... | 311611    | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 17312501  | 2       |
| Phönix                     | Non-ionic hydrous liniment S... | 17001410  | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 3173      | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 18006454  | 2       |
| Phönix                     | Non-ionic hydrous liniment S... | 19055703  | 2       |
| Phönix                     | Non-ionic hydrous liniment S... | 19055702  | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 20000988  | 2       |
| Phönix                     | Non-ionic hydrous liniment S... | 200962209 | 1       |
| Phönix                     | Non-ionic hydrous liniment S... | 20002000  | 1       |
| PHÖNIX                     | Non-ionic hydrous liniment S... | 311040    | 1       |
| Phönix (PKH Halle)         | Non-ionic hydrous liniment S... | 16A060812 | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 309801    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 273375    | 2       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 278255    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 281559    | 2       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 282946    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 287316    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 270008    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 275792    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 290610    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 292617    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 295072    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 296108    | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 17312501  | 1       |
| Phönix Gotha               | Non-ionic hydrous liniment S... | 12A200819 | 1       |
| Bombastus                  | Non-ionic hydrous liniment S... | 388627    | 1       |
| Caelo                      | Non-ionic hydrous liniment S... | 190351403 | 1       |
| Phönix/Gehe                | Non-ionic hydrous liniment S... | 18106503  | 1       |
| PKH Apomix                 | Non-ionic hydrous liniment S... | 27A111218 | 1       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 25A071217 | 1       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 4A190218  | 1       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 11A040618 | 2       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 17A020818 | 1       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 27A111218 | 1       |
| PKH Gehe                   | Non-ionic hydrous liniment S... | 20A301219 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 6B180315  | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 27A291215 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 7A300316  | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 12a200616 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 21A241016 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 22A251016 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 25A071217 | 1       |
| PKH GmbH                   | Non-ionic hydrous liniment S... | 17A140817 | 1       |
| PKH GmbH / Phönix          | Non-ionic hydrous liniment S... | 11B270515 | 1       |

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| Supplier                   | Substance                       | Batch        | Spectra |
|----------------------------|---------------------------------|--------------|---------|
| PKH GmbH/ Alliance Heal... | Non-ionic hydrous liniment S... | 6A120318     | 1       |
| PKH GmbH/ Alliance Heal... | Non-ionic hydrous liniment S... | 15A170718    | 1       |
| PKH GmbH/Kehr              | Non-ionic hydrous liniment S... | 24A231116    | 1       |
| PKH GmbH/Phoenix           | Non-ionic hydrous liniment S... | 18A031219    | 1       |
| PKH GmbH/Phoenix           | Non-ionic hydrous liniment S... | 200110       | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 6A120312     | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 13A200616    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 27A181217    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 13A260618    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 17A020818    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 7A300419     | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 16A081019    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 2A200120     | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 16A080620    | 1       |
| PKH Halle                  | Non-ionic hydrous liniment S... | 22A020920    | 1       |
| PKH Halle / Noweda         | Non-ionic hydrous liniment S... | 10B010719    | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 4A110313     | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 17A230913    | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 4A250214     | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 10A150514    | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 15A140714    | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 25A021214    | 1       |
| PKH Halle / Phoenix        | Non-ionic hydrous liniment S... | 15A150715    | 1       |
| PKH Halle,Anzag            | Non-ionic hydrous liniment S... | 20A221012    | 1       |
| PKH Halle,Phönix           | Non-ionic hydrous liniment S... | 17A030912    | 1       |
| PKH Halle/ Phoenix Lepz... | Non-ionic hydrous liniment S... | 10A110515    | 1       |
| PKH Halle/ Phoenix Lepz... | Non-ionic hydrous liniment S... | 8A250417     | 2       |
| PKH Halle/AHD              | Non-ionic hydrous liniment S... | 24A081018    | 1       |
| PKH Halle/AHD              | Non-ionic hydrous liniment S... | 3A060319     | 1       |
| PKH Halle/Holdermann       | Non-ionic hydrous liniment S... | 10A100517    | 1       |
| PKH Halle/Noweda           | Non-ionic hydrous liniment S... | 25A081215    | 1       |
| PKH Halle/Noweda           | Non-ionic hydrous liniment S... | 4A190218     | 1       |
| PKH Halle/Noweda           | Non-ionic hydrous liniment S... | 15C080620    | 1       |
| PKH Halle/Phönix           | Non-ionic hydrous liniment S... | 12A200616    | 1       |
| PKH Halle/Phönix           | Non-ionic hydrous liniment S... | 10B070420    | 1       |
| PKH/Noweda                 | Non-ionic hydrous liniment S... | 21A250917    | 1       |
| PKH/Phönix                 | Non-ionic hydrous liniment S... | 9A190516     | 1       |
| Pößneck Pharma / Gehe      | Non-ionic hydrous liniment S... | 23A181115    | 2       |
| Rondell Apotheke           | Non-ionic hydrous liniment S... | 297175       | 1       |
| sanacorp                   | Non-ionic hydrous liniment S... | 15096002     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 274820       | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 279500       | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 279501       | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 15014601     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 15002302     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 8/AKD101     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 16318801     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 17064402     | 1       |
| Sanacorp                   | Non-ionic hydrous liniment S... | 17312501     | 2       |
| Sanacorp 21.10.15 und...   | Non-ionic hydrous liniment S... | 15192301     | 1       |
| Caelo                      | Non-ionic hydrous liniment S... | 14276001     | 5       |
| Caelo                      | Non-ionic hydrous liniment S... | 15096002     | 11      |
| Bombastus                  | Non-ionic hydrous liniment S... | 19004814     | 15      |
| Caelo                      | Non-ionic hydrous liniment S... | 269134       | 1       |
| Caelo                      | Non-ionic hydrous liniment S... | 2/AD1        | 1       |
| Caelo                      | Non-ionic hydrous liniment S... | 281564       | 2       |
| Selbstersteller            | Non-ionic hydrous liniment S... | 20140116     | 1       |
| Th. Geyer                  | Non-ionic hydrous liniment S... | 27A111218    | 1       |
| wepa/Sanaco                | Non-ionic hydrous liniment S... | 1542102      | 1       |
| Wolf Apotheke              | Non-ionic hydrous liniment S... | 28(18006449) | 1       |

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| Supplier       | Substance                       | Batch     | Spectra |
|----------------|---------------------------------|-----------|---------|
| Wolf-Apotheke  | Non-ionic hydrous liniment S... | 285793    | 1       |
|                | Hydrated liniment SR/DAC (NR... | 37B190514 | 1       |
| apomix         | Hydrated liniment SR/DAC (NR... |           | 1       |
| Bombastus      | Hydrated liniment SR/DAC (NR... |           | 8       |
| Phönix         | Hydrated liniment SR/DAC (NR... |           | 1       |
| PKH Halle/Kehr | Hydrated liniment SR/DAC (NR... |           | 1       |
|                | Non-ionic hydrous liniment S... | 4A010317  | 1       |
| Bombastus      | Non-ionic hydrous liniment S... | 282335    | 2       |
| Bombastus      | Non-ionic hydrous liniment S... | 297176    | 5       |
|                | Non-ionic hydrous liniment S... | 14350703  | 1       |
| Caelo          | Non-ionic hydrous liniment S... | 14134601  | 9       |
| Caelo          | Non-ionic hydrous liniment S... | 15420901  | 2       |
| Caelo          | Non-ionic hydrous liniment S... |           | 2       |
| Eigen          | Non-ionic hydrous liniment S... |           | 1       |
|                | Non-ionic hydrous liniment S... | 288452    | 1       |

- 235 935 spectra from 1120 *Apo-Ident* customers from a total of 45 550 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Liniment ointments* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Liniment ointments* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1040          | 0              | 62 899        |
| <b>Type B</b> | 0              | 2296          | 4              | 89 191        |
| <b>Type C</b> | 0              | 5265          | 163            | 235 828       |

The substance/substance group *Liniment ointments* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.4231 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.8261 % (> 99.6957 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6837 %) | 96.9971 % (> 96.9418 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Liniment ointments* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                    | Distance in main model | Distance in second-stage model |
|----------------------------------------------|------------------------|--------------------------------|
| Hydrophilic cream, non-ionic SR (NRF p. ...) | 18.90                  | —                              |
| Hydrophilic cream, non-ionic without p. ...  | 25.37                  | —                              |
| Base cream, hydrophobic DAC                  | 26.95                  | —                              |
| Sodium laureth sulfate solution 27%          | 27.10                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)      | 28.89                  | —                              |
| Hydrophilic base emulsion (NRF p.25)         | 29.19                  | —                              |
| Anionic hydrophilic cream with propyle. ...  | 29.84                  | —                              |
| Anionic hydrophilic cream DAB                | 32.33                  | —                              |
| Wolff® base half-fat cream                   | 33.92                  | —                              |
| Anionic hydrophlic cream without prese. ...  | 36.14                  | —                              |
| Skin care ointment W/L SR (without pre. ...) | 36.41                  | —                              |
| Sodium lactate solution 50%                  | 37.70                  | —                              |
| Glycolic acid 70%                            | 38.71                  | —                              |
| Base cream, diluted                          | 41.43                  | —                              |
| Lotio Cordes®                                | 43.65                  | —                              |
| Skin care ointment W/L SR                    | 46.66                  | —                              |
| Gel Cordes®                                  | 47.11                  | —                              |
| Fortified wine                               | 53.01                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Liniment ointments* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30982     | 31939               | 7.82                         | 37.11                           |
| 31169     | 31169               | 0.00                         | 36.45                           |
| 31170     | 31170               | 0.00                         | 42.23                           |
| 31438     | 31938               | 3.29                         | 40.55                           |
| 31476     | 31945               | 5.60                         | 40.00                           |
| 31827     | 31947               | 2.24                         | 39.31                           |
| 31830     | 31947               | 1.10                         | 36.33                           |
| 31938     | 31938               | 0.00                         | 42.90                           |
| 31939     | 31939               | 0.00                         | 41.28                           |
| 31943     | 31943               | 0.00                         | 36.64                           |
| 31945     | 31945               | 0.00                         | 37.31                           |
| 31946     | 31946               | 0.00                         | 38.01                           |
| 31947     | 31947               | 0.00                         | 36.73                           |
| 32089     | 32089               | 0.00                         | 44.48                           |

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| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 32090     | 32090               | 0.00                         | 38.07                           |
| 32305     | 31170               | 5.12                         | 35.38                           |
| 32727     | 32089               | 3.75                         | 39.23                           |
| 34505     | 31939               | 5.01                         | 39.93                           |
| 35111     | 35111               | 0.00                         | 42.12                           |
| 35546     | 35546               | 0.00                         | 45.40                           |
| 35615     | 35615               | 0.00                         | 32.36                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 10004572-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40; Lauromacrogol 400; Macrogol 4 lauryl ether; Macrogolglycerol hydroxystearate 40; Macrogolglyceroli hydroxystearas; Macrogoli aether laurilicus; Polidocanolum

### Special notes

When selecting the *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                     | Type A | Type B | Type C |
|-----------------------------------------------|--------|--------|--------|
| Macrogol 4 lauryl ether / Lauromacrogol 400 / | 17     | 17     | 986    |
| Macrogolglycerol hydroxystearate 40           |        |        |        |

## Second-stage model

For differentiation of the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* the following second-stage model is used:

- [Submodel 10](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|----------|---------------------|------------------|-----------|---------|--------------------|
| Caelo    | Lauromacrogol 400   | 13095802         | 31025     | 40      | 20130523           |
| Caelo    | Lauromacrogol 400   | 13340701         | 31372     | 40      | AR-14-FG-012474-01 |
| Caelo    | Lauromacrogol 400   | 192957           | 35020     | 40      | 20200326*          |
| Euro OTC | Lauromacrogol 400   | 1510024          | 31768     | 58      | 20151102*          |
| Euro OTC | Lauromacrogol 400   | 1605006          | 32283     | 40      | 20160531*          |
| Euro OTC | Lauromacrogol 400   | 1610034          | 32816     | 40      | 20161202*          |
| Fagron   | Lauromacrogol 400   | 12E03-N05        | 30594     | 40      | 20120608           |
| Fagron   | Lauromacrogol 400   | 16E18-B04-326089 | 32824     | 40      | 20160527           |
| Fagron   | Lauromacrogol 400   | 20D20-T12-076662 | 35150     | 40      | 20200722           |
| Caelo    | Macrogol 4 laury... | 14054401         | 31381     | 40      | 1507230            |
| Caelo    | Macrogol 4 laury... | 14225301         | 31583     | 60      | 20140820           |
| Caelo    | Macrogol 4 laury... | 16100205         | 33216     | 40      | 20160527           |
| Caelo    | Macrogol 4 laury... | 19000420004      | 35141     | 40      | 20200416           |
| Caelo    | Macrogolglycerol... | 14283808         | 31625     | 60      | AR-15-FG-010151-01 |
| Caelo    | Macrogolglycerol... | 20002214004      | 35140     | 40      | 20200901           |
| Fagron   | Macrogolglycerol... | 12L06-N02        | 30765     | 40      | 1405328            |
| Fagron   | Macrogolglycerol... | 21A05-F01-376301 | 35464     | 40      | 20210210           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 738 spectra of 17 reference samples from the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 17 different batches.
- 63 201 spectra from a total of 1290 batches from further 221 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 730 spectra of 17 reference samples from the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40*.
- Among them are spectra of independent samples from 17 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch      | Sample ID | Spectra |
|----------|---------------------------------|------------|-----------|---------|
| Caelo    | Lauromacrogol 400               | 172509     | 33899     | 40      |
| Caelo    | Lauromacrogol 400               | 181755     | 34235     | 40      |
| Caelo    | Lauromacrogol 400               | 191310     | 34630     | 40      |
| Euro OTC | Lauromacrogol 400               | 1703033    | 33448     | 40      |
| Euro OTC | Lauromacrogol 400               | 1710026    | 33844     | 40      |
| Euro OTC | Lauromacrogol 400               | 1801043    | 34007     | 40      |
| Euro OTC | Lauromacrogol 400               | 1901029    | 34421     | 40      |
| Euro OTC | Lauromacrogol 400               | 1907010    | 34700     | 40      |
| Euro OTC | Lauromacrogol 400               | 1911015    | 34749     | 40      |
| Euro OTC | Lauromacrogol 400               | 2003031-01 | 35076     | 40      |
| Euro OTC | Lauromacrogol 400               | 2007042    | 35132     | 40      |
| Euro OTC | Lauromacrogol 400               | 2106011    | 35627     | 50      |
| Caelo    | Macrogol 4 lauryl ether         | 161002     | 33690     | 40      |
| Caelo    | Macrogol 4 lauryl ether         | 17028303   | 33950     | 40      |
| Caelo    | Macrogolglycerol hydroxystea... | 14283805   | 31608     | 60      |
| Caelo    | Macrogolglycerol hydroxystea... | 16349304   | 33935     | 40      |
| Fagron   | Macrogolglycerol hydroxystea... | 14K28-B01  | 31640     | 60      |

- 90 761 spectra from a total of 1999 batches from further 343 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 6506 spectra from 959 *Apo-Ident* customers from 978 batches from the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40*.
- Among them are spectra of independent samples from 915 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier      | Substance         | Batch          | Spectra |
|---------------|-------------------|----------------|---------|
| /Sanacorp     | Lauromacrogol 400 | 160312         | 1       |
| AEP Gepepharm | Lauromacrogol 400 | 160312A        | 1       |
| agron/ Phönix | Lauromacrogol 400 | 18A18-B98-0596 | 1       |

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| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| AHD                        | Lauromacrogol 400 | 140911           | 1       |
| AHD                        | Lauromacrogol 400 | 160312           | 2       |
| AHD                        | Lauromacrogol 400 | 160312A          | 2       |
| AHD                        | Lauromacrogol 400 | 19054203         | 1       |
| Fagron                     | Lauromacrogol 400 | 130599           | 1       |
| AHD 09.12.14               | Lauromacrogol 400 | 130109           | 2       |
| AHD 21.03.16 EK 36,71      | Lauromacrogol 400 | 140911           | 1       |
| AHD/Gepepharm              | Lauromacrogol 400 | 160312A          | 1       |
| AHL                        | Lauromacrogol 400 | 160312A          | 1       |
| ALH                        | Lauromacrogol 400 | 160312           | 6       |
| Allianc. Health. / gepe... | Lauromacrogol 400 | 160312           | 1       |
| Allianc. Health. / gepe... | Lauromacrogol 400 | 160312A          | 1       |
| Allianc. Healthc./ Gepe    | Lauromacrogol 400 | 140911           | 2       |
| Alliance                   | Lauromacrogol 400 | 19054203         | 3       |
| Alliance Healtcare         | Lauromacrogol 400 | 19064501A        | 1       |
| Euro OTC                   | Lauromacrogol 400 | 180802501        | 1       |
| Alliance/ gepepharm GmbH   | Lauromacrogol 400 | 16-0290          | 1       |
| Fagron                     | Lauromacrogol 400 | 19064501         | 2       |
| Allianz                    | Lauromacrogol 400 | 160312A          | 1       |
| Anzag                      | Lauromacrogol 400 | 110408           | 3       |
| Anzag                      | Lauromacrogol 400 | 13A31N04         | 1       |
| Anzag                      | Lauromacrogol 400 | 140911           | 1       |
| Anzag                      | Lauromacrogol 400 | 160312           | 2       |
| Anzag                      | Lauromacrogol 400 | 19054203         | 1       |
| ANZAG                      | Lauromacrogol 400 | 110408           | 2       |
| anzag gepepharm            | Lauromacrogol 400 | 160312           | 1       |
| Fagron                     | Lauromacrogol 400 | 19G11307         | 1       |
| Anzag/ gepepharm GmbH      | Lauromacrogol 400 | 182744           | 1       |
| Anzag/Anzag 28.08.18       | Lauromacrogol 400 | 17250913         | 1       |
| apo/Noweda                 | Lauromacrogol 400 | 180802501        | 1       |
| apo-ident                  | Lauromacrogol 400 | 1589415          | 1       |
| apomix PKH GmbH Halle      | Lauromacrogol 400 | 15A26B02-30362   | 1       |
| apomix AHD                 | Lauromacrogol 400 | 140911           | 11      |
| Audor Pharma               | Lauromacrogol 400 | 2003031-01       | 1       |
| Audor Pharma               | Lauromacrogol 400 | 140911           | 2       |
| Audor Pharma               | Lauromacrogol 400 | 19054203         | 3       |
| Bombastus                  | Lauromacrogol 400 | 15G10-B05-318670 | 1       |
| Bombastus                  | Lauromacrogol 400 | 16102912         | 1       |
| Bombastus                  | Lauromacrogol 400 | 16E18-B04-328582 | 1       |
| Caelo                      | Lauromacrogol 400 | 130109           | 22      |
| Caelo                      | Lauromacrogol 400 | 7250901          | 1       |
| Caelo                      | Lauromacrogol 400 | 11107901         | 1       |
| Caelo                      | Lauromacrogol 400 | 12092512         | 3       |
| Caelo                      | Lauromacrogol 400 | 11107804         | 1       |
| Caelo                      | Lauromacrogol 400 | 12092501         | 1       |
| Caelo                      | Lauromacrogol 400 | 12E03-N04        | 2       |
| Caelo                      | Lauromacrogol 400 | 12092516         | 2       |
| Caelo                      | Lauromacrogol 400 | 12092525         | 3       |
| Caelo                      | Lauromacrogol 400 | 12092530         | 2       |
| Caelo                      | Lauromacrogol 400 | 13095801         | 4       |
| Caelo                      | Lauromacrogol 400 | 13095811         | 5       |
| Caelo                      | Lauromacrogol 400 | 13095809         | 3       |
| Caelo                      | Lauromacrogol 400 | 1306004-01       | 1       |
| Caelo                      | Lauromacrogol 400 | 13340706         | 1       |
| Caelo                      | Lauromacrogol 400 | 13340712         | 2       |
| Caelo                      | Lauromacrogol 400 | 14220807         | 2       |
| Caelo                      | Lauromacrogol 400 | 21011501         | 1       |
| Caelo                      | Lauromacrogol 400 | 14220805         | 3       |
| Caelo                      | Lauromacrogol 400 | 13340715         | 2       |
| Caelo                      | Lauromacrogol 400 | 14H04-B03-297071 | 2       |

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| Supplier | Substance         | Batch            | Spectra |
|----------|-------------------|------------------|---------|
| Caelo    | Lauromacrogol 400 | 14220813         | 3       |
| Caelo    | Lauromacrogol 400 | 14H04-B03-301517 | 2       |
| Caelo    | Lauromacrogol 400 | 14220820         | 4       |
| Caelo    | Lauromacrogol 400 | 14220818         | 2       |
| Caelo    | Lauromacrogol 400 | 15192205         | 14      |
| Caelo    | Lauromacrogol 400 | 15192203         | 4       |
| Caelo    | Lauromacrogol 400 | 15192202         | 3       |
| Caelo    | Lauromacrogol 400 | 8727             | 1       |
| Caelo    | Lauromacrogol 400 | 15A26-B02-303627 | 1       |
| Caelo    | Lauromacrogol 400 | 15192208         | 8       |
| Caelo    | Lauromacrogol 400 | 12345            | 1       |
| Caelo    | Lauromacrogol 400 | 15G10-B05-315343 | 1       |
| Caelo    | Lauromacrogol 400 | 15363705         | 2       |
| Caelo    | Lauromacrogol 400 | 15363710         | 6       |
| Caelo    | Lauromacrogol 400 | 16E18B04321109   | 1       |
| Caelo    | Lauromacrogol 400 | 16E18-B04-324095 | 2       |
| Caelo    | Lauromacrogol 400 | 16102901         | 1       |
| Caelo    | Lauromacrogol 400 | 16102903         | 1       |
| Caelo    | Lauromacrogol 400 | 1142238          | 1       |
| Caelo    | Lauromacrogol 400 | 16102916         | 22      |
| Caelo    | Lauromacrogol 400 | 16102920         | 8       |
| Caelo    | Lauromacrogol 400 | 16102912         | 2       |
| Caelo    | Lauromacrogol 400 | 16-1155          | 1       |
| Caelo    | Lauromacrogol 400 | 17046401         | 21      |
| Caelo    | Lauromacrogol 400 | 17A23-B01-330983 | 5       |
| Caelo    | Lauromacrogol 400 | 16E18-B04-328737 | 1       |
| Caelo    | Lauromacrogol 400 | 17046408         | 10      |
| Caelo    | Lauromacrogol 400 | 17046461         | 1       |
| Caelo    | Lauromacrogol 400 | 1610034-01       | 1       |
| Caelo    | Lauromacrogol 400 | 18111708         | 1       |
| Caelo    | Lauromacrogol 400 | 1704606          | 1       |
| Caelo    | Lauromacrogol 400 | 17h21b07341796   | 1       |
| Caelo    | Lauromacrogol 400 | 17A23-B01-332867 | 1       |
| Caelo    | Lauromacrogol 400 | 1184359          | 1       |
| Caelo    | Lauromacrogol 400 | 170845           | 1       |
| Caelo    | Lauromacrogol 400 | 160312A          | 49      |
| Caelo    | Lauromacrogol 400 | 18B26-B06-347342 | 2       |
| Caelo    | Lauromacrogol 400 | 18B26-B06-346398 | 1       |
| Caelo    | Lauromacrogol 400 | 18175503         | 12      |
| Caelo    | Lauromacrogol 400 | 18175504         | 16      |
| Caelo    | Lauromacrogol 400 | 17175502         | 1       |
| Caelo    | Lauromacrogol 400 | 15032018         | 1       |
| Caelo    | Lauromacrogol 400 | 18175513         | 14      |
| Caelo    | Lauromacrogol 400 | 19054203         | 16      |
| Caelo    | Lauromacrogol 400 | 13175513         | 1       |
| Caelo    | Lauromacrogol 400 | gepepharm        | 1       |
| Caelo    | Lauromacrogol 400 | 19131003         | 27      |
| Caelo    | Lauromacrogol 400 | 19131004         | 3       |
| Caelo    | Lauromacrogol 400 | 191310003        | 29      |
| Caelo    | Lauromacrogol 400 | 192957002        | 21      |
| Caelo    | Lauromacrogol 400 | 192957005        | 13      |
| Caelo    | Lauromacrogol 400 | 19291570         | 1       |
| Caelo    | Lauromacrogol 400 | 1929570058       | 1       |
| Caelo    | Lauromacrogol 400 | 20002697002      | 13      |
| Caelo    | Lauromacrogol 400 | 20002697005      | 3       |
| Caelo    | Lauromacrogol 400 | 11107905         | 1       |
| Caelo    | Lauromacrogol 400 | 19131002         | 8       |
| Caelo    | Lauromacrogol 400 | 16E18B04324095   | 2       |
| Caelo    | Lauromacrogol 400 | 19131010         | 4       |
| Caelo    | Lauromacrogol 400 | 17046411         | 22      |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|-------------------|--------------------|----------------|
| Caelo           | Lauromacrogol 400 | 16E18-B04-322723   | 2              |
| Caelo           | Lauromacrogol 400 | 20004484004        | 4              |
| Caelo           | Lauromacrogol 400 | 17H21-B07-341796   | 1              |
| Caelo           | Lauromacrogol 400 | 191310004          | 11             |
| Caelo           | Lauromacrogol 400 | 13-0599            | 1              |
| Caelo           | Lauromacrogol 400 | 18J08-B03-355982   | 1              |
| Caelo           | Lauromacrogol 400 | 18b26-b06-346398   | 1              |
| Caelo           | Lauromacrogol 400 | B14-1414           | 1              |
| Caelo           | Lauromacrogol 400 | 18175512           | 1              |
| Caelo           | Lauromacrogol 400 | 130600401          | 1              |
| Caelo           | Lauromacrogol 400 | CHB17250902        | 1              |
| Caelo           | Lauromacrogol 400 | 15363701           | 1              |
| Caelo           | Lauromacrogol 400 | 1298974            | 2              |
| Caelo           | Lauromacrogol 400 | 18175509P-190225-1 | 1              |
| Caelo           | Lauromacrogol 400 | 18D30-B09-352739   | 2              |
| Caelo           | Lauromacrogol 400 | 18175509           | 15             |
| Caelo           | Lauromacrogol 400 | 20002697001        | 9              |
| Caelo           | Lauromacrogol 400 | 20004484003        | 3              |
| Caelo           | Lauromacrogol 400 | 19131006           | 24             |
| Caelo           | Lauromacrogol 400 | 160312             | 35             |
| Caelo           | Lauromacrogol 400 | 17250909           | 25             |
| Caelo           | Lauromacrogol 400 | 12A26-N08          | 1              |
| Caelo           | Lauromacrogol 400 | 180802501          | 1              |
| Caelo           | Lauromacrogol 400 | 19131008           | 34             |
| Caelo           | Lauromacrogol 400 | 1913100004         | 1              |
| Caelo           | Lauromacrogol 400 | 181755040120       | 1              |
| Caelo           | Lauromacrogol 400 | 16102908           | 5              |
| Caelo           | Lauromacrogol 400 | 3298               | 1              |
| Caelo           | Lauromacrogol 400 | 3121505            | 1              |
| Caelo           | Lauromacrogol 400 | 13340710           | 3              |
| Caelo           | Lauromacrogol 400 | 16E18-B04          | 1              |
| Caelo           | Lauromacrogol 400 | 90807              | 1              |
| Caelo           | Lauromacrogol 400 | 17046406           | 7              |
| Caelo           | Lauromacrogol 400 | 18B26-B06_346397   | 1              |
| Caelo           | Lauromacrogol 400 | 15A26-802          | 1              |
| Caelo           | Lauromacrogol 400 | 17250913           | 19             |
| Caelo           | Lauromacrogol 400 | 188175504          | 1              |
| Caelo           | Lauromacrogol 400 | 19130004           | 1              |
| Caelo           | Lauromacrogol 400 | 20000841002        | 5              |
| Caelo           | Lauromacrogol 400 | 15363702           | 9              |
| Caelo           | Lauromacrogol 400 | 15363703           | 5              |
| Caelo           | Lauromacrogol 400 | 15363712           | 9              |
| Caelo           | Lauromacrogol 400 | 17046502           | 9              |
| Caelo           | Lauromacrogol 400 | 1913003            | 2              |
| Caelo           | Lauromacrogol 400 | 192957001          | 16             |
| Caelo           | Lauromacrogol 400 | 19297001           | 1              |
| Caelo           | Lauromacrogol 400 | 16E18-B04-328699   | 1              |
| Caelo           | Lauromacrogol 400 | 13B13-N01          | 1              |
| Caelo           | Lauromacrogol 400 | 14220808           | 2              |
| Caelo           | Lauromacrogol 400 | 14220815           | 1              |
| Caelo           | Lauromacrogol 400 | 16/077/M           | 1              |
| Caelo           | Lauromacrogol 400 | 151002402          | 1              |
| Caelo           | Lauromacrogol 400 | 16E18B04-321110    | 1              |
| Caelo           | Lauromacrogol 400 | 16102902           | 11             |
| Caelo           | Lauromacrogol 400 | 16D18-B04          | 1              |
| Caelo           | Lauromacrogol 400 | 17H21B07341796     | 2              |
| Caelo           | Lauromacrogol 400 | 17A23-B01-332868   | 1              |
| Caelo           | Lauromacrogol 400 | 18B26-B06-346397   | 3              |
| Caelo           | Lauromacrogol 400 | 18D30-B09-350641   | 3              |
| Caelo           | Lauromacrogol 400 | 18D30-B09-350642   | 2              |

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| Supplier | Substance         | Batch             | Spectra |
|----------|-------------------|-------------------|---------|
| Caelo    | Lauromacrogol 400 | 18B26-B06-347341  | 1       |
| Caelo    | Lauromacrogol 400 | 18D30-B09-350640  | 3       |
| Caelo    | Lauromacrogol 400 | 1359415           | 2       |
| Caelo    | Lauromacrogol 400 | 18175517          | 12      |
| Caelo    | Lauromacrogol 400 | 16E18-B04-327811  | 1       |
| Caelo    | Lauromacrogol 400 | 14-1414           | 2       |
| Caelo    | Lauromacrogol 400 | 17046412          | 9       |
| Caelo    | Lauromacrogol 400 | 13340703          | 4       |
| Caelo    | Lauromacrogol 400 | 13K18-B30         | 1       |
| Caelo    | Lauromacrogol 400 | 1815508           | 1       |
| Caelo    | Lauromacrogol 400 | 15A26-B02         | 2       |
| Caelo    | Lauromacrogol 400 | 140911            | 11      |
| Caelo    | Lauromacrogol 400 | 15a26-b02-303628  | 1       |
| Caelo    | Lauromacrogol 400 | 15363707          | 3       |
| Caelo    | Lauromacrogol 400 | 16102909          | 4       |
| Caelo    | Lauromacrogol 400 | 17250901          | 9       |
| Caelo    | Lauromacrogol 400 | 18912184          | 1       |
| Caelo    | Lauromacrogol 400 | 17250904          | 22      |
| Caelo    | Lauromacrogol 400 | 17250908          | 25      |
| Caelo    | Lauromacrogol 400 | 1801043-01        | 5       |
| Caelo    | Lauromacrogol 400 | 17046409          | 1       |
| Caelo    | Lauromacrogol 400 | 18-0103           | 2       |
| Caelo    | Lauromacrogol 400 | 18826806347342    | 1       |
| Caelo    | Lauromacrogol 400 | 1808025-01        | 2       |
| Caelo    | Lauromacrogol 400 | 1815502           | 1       |
| Caelo    | Lauromacrogol 400 | 18175521          | 5       |
| Caelo    | Lauromacrogol 400 | 20000841001       | 2       |
| Caelo    | Lauromacrogol 400 | 16E18-Bo4-326090  | 1       |
| Caelo    | Lauromacrogol 400 | 18175515          | 6       |
| Caelo    | Lauromacrogol 400 | 191111510         | 1       |
| Caelo    | Lauromacrogol 400 | 1302014-01        | 1       |
| Caelo    | Lauromacrogol 400 | 15192209          | 4       |
| Caelo    | Lauromacrogol 400 | 16E18-B04-326089  | 1       |
| Caelo    | Lauromacrogol 400 | 163012            | 1       |
| Caelo    | Lauromacrogol 400 | 16E-18-B04-326089 | 1       |
| Caelo    | Lauromacrogol 400 | 17A23-B01-332868  | 1       |
| Caelo    | Lauromacrogol 400 | 17H21-B07         | 2       |
| Caelo    | Lauromacrogol 400 | 17H21-B07-339504  | 1       |
| Caelo    | Lauromacrogol 400 | 41796             | 1       |
| Caelo    | Lauromacrogol 400 | 1725902           | 1       |
| Caelo    | Lauromacrogol 400 | 15-0596           | 1       |
| Caelo    | Lauromacrogol 400 | 18D30B09-350640   | 1       |
| Caelo    | Lauromacrogol 400 | 18175508          | 18      |
| Caelo    | Lauromacrogol 400 | 1919E-02384       | 1       |
| Caelo    | Lauromacrogol 400 | 1919B-02384       | 1       |
| Caelo    | Lauromacrogol 400 | 1919A-02384       | 1       |
| Caelo    | Lauromacrogol 400 | 2319E-02384(1)    | 1       |
| Caelo    | Lauromacrogol 400 | 2319F-02384(2)    | 1       |
| Caelo    | Lauromacrogol 400 | 2319G-02384(3)    | 1       |
| Caelo    | Lauromacrogol 400 | 19131005          | 8       |
| Caelo    | Lauromacrogol 400 | 1703033-01        | 5       |
| Caelo    | Lauromacrogol 400 | 110408            | 19      |
| Caelo    | Lauromacrogol 400 | 13-0108           | 1       |
| Caelo    | Lauromacrogol 400 | 13095817          | 4       |
| Caelo    | Lauromacrogol 400 | 14220816          | 10      |
| Caelo    | Lauromacrogol 400 | 15G10-B05         | 1       |
| Caelo    | Lauromacrogol 400 | 16102914          | 6       |
| Caelo    | Lauromacrogol 400 | 16E18B04326089    | 1       |
| Caelo    | Lauromacrogol 400 | 17A23B01330983    | 1       |
| Caelo    | Lauromacrogol 400 | 16E-18B04         | 1       |

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| Supplier                    | Substance         | Batch       | Spectra |
|-----------------------------|-------------------|-------------|---------|
| Caelo                       | Lauromacrogol 400 | 17250902    | 24      |
| Caelo                       | Lauromacrogol 400 | 192957003   | 1       |
| Caelo                       | Lauromacrogol 400 | 4617M02384  | 1       |
| Caelo                       | Lauromacrogol 400 | 16-0290     | 1       |
| Caesa / Alliance Health...  | Lauromacrogol 400 | 18175504    | 1       |
| Caesar & Lorenz             | Lauromacrogol 400 | 13095802    | 1       |
| Caesar & Loretz             | Lauromacrogol 400 | 17250908    | 1       |
| Caesar & Loretz             | Lauromacrogol 400 | 17250913    | 2       |
| Caesar & Loretz             | Lauromacrogol 400 | 18175503    | 1       |
| Caesar & Loretz             | Lauromacrogol 400 | 18175504    | 4       |
| CAESAR & LORETZ             | Lauromacrogol 400 | 19131003    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 16102911    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 17046411    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175509    | 4       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175513    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175512    | 3       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19054203    | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175508    | 9       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175515    | 3       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175504    | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175517    | 4       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 18175520    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131002    | 9       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131005    | 3       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131003    | 8       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19002901    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131006    | 11      |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131008    | 10      |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131010    | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131004    | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 19131009    | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 191310004   | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 191310003   | 4       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 192957002   | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | B02-0728302 | 1       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 192957005   | 3       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 192957001   | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 20002697001 | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 20000841002 | 2       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 20002697002 | 3       |
| Caesar & Loretz GmbH        | Lauromacrogol 400 | 21000678005 | 1       |
| Caesar & Loretz GmbH / ...  | Lauromacrogol 400 | 18175509    | 3       |
| Caesar & Loretz GmbH / ...  | Lauromacrogol 400 | 19131003    | 1       |
| Caesar & Loretz GmbH / ...  | Lauromacrogol 400 | 192957001   | 1       |
| Caesar & Loretz GmbH / ...  | Lauromacrogol 400 | 18175517    | 1       |
| Caesar & Loretz GmbH / ...  | Lauromacrogol 400 | 19131008    | 2       |
| Caesar & Loretz GmbH / G... | Lauromacrogol 400 | 19131003    | 2       |
| Caesar & Loretz GmbH / G... | Lauromacrogol 400 | 19131008    | 1       |
| Caesar & Loretz GmbH / G... | Lauromacrogol 400 | 191310003   | 3       |
| Caesar & Loretz GmbH/AHD    | Lauromacrogol 400 | 19131010    | 1       |
| Caesar & Loretz GmbH/AHD    | Lauromacrogol 400 | 19131002    | 1       |
| Caesar & Loretz GmbH/Fi...  | Lauromacrogol 400 | 192957005   | 1       |
| Caesar & Loretz GmbH/Fi...  | Lauromacrogol 400 | 20002697005 | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | 191310003   | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | 19131005    | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | 192957005   | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | AP200918-03 | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | AP200918-02 | 1       |
| Caesar & Loretz GmbH/Gehe   | Lauromacrogol 400 | AP200918-04 | 1       |
| Caesar & Loretz GmbH/Je...  | Lauromacrogol 400 | 19131006    | 1       |

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| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| Caesar & Loretz GmbH/Je... | Lauromacrogol 400 | 192957005        | 1       |
| Caesar & Loretz GmbH/No... | Lauromacrogol 400 | 20004484003      | 2       |
| Caesar & Loretz GmbH/No... | Lauromacrogol 400 | 21000678005      | 1       |
| Caesar & Loretz GmbH/NO... | Lauromacrogol 400 | 192957005        | 1       |
| Caesar & Loretz GmbH/Sa... | Lauromacrogol 400 | 20002697002      | 1       |
| Caesar & Loretz GmbH/Sa... | Lauromacrogol 400 | 20001966001      | 1       |
| Caesar & Loretz Hilden/... | Lauromacrogol 400 | 20002697005      | 1       |
| Caesar & Loretz/Sanacorp   | Lauromacrogol 400 | 15363712         | 1       |
| Caesar&Loretz GmbH/ All... | Lauromacrogol 400 | 17250913         | 1       |
| Caesar/Loretz              | Lauromacrogol 400 | 18175513         | 1       |
| Caesar/Loretz              | Lauromacrogol 400 | 18175515         | 5       |
| Caesar/Noweda              | Lauromacrogol 400 | 13B13-N01        | 1       |
| Caleo                      | Lauromacrogol 400 | 192957005        | 1       |
| Calo/AHD                   | Lauromacrogol 400 | 14-0731          | 1       |
| Cepepharm / Gehe           | Lauromacrogol 400 | 140911           | 3       |
| Chemische Fabrik/Noweda    | Lauromacrogol 400 | 19054203         | 3       |
| Chem. Fabrik Schärer & ... | Lauromacrogol 400 | 19131002         | 1       |
| Chemische Fabrik           | Lauromacrogol 400 | 19064501         | 1       |
| Chemische Fabrik / Phönix  | Lauromacrogol 400 | 19054203         | 1       |
| Chemische Fabrik / Phönix  | Lauromacrogol 400 | 19064501         | 4       |
| Chemische Fabrik / Phönix  | Lauromacrogol 400 | 19054203A        | 4       |
| Chemische Fabrik / Phönix  | Lauromacrogol 400 | 19064501A        | 2       |
| chemische Fabrik : Schä... | Lauromacrogol 400 | 19064501         | 1       |
| Chemische Fabrik Phoenix   | Lauromacrogol 400 | 19064501         | 1       |
| Chemische Fabrik Schäre... | Lauromacrogol 400 | 19064501A        | 1       |
| Chemische Fabrik Schäre... | Lauromacrogol 400 | 19054203         | 1       |
| Chemische Fabrik Schäre... | Lauromacrogol 400 | 19064501         | 1       |
| Chemische Fabrik, Schär... | Lauromacrogol 400 | 19054203         | 1       |
| Euro OTC                   | Lauromacrogol 400 | 20001966001      | 1       |
| Chemische Fabrik/AHD       | Lauromacrogol 400 | 19054203         | 1       |
| Chemische Fabrik/Phoenix   | Lauromacrogol 400 | 20-0945          | 1       |
| Corda Iberica,SA.          | Lauromacrogol 400 | 1911015-01       | 1       |
| Croda Iberica              | Lauromacrogol 400 | 1510024-02       | 1       |
| Delta                      | Lauromacrogol 400 | 17H21-B07-341795 | 1       |
| Depepharm/Sanacorp         | Lauromacrogol 400 | 140911           | 2       |
| Devesa/NOW                 | Lauromacrogol 400 | 15363712         | 1       |
| Dr.rer.nat. S. Wissel      | Lauromacrogol 400 | 160312           | 1       |
| E Plus                     | Lauromacrogol 400 | 17046502         | 1       |
| E Plus                     | Lauromacrogol 400 | 17250909         | 1       |
| E Plus                     | Lauromacrogol 400 | 18175502         | 2       |
| Ebert & Jacobi             | Lauromacrogol 400 | 18D30-B09-352738 | 1       |
| Ebert & Jacobi 31.05...    | Lauromacrogol 400 | 140911           | 2       |
| Ebert+Jacobi               | Lauromacrogol 400 | 12A26-N08        | 1       |
| EoRho                      | Lauromacrogol 400 | 1302014-01       | 2       |
| eurho                      | Lauromacrogol 400 | 197010-01        | 1       |
| EuRho                      | Lauromacrogol 400 | 130109           | 2       |
| EuRho                      | Lauromacrogol 400 | 1808025-01       | 3       |
| EuRho/Sanacorp             | Lauromacrogol 400 | 1703033-01       | 1       |
| EuRho/VDL                  | Lauromacrogol 400 | 1907010-01       | 1       |
| Euro                       | Lauromacrogol 400 | 1510024-01       | 1       |
| Euro OTC                   | Lauromacrogol 400 | 13F13-N07        | 1       |
| Euro OTC                   | Lauromacrogol 400 | 502956           | 1       |
| Euro OTC                   | Lauromacrogol 400 | 1302014-01       | 5       |
| Euro OTC                   | Lauromacrogol 400 | 221542           | 1       |
| Euro OTC                   | Lauromacrogol 400 | 1503032          | 1       |
| Euro OTC                   | Lauromacrogol 400 | 1510024-02       | 11      |
| Euro OTC                   | Lauromacrogol 400 | 151002401        | 1       |
| Euro OTC                   | Lauromacrogol 400 | 170333-01        | 1       |
| Euro OTC                   | Lauromacrogol 400 | 17A23-B01-335355 | 1       |
| Euro OTC                   | Lauromacrogol 400 | 17H21-B07-341797 | 1       |

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| Supplier               | Substance         | Batch               | Spectra |
|------------------------|-------------------|---------------------|---------|
| Euro OTC               | Lauromacrogol 400 | MLE2018625          | 1       |
| Euro OTC               | Lauromacrogol 400 | 181043-01           | 1       |
| Euro OTC               | Lauromacrogol 400 | 180002541           | 1       |
| Euro OTC               | Lauromacrogol 400 | 2007042-01          | 5       |
| Euro OTC               | Lauromacrogol 400 | 1109011-01          | 2       |
| Euro OTC               | Lauromacrogol 400 | 1210035-01          | 2       |
| Euro OTC               | Lauromacrogol 400 | 1009020-02          | 2       |
| Euro OTC               | Lauromacrogol 400 | 1306004-01          | 9       |
| Euro OTC               | Lauromacrogol 400 | 1306004-02          | 3       |
| Euro OTC               | Lauromacrogol 400 | 1410010-01          | 2       |
| Euro OTC               | Lauromacrogol 400 | 1510024-01          | 8       |
| Euro OTC               | Lauromacrogol 400 | 161003401           | 1       |
| Euro OTC               | Lauromacrogol 400 | 1275280             | 3       |
| Euro OTC               | Lauromacrogol 400 | 1359415             | 3       |
| Euro OTC               | Lauromacrogol 400 | 1551417             | 2       |
| Euro OTC               | Lauromacrogol 400 | 260315/1            | 1       |
| Euro OTC               | Lauromacrogol 400 | 1410010-02          | 1       |
| Euro OTC               | Lauromacrogol 400 | 1184359             | 1       |
| Euro OTC               | Lauromacrogol 400 | 14100100-01         | 1       |
| Euro OTC               | Lauromacrogol 400 | 140700701           | 1       |
| Euro OTC               | Lauromacrogol 400 | 160312              | 7       |
| Euro OTC               | Lauromacrogol 400 | 160500602           | 3       |
| Euro OTC               | Lauromacrogol 400 | 171116PC/1703033-01 | 1       |
| Euro OTC               | Lauromacrogol 400 | 180143-01           | 1       |
| Euro OTC               | Lauromacrogol 400 | 191029-01           | 1       |
| Euro OTC               | Lauromacrogol 400 | 1901029             | 1       |
| Euro OTC               | Lauromacrogol 400 | 17A23-B01-332869    | 1       |
| Euro OTC               | Lauromacrogol 400 | 130109              | 1       |
| Euro OTC               | Lauromacrogol 400 | 180101043-01        | 1       |
| Euro OTC               | Lauromacrogol 400 | 1801043-01          | 25      |
| Euro OTC               | Lauromacrogol 400 | 1412296             | 3       |
| Euro OTC               | Lauromacrogol 400 | 160312A             | 2       |
| Euro OTC               | Lauromacrogol 400 | 127580              | 1       |
| Euro OTC               | Lauromacrogol 400 | 1781002601          | 1       |
| Euro OTC               | Lauromacrogol 400 | 1589415             | 2       |
| Euro OTC               | Lauromacrogol 400 | 1503032-01          | 3       |
| Euro OTC               | Lauromacrogol 400 | 1510025-01          | 1       |
| Euro OTC               | Lauromacrogol 400 | 1919-02384          | 1       |
| Euro OTC               | Lauromacrogol 400 | 1919G-02384         | 1       |
| Euro OTC               | Lauromacrogol 400 | 160500601           | 1       |
| Euro OTC               | Lauromacrogol 400 | 170303301           | 4       |
| Euro OTC               | Lauromacrogol 400 | 1605006-01          | 12      |
| Euro OTC               | Lauromacrogol 400 | 171002601           | 2       |
| Fagron                 | Lauromacrogol 400 | 15G10-B05           | 1       |
| Fagon                  | Lauromacrogol 400 | 15G10-B05-318670    | 1       |
| Fagon / Gehe           | Lauromacrogol 400 | 19G09-B02-072832    | 1       |
| fagr                   | Lauromacrogol 400 | 16-0290             | 1       |
| Fagro, Gehe 01.02.2019 | Lauromacrogol 400 | 18D30-B09-352738    | 1       |
| Fagro/ Sanacorp        | Lauromacrogol 400 | 18B26-B06-346396    | 2       |
| Fagro/Noweda           | Lauromacrogol 400 | 18826-806-346397    | 1       |
| Fagron                 | Lauromacrogol 400 | 12-1074             | 1       |
| Fagron                 | Lauromacrogol 400 | 11F28-N08           | 4       |
| Fagron                 | Lauromacrogol 400 | 12a26-n08           | 1       |
| Fagron                 | Lauromacrogol 400 | 11f28-n08           | 1       |
| Fagron                 | Lauromacrogol 400 | 13A31-N04           | 3       |
| Fagron                 | Lauromacrogol 400 | 12A26-N08           | 1       |
| Fagron                 | Lauromacrogol 400 | 13K18-B30-28816     | 2       |
| Fagron                 | Lauromacrogol 400 | 12e03-n04           | 1       |
| Fagron                 | Lauromacrogol 400 | 11B11-N15           | 2       |
| Fagron                 | Lauromacrogol 400 | 12I18-n04           | 1       |

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| Supplier | Substance         | Batch              | Spectra |
|----------|-------------------|--------------------|---------|
| Fagron   | Lauromacrogol 400 | 11I07-N05          | 1       |
| Fagron   | Lauromacrogol 400 | 13B13-N01          | 1       |
| Fagron   | Lauromacrogol 400 | 13b13-n01          | 1       |
| Fagron   | Lauromacrogol 400 | 13B13N01           | 1       |
| Fagron   | Lauromacrogol 400 | 13G02N03           | 3       |
| Fagron   | Lauromacrogol 400 | 13813-n01          | 1       |
| Fagron   | Lauromacrogol 400 | 21121201           | 1       |
| Fagron   | Lauromacrogol 400 | 13G02-No3          | 2       |
| Fagron   | Lauromacrogol 400 | 13J01-N03          | 2       |
| Fagron   | Lauromacrogol 400 | 13K18-B30          | 5       |
| Fagron   | Lauromacrogol 400 | 130109             | 1       |
| Fagron   | Lauromacrogol 400 | 13K18-B30-288165   | 2       |
| Fagron   | Lauromacrogol 400 | 14e06-b05          | 1       |
| Fagron   | Lauromacrogol 400 | 13-1827            | 3       |
| Fagron   | Lauromacrogol 400 | 14E06-B05293846    | 1       |
| Fagron   | Lauromacrogol 400 | 14e06-b05-293847   | 1       |
| Fagron   | Lauromacrogol 400 | 14H04-B03-297073   | 3       |
| Fagron   | Lauromacrogol 400 | 14E06-B05293848    | 1       |
| Fagron   | Lauromacrogol 400 | 14H04B03           | 1       |
| Fagron   | Lauromacrogol 400 | 14E06-B05-295979   | 4       |
| Fagron   | Lauromacrogol 400 | 14E06-B05          | 1       |
| Fagron   | Lauromacrogol 400 | 14h04-b03-297073   | 1       |
| Fagron   | Lauromacrogol 400 | 14220816           | 1       |
| Fagron   | Lauromacrogol 400 | 14h04-b03-301518   | 1       |
| Fagron   | Lauromacrogol 400 | 14H04-B03-301520   | 4       |
| Fagron   | Lauromacrogol 400 | 14H04-B03-301519   | 6       |
| Fagron   | Lauromacrogol 400 | 15A26-B02-303626   | 6       |
| Fagron   | Lauromacrogol 400 | 15A26-B02303628    | 1       |
| Fagron   | Lauromacrogol 400 | 15A26-B02-303627   | 6       |
| Fagron   | Lauromacrogol 400 | 14-1492            | 1       |
| Fagron   | Lauromacrogol 400 | 303628             | 1       |
| Fagron   | Lauromacrogol 400 | 15E27-B99-308668   | 1       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-314366   | 5       |
| Fagron   | Lauromacrogol 400 | 15G1-B05-313605    | 1       |
| Fagron   | Lauromacrogol 400 | 14A26-B02-303629   | 1       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-313605   | 6       |
| Fagron   | Lauromacrogol 400 | 15-0596            | 3       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-313606   | 1       |
| Fagron   | Lauromacrogol 400 | 15C10-B05-314366   | 1       |
| Fagron   | Lauromacrogol 400 | 15A26-B02-303626   | 1       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-318670   | 4       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-317456   | 7       |
| Fagron   | Lauromacrogol 400 | 15G10-B05-317-56   | 1       |
| Fagron   | Lauromacrogol 400 | 15G10-B025-318670  | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-804-321110   | 1       |
| Fagron   | Lauromacrogol 400 | 15g10-b05-317457   | 2       |
| Fagron   | Lauromacrogol 400 | 15G10              | 2       |
| Fagron   | Lauromacrogol 400 | 16E18-B04          | 25      |
| Fagron   | Lauromacrogol 400 | 16E18-B04-321109   | 7       |
| Fagron   | Lauromacrogol 400 | 15g10-b05-317456   | 1       |
| Fagron   | Lauromacrogol 400 | 16e18-b04-321110   | 1       |
| Fagron   | Lauromacrogol 400 | 16-0290            | 7       |
| Fagron   | Lauromacrogol 400 | 1510024-02         | 1       |
| Fagron   | Lauromacrogol 400 | 16e18-b04-32109    | 1       |
| Fagron   | Lauromacrogol 400 | 16E18804-322722    | 1       |
| Fagron   | Lauromacrogol 400 | 1618B04-324095     | 1       |
| Fagron   | Lauromacrogol 400 | 16E-18-BB04-324095 | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04-32495    | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04_326089   | 2       |
| Fagron   | Lauromacrogol 400 | 16E18-B04_328699   | 1       |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|-------------------|---------------------|----------------|
| Fagron          | Lauromacrogol 400 | 16E18-B04-328582    | 4              |
| Fagron          | Lauromacrogol 400 | 16E18-804-326090    | 1              |
| Fagron          | Lauromacrogol 400 | 117A23-B01-330982   | 1              |
| Fagron          | Lauromacrogol 400 | 160312              | 3              |
| Fagron          | Lauromacrogol 400 | 332867              | 1              |
| Fagron          | Lauromacrogol 400 | 17A23-B01-332867    | 2              |
| Fagron          | Lauromacrogol 400 | 17H21-B07-339504    | 7              |
| Fagron          | Lauromacrogol 400 | 17H21-B07           | 20             |
| Fagron          | Lauromacrogol 400 | 17H21-B07-339506    | 9              |
| Fagron          | Lauromacrogol 400 | 330983              | 1              |
| Fagron          | Lauromacrogol 400 | 17H21-B-07-341796   | 1              |
| Fagron          | Lauromacrogol 400 | 17H21-B07339504     | 1              |
| Fagron          | Lauromacrogol 400 | 18A18-B98-344798    | 8              |
| Fagron          | Lauromacrogol 400 | 18A18-B98           | 3              |
| Fagron          | Lauromacrogol 400 | 170845              | 1              |
| Fagron          | Lauromacrogol 400 | 18A18-B98-344789    | 1              |
| Fagron          | Lauromacrogol 400 | 18A19-B98-344798    | 1              |
| Fagron          | Lauromacrogol 400 | 17H21B07            | 1              |
| Fagron          | Lauromacrogol 400 | 18D30-B09-350640    | 12             |
| Fagron          | Lauromacrogol 400 | 18b26-b06           | 1              |
| Fagron          | Lauromacrogol 400 | 18826-B06-347343    | 2              |
| Fagron          | Lauromacrogol 400 | 18D30-B09           | 1              |
| Fagron          | Lauromacrogol 400 | 18D30-B09-352738    | 13             |
| Fagron          | Lauromacrogol 400 | 18J08-B03           | 4              |
| Fagron          | Lauromacrogol 400 | 18175502            | 1              |
| Fagron          | Lauromacrogol 400 | 18175508            | 1              |
| Fagron          | Lauromacrogol 400 | 18J08-B03355980     | 1              |
| Fagron          | Lauromacrogol 400 | 19054203            | 3              |
| Fagron          | Lauromacrogol 400 | 18D30               | 1              |
| Fagron          | Lauromacrogol 400 | 19G09_B02_072831    | 1              |
| Fagron          | Lauromacrogol 400 | 72842               | 1              |
| Fagron          | Lauromacrogol 400 | T12-0766602         | 1              |
| Fagron          | Lauromacrogol 400 | 2220-T12-076663     | 1              |
| Fagron          | Lauromacrogol 400 | 13F13-N07           | 5              |
| Fagron          | Lauromacrogol 400 | 13K18-B30-288164    | 4              |
| Fagron          | Lauromacrogol 400 | 18A18-B98-344797    | 2              |
| Fagron          | Lauromacrogol 400 | 18A18B98344797      | 1              |
| Fagron          | Lauromacrogol 400 | 17AB23-B01-332868   | 1              |
| Fagron          | Lauromacrogol 400 | 15A26-B02-303625    | 10             |
| Fagron          | Lauromacrogol 400 | 8581634             | 1              |
| Fagron          | Lauromacrogol 400 | 14H04-B03           | 7              |
| Fagron          | Lauromacrogol 400 | 14371706            | 1              |
| Fagron          | Lauromacrogol 400 | 16E-18-B04-321109   | 1              |
| Fagron          | Lauromacrogol 400 | B02-0728301         | 1              |
| Fagron          | Lauromacrogol 400 | 12E03-N04           | 24             |
| Fagron          | Lauromacrogol 400 | 12-0719             | 1              |
| Fagron          | Lauromacrogol 400 | T-190116-1          | 1              |
| Fagron          | Lauromacrogol 400 | 16e18-b04-324095    | 1              |
| Fagron          | Lauromacrogol 400 | 15A26-B02           | 10             |
| Fagron          | Lauromacrogol 400 | 15g10-b05-313605    | 2              |
| Fagron          | Lauromacrogol 400 | 18a18-b98-344799    | 1              |
| Fagron          | Lauromacrogol 400 | 2517I-02384         | 1              |
| Fagron          | Lauromacrogol 400 | 1298974             | 1              |
| Fagron          | Lauromacrogol 400 | 221542-0004         | 1              |
| Fagron          | Lauromacrogol 400 | 20D20-T12-080213    | 2              |
| Fagron          | Lauromacrogol 400 | 15G10-B05-31745     | 1              |
| Fagron          | Lauromacrogol 400 | 12A26-N08           | 9              |
| Fagron          | Lauromacrogol 400 | 16E18-B04-326091    | 6              |
| Fagron          | Lauromacrogol 400 | 1BB26-B06-346398    | 2              |
| Fagron          | Lauromacrogol 400 | 19G09-B02P-191206-4 | 1              |

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| Supplier | Substance         | Batch              | Spectra |
|----------|-------------------|--------------------|---------|
| Fagron   | Lauromacrogol 400 | 18003513P-190312-7 | 1       |
| Fagron   | Lauromacrogol 400 | 11D28-N20          | 1       |
| Fagron   | Lauromacrogol 400 | 16E18B04326089     | 1       |
| Fagron   | Lauromacrogol 400 | 17A23-B01-330982   | 7       |
| Fagron   | Lauromacrogol 400 | 18I08-B03-355981   | 1       |
| Fagron   | Lauromacrogol 400 | 19G09-B02-072836   | 4       |
| Fagron   | Lauromacrogol 400 | 20D20-T12-080208   | 2       |
| Fagron   | Lauromacrogol 400 | 18B26-B06-346396   | 5       |
| Fagron   | Lauromacrogol 400 | 19-0653            | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04-328699   | 16      |
| Fagron   | Lauromacrogol 400 | 17A23-B01-335355   | 7       |
| Fagron   | Lauromacrogol 400 | 16E-18-B04-324095  | 1       |
| Fagron   | Lauromacrogol 400 | 18826-B06-347341   | 1       |
| Fagron   | Lauromacrogol 400 | 18d30b09352738     | 1       |
| Fagron   | Lauromacrogol 400 | 19G09-B02-072844   | 2       |
| Fagron   | Lauromacrogol 400 | 19g09-b02-072842   | 1       |
| Fagron   | Lauromacrogol 400 | 14E06-B05-29847    | 1       |
| Fagron   | Lauromacrogol 400 | 15a26-b02-303628   | 1       |
| Fagron   | Lauromacrogol 400 | 15a26-b02-303625   | 1       |
| Fagron   | Lauromacrogol 400 | 13K18-B30_288163   | 1       |
| Fagron   | Lauromacrogol 400 | 15A26-B02-30628    | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04-326090   | 10      |
| Fagron   | Lauromacrogol 400 | 1723-335356        | 1       |
| Fagron   | Lauromacrogol 400 | 18b26-b06-347341   | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04-324095   | 1       |
| Fagron   | Lauromacrogol 400 | 18A18-B98-344800   | 1       |
| Fagron   | Lauromacrogol 400 | 16E-18-B04         | 1       |
| Fagron   | Lauromacrogol 400 | 14H04-B03-301518   | 3       |
| Fagron   | Lauromacrogol 400 | 17H21-b07-339504   | 1       |
| Fagron   | Lauromacrogol 400 | 18826-B06-346398   | 2       |
| Fagron   | Lauromacrogol 400 | 191310003          | 1       |
| Fagron   | Lauromacrogol 400 | 16E-18-B04-327811  | 1       |
| Fagron   | Lauromacrogol 400 | 12/18-N04          | 5       |
| Fagron   | Lauromacrogol 400 | 12118-N04          | 1       |
| Fagron   | Lauromacrogol 400 | 12I18-N04          | 2       |
| Fagron   | Lauromacrogol 400 | 13B13-No1          | 1       |
| Fagron   | Lauromacrogol 400 | 13-0599            | 2       |
| Fagron   | Lauromacrogol 400 | 14H04-B03-297070   | 5       |
| Fagron   | Lauromacrogol 400 | 14-0731            | 6       |
| Fagron   | Lauromacrogol 400 | 16/149/P           | 1       |
| Fagron   | Lauromacrogol 400 | 16E18-B04-0290     | 1       |
| Fagron   | Lauromacrogol 400 | 17A23B01-330982    | 1       |
| Fagron   | Lauromacrogol 400 | 17A23B01330983     | 2       |
| Fagron   | Lauromacrogol 400 | 17A23-B01_332867   | 1       |
| Fagron   | Lauromacrogol 400 | 17a23801335355     | 1       |
| Fagron   | Lauromacrogol 400 | 17A21-B07          | 1       |
| Fagron   | Lauromacrogol 400 | 18826-B06-346396   | 1       |
| Fagron   | Lauromacrogol 400 | 17H21B07341795     | 1       |
| Fagron   | Lauromacrogol 400 | 17h21-b07-341795   | 1       |
| Fagron   | Lauromacrogol 400 | 18B26-B06-347342   | 14      |
| Fagron   | Lauromacrogol 400 | 160312/A           | 1       |
| Fagron   | Lauromacrogol 400 | 18D30B09350640     | 1       |
| Fagron   | Lauromacrogol 400 | 18D30B221542       | 1       |
| Fagron   | Lauromacrogol 400 | 18J08-B03-3555981  | 1       |
| Fagron   | Lauromacrogol 400 | 18J08B03355980     | 1       |
| Fagron   | Lauromacrogol 400 | 13G02-N03          | 16      |
| Fagron   | Lauromacrogol 400 | 13G02-N030515/1084 | 1       |
| Fagron   | Lauromacrogol 400 | 13k18-b30-288163   | 1       |
| Fagron   | Lauromacrogol 400 | 13G02-N030021/1084 | 1       |
| Fagron   | Lauromacrogol 400 | 13G02-N030047/1084 | 1       |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|-------------------|-------------------|----------------|
| Fagron          | Lauromacrogol 400 | 14H04-B03-297074  | 2              |
| Fagron          | Lauromacrogol 400 | 18b26-b06-346397  | 1              |
| Fagron          | Lauromacrogol 400 | 20020-T12-080213  | 1              |
| Fagron          | Lauromacrogol 400 | 19G09-B02-072842  | 5              |
| Fagron          | Lauromacrogol 400 | 18D30-B09-349679  | 3              |
| Fagron          | Lauromacrogol 400 | 18B26B06          | 1              |
| Fagron          | Lauromacrogol 400 | 18D30B09350641    | 2              |
| Fagron          | Lauromacrogol 400 | 18D30B09-352739   | 1              |
| Fagron          | Lauromacrogol 400 | 20020112076662    | 1              |
| Fagron          | Lauromacrogol 400 | 17A23-B01-331156  | 4              |
| Fagron          | Lauromacrogol 400 | 17H21-B07-341797  | 2              |
| Fagron          | Lauromacrogol 400 | 14E06-B05-293847  | 14             |
| Fagron          | Lauromacrogol 400 | 14H04-B03-301517  | 5              |
| Fagron          | Lauromacrogol 400 | 14H-04-B03-301518 | 2              |
| Fagron          | Lauromacrogol 400 | 15A26-B02_303626  | 1              |
| Fagron          | Lauromacrogol 400 | 15G10-B05_315343  | 1              |
| Fagron          | Lauromacrogol 400 | 15G10-B05-317457  | 6              |
| Fagron          | Lauromacrogol 400 | 16e18-b04-321109  | 1              |
| Fagron          | Lauromacrogol 400 | 16B18-B04-321109  | 1              |
| Fagron          | Lauromacrogol 400 | 1605006-01        | 1              |
| Fagron          | Lauromacrogol 400 | 17A23-B01-330983  | 12             |
| Fagron          | Lauromacrogol 400 | 17A23-B01-332869  | 6              |
| Fagron          | Lauromacrogol 400 | 17H21-807         | 1              |
| Fagron          | Lauromacrogol 400 | 18826-B06-346397  | 2              |
| Fagron          | Lauromacrogol 400 | 18J08-B03         | 2              |
| Fagron          | Lauromacrogol 400 | 18J08-B03-3555980 | 1              |
| Fagron          | Lauromacrogol 400 | 20D20-T12-080231  | 1              |
| Fagron          | Lauromacrogol 400 | 15A26-B02-303628  | 23             |
| Fagron          | Lauromacrogol 400 | 15A26-B02-303629  | 7              |
| Fagron          | Lauromacrogol 400 | 15a26-B02         | 1              |
| Fagron          | Lauromacrogol 400 | 15A26B02303627    | 1              |
| Fagron          | Lauromacrogol 400 | 16E18-B04-322724  | 3              |
| Fagron          | Lauromacrogol 400 | 16-1155           | 1              |
| Fagron          | Lauromacrogol 400 | 18D30B09352740    | 1              |
| Fagron          | Lauromacrogol 400 | 1808025-01        | 1              |
| Fagron          | Lauromacrogol 400 | 18I08-B03-355980  | 1              |
| Fagron          | Lauromacrogol 400 | 20D20-T12-076663  | 2              |
| Fagron          | Lauromacrogol 400 | 3713U-02384       | 1              |
| Fagron          | Lauromacrogol 400 | 13813-N01         | 3              |
| Fagron          | Lauromacrogol 400 | 1314A-02384       | 1              |
| Fagron          | Lauromacrogol 400 | 2215I-02384       | 1              |
| Fagron          | Lauromacrogol 400 | 15G10-B05317456   | 2              |
| Fagron          | Lauromacrogol 400 | 16E18-B04-321110  | 5              |
| Fagron          | Lauromacrogol 400 | 1416A-02384       | 1              |
| Fagron          | Lauromacrogol 400 | 17A23-B01-335356  | 2              |
| Fagron          | Lauromacrogol 400 | 140911            | 1              |
| Fagron          | Lauromacrogol 400 | 16E18-B           | 1              |
| Fagron          | Lauromacrogol 400 | 17A23-B01-355355  | 1              |
| Fagron          | Lauromacrogol 400 | 18A-18-B98-344797 | 1              |
| Fagron          | Lauromacrogol 400 | 188B26-B06-346396 | 2              |
| Fagron          | Lauromacrogol 400 | 160312A           | 2              |
| Fagron          | Lauromacrogol 400 | 18B26-B03-347343  | 1              |
| Fagron          | Lauromacrogol 400 | 17H21-B06-341764  | 1              |
| Fagron          | Lauromacrogol 400 | 18826-06-346396   | 1              |
| Fagron          | Lauromacrogol 400 | 18826-B06-347342  | 1              |
| Fagron          | Lauromacrogol 400 | 18D30-B09-352739  | 11             |
| Fagron          | Lauromacrogol 400 | 18D30B09-350642   | 1              |
| Fagron          | Lauromacrogol 400 | 1808-B03-355981   | 1              |
| Fagron          | Lauromacrogol 400 | 18B26B06346397    | 2              |
| Fagron          | Lauromacrogol 400 | 19G09B02-072832   | 2              |

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| Supplier                  | Substance         | Batch             | Spectra |
|---------------------------|-------------------|-------------------|---------|
| Fagron                    | Lauromacrogol 400 | 3018I-02868       | 1       |
| Fagron                    | Lauromacrogol 400 | 19G09-B02072835   | 1       |
| Fagron                    | Lauromacrogol 400 | 19096701          | 1       |
| Fagron                    | Lauromacrogol 400 | 14H04-B03-297071  | 2       |
| Fagron                    | Lauromacrogol 400 | 15A26B02-303627   | 1       |
| Fagron                    | Lauromacrogol 400 | 15G10-B05-31457   | 1       |
| Fagron                    | Lauromacrogol 400 | 17H21-B07-341795  | 18      |
| Fagron                    | Lauromacrogol 400 | 17H21-B07-3411795 | 1       |
| Fagron                    | Lauromacrogol 400 | 18D30-B09-352740  | 8       |
| Fagron                    | Lauromacrogol 400 | 18B30-B09         | 1       |
| Fagron                    | Lauromacrogol 400 | 1412296           | 1       |
| Fagron                    | Lauromacrogol 400 | 18J08-B03-355981  | 5       |
| Fagron                    | Lauromacrogol 400 | 19G09-B02-072837  | 1       |
| Fargon                    | Lauromacrogol 400 | 13K18-B30-288166  | 1       |
| Fargon / Gehe             | Lauromacrogol 400 | 19G09-B02         | 1       |
| Fargon /Sanacorp          | Lauromacrogol 400 | 18J08-B03         | 1       |
| Fargon /Sanacorp          | Lauromacrogol 400 | 19G09-B02         | 1       |
| Fargon GmbH & Co.KG       | Lauromacrogol 400 | 16E18-B04-326091  | 1       |
| Fargon/ Noweda            | Lauromacrogol 400 | 18J08-B03-355980  | 1       |
| Fargon/18.07.2013/Noweda  | Lauromacrogol 400 | 13B13-N01         | 2       |
| Fargon/GEHE               | Lauromacrogol 400 | 19G09-B02-072831  | 1       |
| Fargon/Phönix             | Lauromacrogol 400 | 18D30-B09-350640  | 1       |
| Fargon/ Sanacorp          | Lauromacrogol 400 | 18826b0634639     | 1       |
| Faron/Noweda              | Lauromacrogol 400 | 1909-B02-072832   | 1       |
| Fgron                     | Lauromacrogol 400 | 18D30-B09-352738  | 1       |
| Fiebig                    | Lauromacrogol 400 | 15A26-B02-303629  | 1       |
| Fiebig                    | Lauromacrogol 400 | 18175517          | 1       |
| Fiebig/ gepepharm         | Lauromacrogol 400 | 140911            | 1       |
| Frago/Gehe                | Lauromacrogol 400 | 17A23-B01-332869  | 1       |
| Frago/Noweda              | Lauromacrogol 400 | 17H21-B07         | 2       |
| Fragon/ Noweda            | Lauromacrogol 400 | 16E18-B04-328699  | 1       |
| Fragon/Noweda             | Lauromacrogol 400 | 17A23-B01-330982  | 1       |
| Fragon/Noweda             | Lauromacrogol 400 | 17H21-B07-339507  | 1       |
| Gatt-Koller               | Lauromacrogol 400 | 1504/05153915     | 2       |
| Gatt-Koller               | Lauromacrogol 400 | 1900852           | 2       |
| gebepharma                | Lauromacrogol 400 | 20030412-1        | 1       |
| gebepharma                | Lauromacrogol 400 | 813E-02384        | 1       |
| gebepharma                | Lauromacrogol 400 | 813Q-02384        | 1       |
| Gebepharma GmbH           | Lauromacrogol 400 | 130109            | 2       |
| gebepharma N PZN 01915345 | Lauromacrogol 400 | 130109            | 1       |
| Gebepharma/Anzag          | Lauromacrogol 400 | 130109            | 1       |
| Gebepharma/Anzag          | Lauromacrogol 400 | 110408            | 1       |
| gegepharm                 | Lauromacrogol 400 | 130109            | 1       |
| gegepharm                 | Lauromacrogol 400 | 140911            | 6       |
| gegepharm                 | Lauromacrogol 400 | 160312            | 3       |
| gegepharm                 | Lauromacrogol 400 | 1603125281        | 1       |
| gegepharm                 | Lauromacrogol 400 | 1603125464        | 1       |
| gegepharm                 | Lauromacrogol 400 | 160312A           | 1       |
| Gegepharm                 | Lauromacrogol 400 | 160312            | 2       |
| Gegepharm                 | Lauromacrogol 400 | 160312A           | 1       |
| Gegepharm GmbH /Phönix    | Lauromacrogol 400 | 19054203          | 8       |
| gegepharm GmbH/ Noweda    | Lauromacrogol 400 | 130109            | 1       |
| gegepharm PH              | Lauromacrogol 400 | 16-0290           | 1       |
| gegepharm PH              | Lauromacrogol 400 | 160312A           | 2       |
| gegepharm PH              | Lauromacrogol 400 | 19054203          | 2       |
| gegepharm,Anzag           | Lauromacrogol 400 | 110408            | 2       |
| Gegepharm/Ebert           | Lauromacrogol 400 | 140911            | 1       |
| gegepharm/Gehe            | Lauromacrogol 400 | 160312            | 2       |
| gegepharm/Gehe            | Lauromacrogol 400 | 182743            | 1       |
| Gegepharm/Gehe            | Lauromacrogol 400 | 130109            | 3       |

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| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| Gegepharm/N/26.02.13 PZ... | Lauromacrogol 400 | 110408           | 1       |
| gegepharm/Noweda           | Lauromacrogol 400 | 160312           | 3       |
| gegepharm/Noweda           | Lauromacrogol 400 | 160312A          | 1       |
| gegepharm/Noweda           | Lauromacrogol 400 | 19054203         | 4       |
| Gegepharm/Phönix           | Lauromacrogol 400 | 160312           | 1       |
| Gegepharm/Phönix           | Lauromacrogol 400 | 160312A          | 1       |
| gegepharm/Phönix Kunde     | Lauromacrogol 400 | 160312A          | 2       |
| Gehe                       | Lauromacrogol 400 | 110408           | 3       |
| Gehe                       | Lauromacrogol 400 | 130109           | 4       |
| Gehe                       | Lauromacrogol 400 | 15A26-B02-303628 | 2       |
| Gehe                       | Lauromacrogol 400 | 140911           | 4       |
| Gehe                       | Lauromacrogol 400 | 15G10-B05-317457 | 1       |
| Gehe                       | Lauromacrogol 400 | 160312           | 7       |
| Gehe                       | Lauromacrogol 400 | 16E18-B04        | 1       |
| Gehe                       | Lauromacrogol 400 | 17A23-B01-332867 | 1       |
| Gehe                       | Lauromacrogol 400 | 17A23-B01-330983 | 2       |
| Gehe                       | Lauromacrogol 400 | 17250901         | 1       |
| Gehe                       | Lauromacrogol 400 | 17H21-B07-341795 | 1       |
| Gehe                       | Lauromacrogol 400 | 17H21-b07-341796 | 1       |
| Gehe                       | Lauromacrogol 400 | 17250902         | 1       |
| Gehe                       | Lauromacrogol 400 | 9759896          | 1       |
| Gehe                       | Lauromacrogol 400 | 17250913         | 3       |
| Gehe                       | Lauromacrogol 400 | 18D30-B09-350641 | 2       |
| Gehe                       | Lauromacrogol 400 | 18J8-B03-355980  | 1       |
| Gehe                       | Lauromacrogol 400 | 19054203         | 3       |
| Gehe                       | Lauromacrogol 400 | 1551417          | 1       |
| GEHE                       | Lauromacrogol 400 | 13B13-N01        | 1       |
| GEHE                       | Lauromacrogol 400 | 130109           | 1       |
| GEHE                       | Lauromacrogol 400 | 160312           | 1       |
| GEHE                       | Lauromacrogol 400 | 17250904         | 1       |
| GEHE                       | Lauromacrogol 400 | 17250909         | 2       |
| GEHE                       | Lauromacrogol 400 | 18175501         | 2       |
| GEHE                       | Lauromacrogol 400 | 18175502         | 2       |
| GEHE                       | Lauromacrogol 400 | 18175507         | 1       |
| GEHE                       | Lauromacrogol 400 | 19131004         | 2       |
| Caelo                      | Lauromacrogol 400 | 17046552         | 1       |
| Fagron                     | Lauromacrogol 400 | 16E18-804-324095 | 1       |
| Caelo                      | Lauromacrogol 400 | 1725090217250902 | 1       |
| Gehe /Caleo                | Lauromacrogol 400 | 17250908         | 1       |
| Gehe /Caleo                | Lauromacrogol 400 | 17250909         | 1       |
| Gehe /Caleo                | Lauromacrogol 400 | 18175502         | 2       |
| GEHE 28.11.2014            | Lauromacrogol 400 | 14H04-B03-297070 | 1       |
| Gehe amax                  | Lauromacrogol 400 | 15G10-B05-314366 | 1       |
| Gehe amax                  | Lauromacrogol 400 | 1907010-01       | 1       |
| Gehe gepepharmn            | Lauromacrogol 400 | 110408           | 1       |
| Gehe/ gepepharm GmbH       | Lauromacrogol 400 | 160312A          | 1       |
| Caelo                      | Lauromacrogol 400 | 16102904         | 9       |
| Caelo                      | Lauromacrogol 400 | 17A23-B01-33287  | 1       |
| Caelo                      | Lauromacrogol 400 | 18175502         | 19      |
| Fagron                     | Lauromacrogol 400 | 13g02-n03        | 1       |
| Fagron                     | Lauromacrogol 400 | 15G10B05315343   | 1       |
| Fagron                     | Lauromacrogol 400 | 16E18-B04-322723 | 8       |
| Fagron                     | Lauromacrogol 400 | 14A23B01332867   | 2       |
| Fagron                     | Lauromacrogol 400 | 18B26-B06-0103   | 1       |
| Fagron                     | Lauromacrogol 400 | 18B26B06346396   | 1       |
| Gehe/Fragon                | Lauromacrogol 400 | 15A26B02303627   | 1       |
| Gehe/Fragon                | Lauromacrogol 400 | 15G10B05317456   | 1       |
| Gehe/Fragon                | Lauromacrogol 400 | 17A23B01332868   | 1       |
| Gehe/Gegepharm             | Lauromacrogol 400 | 19064501         | 2       |
| gehe/gepepharm             | Lauromacrogol 400 | 160312           | 1       |

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| Supplier            | Substance         | Batch            | Spectra |
|---------------------|-------------------|------------------|---------|
| Gehe/gepepharm      | Lauromacrogol 400 | 140911           | 2       |
| Gehe/gepepharm      | Lauromacrogol 400 | 160312           | 1       |
| Gehe/gepepharm      | Lauromacrogol 400 | 160312A          | 3       |
| Gehe/Gepepharm      | Lauromacrogol 400 | 160312A          | 1       |
| Gehe/Gepepharm      | Lauromacrogol 400 | 19054203         | 1       |
| Geibo/ Fargron      | Lauromacrogol 400 | 18D30-B09-352740 | 1       |
| geopharm /Gehe      | Lauromacrogol 400 | 160312A          | 1       |
| Geopharm/Alliance   | Lauromacrogol 400 | 163012A          | 1       |
| gepharm GmbH        | Lauromacrogol 400 | 140911           | 1       |
| Spangropharm        | Lauromacrogol 400 | 160312           | 1       |
| Spangropharm        | Lauromacrogol 400 | 19054203         | 1       |
| GEPE/Anzag          | Lauromacrogol 400 | 110408           | 2       |
| gepe/Gehe           | Lauromacrogol 400 | 130109           | 1       |
| Gepegepharm         | Lauromacrogol 400 | 130109           | 1       |
| gepegepharm/Phoenix | Lauromacrogol 400 | 160321A          | 1       |
| Gepepharm           | Lauromacrogol 400 | 160312           | 1       |
| gepepharm / Fiebig  | Lauromacrogol 400 | 130109           | 1       |
| gepepharm/AHD       | Lauromacrogol 400 | 130109           | 1       |
| gepepharm/Gehe      | Lauromacrogol 400 | 140911           | 3       |
| Gepepharm/Sanacorp  | Lauromacrogol 400 | 1954203          | 1       |
| Gepepharm           | Lauromacrogol 400 | 160312           | 1       |
| gepeoharm / Anzag   | Lauromacrogol 400 | 140911           | 1       |
| gepep/Phoenix       | Lauromacrogol 400 | 140911           | 1       |
| Gepeph/Phönix       | Lauromacrogol 400 | 160312           | 1       |
| gepepharm           | Lauromacrogol 400 | 110408           | 7       |
| gepepharm           | Lauromacrogol 400 | 130109           | 58      |
| gepepharm           | Lauromacrogol 400 | 13044009         | 1       |
| gepepharm           | Lauromacrogol 400 | 13-0108          | 2       |
| gepepharm           | Lauromacrogol 400 | 140911           | 36      |
| gepepharm           | Lauromacrogol 400 | 160312           | 55      |
| gepepharm           | Lauromacrogol 400 | 16-0290          | 3       |
| gepepharm           | Lauromacrogol 400 | 1603102          | 1       |
| gepepharm           | Lauromacrogol 400 | 1603012          | 1       |
| gepepharm           | Lauromacrogol 400 | 160312A          | 29      |
| gepepharm           | Lauromacrogol 400 | 1603120A         | 1       |
| gepepharm           | Lauromacrogol 400 | 19054203         | 18      |
| gepepharm           | Lauromacrogol 400 | 19064501         | 6       |
| gepepharm           | Lauromacrogol 400 | 802-0728401      | 1       |
| gepepharm           | Lauromacrogol 400 | 19064501A        | 1       |
| Gepepharm           | Lauromacrogol 400 | 110408           | 6       |
| Gepepharm           | Lauromacrogol 400 | 19101201         | 1       |
| Gepepharm           | Lauromacrogol 400 | 6111203          | 1       |
| Gepepharm           | Lauromacrogol 400 | 4111M-02384      | 1       |
| Gepepharm           | Lauromacrogol 400 | 27111202         | 1       |
| Gepepharm           | Lauromacrogol 400 | 19121203         | 1       |
| Gepepharm           | Lauromacrogol 400 | 2002312384       | 1       |
| Gepepharm           | Lauromacrogol 400 | 30031303         | 1       |
| Gepepharm           | Lauromacrogol 400 | 130109           | 15      |
| Gepepharm           | Lauromacrogol 400 | 17111403         | 1       |
| Gepepharm           | Lauromacrogol 400 | 13051502         | 1       |
| Gepepharm           | Lauromacrogol 400 | 25061502         | 1       |
| Gepepharm           | Lauromacrogol 400 | 140911           | 27      |
| Gepepharm           | Lauromacrogol 400 | 160312           | 28      |
| Gepepharm           | Lauromacrogol 400 | 16031705         | 1       |
| Gepepharm           | Lauromacrogol 400 | 9041702          | 1       |
| Gepepharm           | Lauromacrogol 400 | 17061708         | 1       |
| Gepepharm           | Lauromacrogol 400 | 21071712         | 1       |
| Gepepharm           | Lauromacrogol 400 | 28101704         | 1       |
| Gepepharm           | Lauromacrogol 400 | 160290           | 1       |
| Gepepharm           | Lauromacrogol 400 | 16-0290          | 1       |

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| Supplier                   | Substance         | Batch               | Spectra |
|----------------------------|-------------------|---------------------|---------|
| Gepepharm                  | Lauromacrogol 400 | 160312A             | 22      |
| Gepepharm                  | Lauromacrogol 400 | 19054203            | 13      |
| Gepepharm                  | Lauromacrogol 400 | 19G09-B02-072831    | 1       |
| Gepepharm                  | Lauromacrogol 400 | 19295701            | 1       |
| Gepepharm                  | Lauromacrogol 400 | 19064501A           | 1       |
| Gepepharm                  | Lauromacrogol 400 | 20001966001         | 2       |
| GEPEPHARM                  | Lauromacrogol 400 | 140911              | 5       |
| GEPEPHARM                  | Lauromacrogol 400 | 14-1414             | 1       |
| GEPEPHARM                  | Lauromacrogol 400 | 190542G3            | 1       |
| gepepharm / G              | Lauromacrogol 400 | 160312A             | 1       |
| Gepepharm Anzag            | Lauromacrogol 400 | 22(160312A)         | 1       |
| gepepharm (Thesit)         | Lauromacrogol 400 | 160312              | 1       |
| gepepharm (Thesit)         | Lauromacrogol 400 | 160312A             | 1       |
| gepepharm (Thesit)         | Lauromacrogol 400 | 16-0290             | 1       |
| gepepharm / Alliance he... | Lauromacrogol 400 | 160312              | 3       |
| gepepharm / Alliance He... | Lauromacrogol 400 | 19054203            | 1       |
| gepepharm / Allianz Hea... | Lauromacrogol 400 | 160312A             | 1       |
| gepepharm / G              | Lauromacrogol 400 | 160312              | 1       |
| Gepepharm / Gehe           | Lauromacrogol 400 | 110408              | 1       |
| Gepepharm / Gehe           | Lauromacrogol 400 | 130109              | 5       |
| Gepepharm / Gehe           | Lauromacrogol 400 | 160312A             | 8       |
| Gepepharm / Gehe           | Lauromacrogol 400 | 19054203            | 4       |
| Gepepharm / GEHE           | Lauromacrogol 400 | 130109              | 1       |
| Gepepharm / Kehr           | Lauromacrogol 400 | 19054203            | 1       |
| gepepharm / Noweda         | Lauromacrogol 400 | 130109              | 7       |
| gepepharm / Noweda         | Lauromacrogol 400 | 110408              | 1       |
| gepepharm / Noweda         | Lauromacrogol 400 | 140911              | 1       |
| gepepharm / Noweda         | Lauromacrogol 400 | 160312              | 2       |
| gepepharm / Noweda         | Lauromacrogol 400 | 160312-A            | 1       |
| Gepepharm / Noweda         | Lauromacrogol 400 | 140911              | 1       |
| Gepepharm / Noweda         | Lauromacrogol 400 | 160312              | 1       |
| Gepepharm / Noweda         | Lauromacrogol 400 | 19051203            | 1       |
| Gepepharm / Noweda         | Lauromacrogol 400 | 19064501            | 2       |
| Gepepharm / Phoenix        | Lauromacrogol 400 | 160312A             | 1       |
| gepepharm / Phönix         | Lauromacrogol 400 | 140911              | 2       |
| gepepharm / Phönix         | Lauromacrogol 400 | 19054203            | 9       |
| gepepharm / Sanacorp       | Lauromacrogol 400 | 130109              | 3       |
| gepepharm / Sanacorp       | Lauromacrogol 400 | 13-0108             | 1       |
| gepepharm / Sanacorp       | Lauromacrogol 400 | 160312              | 2       |
| Gepepharm / Sanacorp       | Lauromacrogol 400 | 110408              | 2       |
| Gepepharm / Sanacorp       | Lauromacrogol 400 | 130109              | 1       |
| Gepepharm / Fiebig         | Lauromacrogol 400 | labip-g97-110616-01 | 1       |
| gepepharm / Noweda         | Lauromacrogol 400 | 130109              | 3       |
| Gepepharm / Noweda         | Lauromacrogol 400 | 140911              | 1       |
| gepepharm AEP              | Lauromacrogol 400 | 19064501            | 2       |
| gepepharm AHD 07.11.17 ... | Lauromacrogol 400 | 160312              | 1       |
| gepepharm Anzag            | Lauromacrogol 400 | 160312A             | 1       |
| Gepepharm Anzag            | Lauromacrogol 400 | 110408              | 16      |
| gepepharm CmbH             | Lauromacrogol 400 | 140911              | 1       |
| gepepharm CmbH             | Lauromacrogol 400 | 160312              | 1       |
| gepepharm CmbH             | Lauromacrogol 400 | 160312A             | 1       |
| GEPEPHARM GEHE 14:02:17    | Lauromacrogol 400 | 160312              | 7       |
| GEPEPHARM GEHE 25.07.19    | Lauromacrogol 400 | 19054203            | 1       |
| gepepharm gmbh             | Lauromacrogol 400 | 130109              | 4       |
| gepepharm gmbh             | Lauromacrogol 400 | 160312              | 5       |
| gepepharm gmbh             | Lauromacrogol 400 | 17250901            | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 110408              | 12      |
| gepepharm GmbH             | Lauromacrogol 400 | 130109              | 27      |
| gepepharm GmbH             | Lauromacrogol 400 | 13-0109             | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 13-0108             | 1       |

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| Supplier                   | Substance         | Batch              | Spectra |
|----------------------------|-------------------|--------------------|---------|
| gepepharm GmbH             | Lauromacrogol 400 | 3072014A           | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 27112014A          | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 1915345            | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 8062015D           | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 140911             | 24      |
| gepepharm GmbH             | Lauromacrogol 400 | 14091              | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 160312             | 29      |
| gepepharm GmbH             | Lauromacrogol 400 | 160312A            | 8       |
| gepepharm GmbH             | Lauromacrogol 400 | 19054203           | 13      |
| gepepharm GmbH             | Lauromacrogol 400 | 182743             | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 19064501           | 6       |
| gepepharm GmbH             | Lauromacrogol 400 | 19064501A          | 2       |
| gepepharm GmbH             | Lauromacrogol 400 | 20001966001        | 3       |
| gepepharm GmbH             | Lauromacrogol 400 | 130109             | 1       |
| gepepharm GmbH             | Lauromacrogol 400 | 160312A            | 1       |
| Gepepharm GmbH             | Lauromacrogol 400 | 19054203A          | 1       |
| Gepepharm GmbH             | Lauromacrogol 400 | 20001966001        | 1       |
| Gepepharm GmbH             | Lauromacrogol 400 | 110408             | 3       |
| Gepepharm GmbH             | Lauromacrogol 400 | 130109             | 1       |
| Gepepharm GmbH             | Lauromacrogol 400 | 140911             | 6       |
| Gepepharm GmbH             | Lauromacrogol 400 | 160312             | 7       |
| Gepepharm GmbH             | Lauromacrogol 400 | 160312A            | 5       |
| Gepepharm GmbH             | Lauromacrogol 400 | 19054203           | 4       |
| Gepepharm GmbH             | Lauromacrogol 400 | 19064501           | 1       |
| Gepepharm GmbH             | Lauromacrogol 400 | 19064501A          | 1       |
| GEpepharm GmbH             | Lauromacrogol 400 | 160312             | 3       |
| gepepharm GmbH / Allian... | Lauromacrogol 400 | 140911             | 1       |
| Gepepharm GmbH / Allian... | Lauromacrogol 400 | 160312             | 4       |
| Gepepharm GmbH / Anzag     | Lauromacrogol 400 | 110408             | 1       |
| Gepepharm GmbH / Anzag     | Lauromacrogol 400 | 130109             | 1       |
| Gepepharm GmbH / Gehe      | Lauromacrogol 400 | 160312             | 1       |
| gepepharm GmbH / Kehr      | Lauromacrogol 400 | 19054203           | 1       |
| gepepharm GmbH / Noweda    | Lauromacrogol 400 | 19054203           | 2       |
| gepepharm GmbH / Phönix    | Lauromacrogol 400 | 160312A            | 10      |
| gepepharm GmbH Hennef      | Lauromacrogol 400 | 160312A            | 1       |
| gepepharm GmbH Hennef      | Lauromacrogol 400 | 19054203           | 1       |
| gepepharm gmbh noweda      | Lauromacrogol 400 | 160312A            | 3       |
| gepepharm GmbH, Gehe       | Lauromacrogol 400 | 160312             | 1       |
| gepepharm GmbH, Gehe       | Lauromacrogol 400 | 19064501           | 1       |
| Gepepharm GmbH/ Alliance   | Lauromacrogol 400 | 160312             | 1       |
| Gepepharm GmbH/ Anzag      | Lauromacrogol 400 | 19054203A          | 1       |
| gepepharm GmbH/ Gehe       | Lauromacrogol 400 | 160312             | 2       |
| gepepharm GmbH/ NOW        | Lauromacrogol 400 | 140911             | 1       |
| gepepharm gmbh/ Noweda     | Lauromacrogol 400 | 19054203           | 5       |
| gepepharm GmbH/ Noweda     | Lauromacrogol 400 | 19054203           | 1       |
| Gepepharm GmbH/ Noweda     | Lauromacrogol 400 | 19054203           | 1       |
| Gepepharm GmbH/ NOWEDA     | Lauromacrogol 400 | 160312A            | 1       |
| Gepepharm GmbH/ NOWEDA     | Lauromacrogol 400 | 19054203           | 1       |
| Gepepharm GmbH/ NOWEDA     | Lauromacrogol 400 | 19064501           | 1       |
| gepepharm gmbh/AHD         | Lauromacrogol 400 | 160312A            | 1       |
| Gepepharm gmbh/AHD         | Lauromacrogol 400 | 19064501           | 1       |
| gepepharm GmbH/Alliance... | Lauromacrogol 400 | 160312A            | 1       |
| gepepharm GmbH/Anzag       | Lauromacrogol 400 | 19054203           | 1       |
| gepepharm GmbH/Gehe        | Lauromacrogol 400 | 130109             | 3       |
| gepepharm GmbH/Gehe        | Lauromacrogol 400 | 140911             | 3       |
| gepepharm GmbH/Gehe        | Lauromacrogol 400 | 160312             | 5       |
| gepepharm GmbH/Gehe        | Lauromacrogol 400 | 19064501A          | 1       |
| gepepharm GmbH/Gehe        | Lauromacrogol 400 | 20001966001        | 1       |
| Gepepharm GmbH/Gehe        | Lauromacrogol 400 | 140911/20160309/13 | 1       |
| Gepepharm GmbH/Gehe        | Lauromacrogol 400 | 160312             | 10      |

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| Supplier                 | Substance         | Batch                | Spectra |
|--------------------------|-------------------|----------------------|---------|
| gepepharm GmbH/Kehr      | Lauromacrogol 400 | 160312               | 7       |
| gepepharm gmbH/Noweda    | Lauromacrogol 400 | 160312               | 1       |
| gepepharm gmbH/Noweda    | Lauromacrogol 400 | 160312A              | 1       |
| gepepharm GmbH/Noweda    | Lauromacrogol 400 | 130109               | 4       |
| gepepharm GmbH/Noweda    | Lauromacrogol 400 | 19054203A            | 1       |
| gepepharm GmbH/Noweda    | Lauromacrogol 400 | 19064501A            | 1       |
| Gepepharm GmbH/Noweda    | Lauromacrogol 400 | 19064501             | 1       |
| gepepharm gmbH/Phoenix   | Lauromacrogol 400 | 16-0290              | 2       |
| gepepharm GmbH/Phoenix   | Lauromacrogol 400 | 160312A              | 1       |
| Gepepharm GmbH/Phoenix   | Lauromacrogol 400 | 140911               | 2       |
| Gepepharm GmbH/Phoenix   | Lauromacrogol 400 | 160312               | 2       |
| Gepepharm GmbH/Phoenix   | Lauromacrogol 400 | 160312A              | 3       |
| gepepharm GmbH/Phönix    | Lauromacrogol 400 | 160312               | 6       |
| gepepharm GmbH/Phönix    | Lauromacrogol 400 | 140911               | 1       |
| gepepharm GmbH/Phönix    | Lauromacrogol 400 | 160312A              | 4       |
| Gepepharm GmbH/Phönix    | Lauromacrogol 400 | 160312A              | 1       |
| Gepepharm GmbH/Phönix    | Lauromacrogol 400 | 19054203             | 5       |
| gepepharm GmbH/Sanacorp  | Lauromacrogol 400 | 160312               | 1       |
| Gepepharm GmbH/Sanacorp  | Lauromacrogol 400 | 160312               | 2       |
| Gepepharm GmbH/Sanacorp  | Lauromacrogol 400 | 1905203              | 1       |
| Gepepharm GmbH/Sanacorp  | Lauromacrogol 400 | 19054203             | 3       |
| Gepepharm GmbH/Sanacorp  | Lauromacrogol 400 | 19064501             | 2       |
| Gepepharm GmH            | Lauromacrogol 400 | 140911               | 5       |
| gepepharm Noweda         | Lauromacrogol 400 | 19054203             | 2       |
| gepepharm Noweda         | Lauromacrogol 400 | 19054203A            | 1       |
| gepepharm Phoenix        | Lauromacrogol 400 | 182743               | 1       |
| Spangropharm             | Lauromacrogol 400 | 110408               | 1       |
| Gepepharm über Phoenix   | Lauromacrogol 400 | 130109               | 7       |
| Gepepharm über Phoenix   | Lauromacrogol 400 | 140911               | 3       |
| gepepharm, Noweda        | Lauromacrogol 400 | 110408               | 4       |
| gepepharm, Noweda        | Lauromacrogol 400 | 130109               | 1       |
| gepepharm,gehe           | Lauromacrogol 400 | 19054203             | 2       |
| Gepepharm/ Sanacorp      | Lauromacrogol 400 | 160312               | 1       |
| gepepharm/ Alliance      | Lauromacrogol 400 | 19054203             | 2       |
| Gepepharm/ Alliance      | Lauromacrogol 400 | 160312A              | 1       |
| Gepepharm/ Anzag         | Lauromacrogol 400 | 19064501             | 2       |
| gepepharm/ Gehe          | Lauromacrogol 400 | 20170829/2           | 1       |
| gepepharm/ Gehe          | Lauromacrogol 400 | 160312A              | 5       |
| Gepepharm/ Gehe          | Lauromacrogol 400 | 14-1414              | 1       |
| Gepepharm/ Gehe          | Lauromacrogol 400 | 140911               | 2       |
| Gepepharm/ Gehe          | Lauromacrogol 400 | 160312               | 3       |
| Gepepharm/ Gehe          | Lauromacrogol 400 | 160312A              | 1       |
| Gepepharm/ Gehe          | Lauromacrogol 400 | 19064501             | 1       |
| gepepharm/ Gehe 15.12.17 | Lauromacrogol 400 | 160312-20180112Ma7   | 1       |
| gepepharm/ Gehe 16.10.18 | Lauromacrogol 400 | 160312A-T20181115Ma7 | 1       |
| gepepharm/ Gehe 26.6.17  | Lauromacrogol 400 | 160312-20170704Ma10  | 1       |
| gepepharm/ Gehe 5.5.17   | Lauromacrogol 400 | 160312-20170704Ma9   | 1       |
| Gepepharm/ Jenne         | Lauromacrogol 400 | 160312A              | 2       |
| gepepharm/ Kehr          | Lauromacrogol 400 | 160312               | 1       |
| gepepharm/ Noweda        | Lauromacrogol 400 | 130109               | 4       |
| gepepharm/ Noweda        | Lauromacrogol 400 | 160312               | 1       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 130109               | 1       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 160132               | 1       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 160312a              | 2       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 160312A              | 7       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 19054203             | 1       |
| Gepepharm/ Noweda        | Lauromacrogol 400 | 19064501             | 1       |
| gepepharm/ Phoenix       | Lauromacrogol 400 | 160312A              | 1       |
| gepepharm/ Phoenix       | Lauromacrogol 400 | 19054203             | 1       |
| gepepharm/ Phoenix       | Lauromacrogol 400 | 19064501             | 2       |

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| Supplier                   | Substance         | Batch       | Spectra |
|----------------------------|-------------------|-------------|---------|
| gepepharm/ Phoenix         | Lauromacrogol 400 | 19064501A   | 1       |
| gepepharm/ Phönix          | Lauromacrogol 400 | 19054203    | 1       |
| gepepharm/ Phönix          | Lauromacrogol 400 | 182744      | 1       |
| gepepharm/ Phönix          | Lauromacrogol 400 | 20001966001 | 1       |
| Gepepharm/ Phönix          | Lauromacrogol 400 | 140911      | 1       |
| Gepepharm/ Phönix          | Lauromacrogol 400 | 160312      | 4       |
| Gepepharm/ Phönix          | Lauromacrogol 400 | 160312A     | 3       |
| Gepepharm/ Phönix          | Lauromacrogol 400 | 19054203    | 1       |
| gepepharm/ Sanacorp        | Lauromacrogol 400 | 160312      | 1       |
| gepepharm/ Sanacorp        | Lauromacrogol 400 | 19064501    | 1       |
| gepepharm/ Sanacorp 22...  | Lauromacrogol 400 | 130109      | 1       |
| gepepharm/ VDL             | Lauromacrogol 400 | 160312      | 1       |
| gepepharm/17.07.20/gehe    | Lauromacrogol 400 | 19064501    | 5       |
| Gepepharm/3                | Lauromacrogol 400 | 160312A     | 1       |
| gepepharm/AHD              | Lauromacrogol 400 | 160312      | 2       |
| gepepharm/AHD              | Lauromacrogol 400 | 1603123A    | 1       |
| gepepharm/AHD              | Lauromacrogol 400 | 160312A     | 1       |
| gepepharm/AHD              | Lauromacrogol 400 | 19054203    | 2       |
| gepepharm/AHD              | Lauromacrogol 400 | 19064501    | 1       |
| Gepepharm/AHD              | Lauromacrogol 400 | 160312      | 2       |
| GepePharm/AHD              | Lauromacrogol 400 | 160312      | 1       |
| gepepharm/AHD/03.07.19     | Lauromacrogol 400 | 19054203    | 9       |
| gepepharm/Alliance         | Lauromacrogol 400 | 16-0290     | 1       |
| gepepharm/Alliance         | Lauromacrogol 400 | 160312A     | 11      |
| gepepharm/Alliance         | Lauromacrogol 400 | 19054203    | 1       |
| Gepepharm/Alliance         | Lauromacrogol 400 | 160312      | 1       |
| Gepepharm/Alliance         | Lauromacrogol 400 | 160312A     | 9       |
| Gepepharm/Alliance         | Lauromacrogol 400 | 19054203    | 7       |
| Gepepharm/Alliance         | Lauromacrogol 400 | 182743      | 1       |
| gepepharm/Anzag            | Lauromacrogol 400 | 130109      | 1       |
| gepepharm/Anzag            | Lauromacrogol 400 | 160312      | 2       |
| Gepepharm/Anzag            | Lauromacrogol 400 | 140911      | 1       |
| Gepepharm/Anzag            | Lauromacrogol 400 | 160312      | 3       |
| Gepepharm/Anzag            | Lauromacrogol 400 | 160312A     | 1       |
| gepepharm/Anzag 27.04.2... | Lauromacrogol 400 | 110408      | 8       |
| gepepharm/Ebert            | Lauromacrogol 400 | 130109      | 2       |
| Gepepharm/Fiebig           | Lauromacrogol 400 | 130109      | 1       |
| Gepepharm/Fiebig           | Lauromacrogol 400 | 160312      | 1       |
| gepepharm/G                | Lauromacrogol 400 | 140911      | 1       |
| gepepharm/gehe             | Lauromacrogol 400 | 110408      | 2       |
| gepepharm/gehe             | Lauromacrogol 400 | 130109      | 2       |
| gepepharm/gehe             | Lauromacrogol 400 | 160312      | 5       |
| gepepharm/gehe             | Lauromacrogol 400 | 160312A     | 6       |
| gepepharm/Gehe             | Lauromacrogol 400 | 130109      | 3       |
| gepepharm/Gehe             | Lauromacrogol 400 | 140911      | 1       |
| gepepharm/Gehe             | Lauromacrogol 400 | 14-1414     | 2       |
| gepepharm/Gehe             | Lauromacrogol 400 | 160312      | 19      |
| gepepharm/Gehe             | Lauromacrogol 400 | 160312A     | 7       |
| gepepharm/Gehe             | Lauromacrogol 400 | 19054203    | 2       |
| Gepepharm/gehe             | Lauromacrogol 400 | 160312A     | 3       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 110408      | 2       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 140911      | 12      |
| Gepepharm/Gehe             | Lauromacrogol 400 | 160312      | 4       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 160312A     | 8       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 17250913    | 1       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 182743      | 1       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 19054203    | 1       |
| Gepepharm/Gehe             | Lauromacrogol 400 | 19064501    | 1       |
| gepepharm/Kehr             | Lauromacrogol 400 | 160312A     | 1       |
| Gepepharm/Kehr             | Lauromacrogol 400 | 51123/2Sie  | 1       |

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| Supplier                   | Substance         | Batch       | Spectra |
|----------------------------|-------------------|-------------|---------|
| Gepepharm/Kehr             | Lauromacrogol 400 | 160312A     | 1       |
| gepepharm/Kehr , 04.09.... | Lauromacrogol 400 | 19054203    | 1       |
| gepepharm/Kehr , 09.07.... | Lauromacrogol 400 | 19064501    | 2       |
| gepepharm/Krieger          | Lauromacrogol 400 | 160312      | 1       |
| gepepharm/Krieger          | Lauromacrogol 400 | 160312A     | 2       |
| gepepharm/Krieger          | Lauromacrogol 400 | 19054203    | 1       |
| Gepepharm/Krieger          | Lauromacrogol 400 | 160312A     | 1       |
| Gepepharm/Krieger          | Lauromacrogol 400 | 19054203    | 1       |
| gepepharm/Nowe             | Lauromacrogol 400 | 160312      | 11      |
| gepepharm/Noweda           | Lauromacrogol 400 | 130109      | 2       |
| gepepharm/Noweda           | Lauromacrogol 400 | 140911      | 4       |
| gepepharm/Noweda           | Lauromacrogol 400 | 160312      | 3       |
| gepepharm/Noweda           | Lauromacrogol 400 | 160312A     | 1       |
| gepepharm/Noweda           | Lauromacrogol 400 | 1905403     | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 130109      | 2       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 140911      | 4       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 1440911     | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 160312      | 3       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 160312A     | 11      |
| Gepepharm/Noweda           | Lauromacrogol 400 | 16-0290     | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 19054203    | 14      |
| Gepepharm/Noweda           | Lauromacrogol 400 | 19064501    | 4       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 190503      | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 182744      | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 19054203A   | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 19064501A   | 1       |
| Gepepharm/Noweda           | Lauromacrogol 400 | 20001966001 | 1       |
| gepepharm/Otto             | Lauromacrogol 400 | 65793       | 1       |
| gepepharm/Otto             | Lauromacrogol 400 | 130109      | 18      |
| gepepharm/Phoenix          | Lauromacrogol 400 | 130109      | 4       |
| gepepharm/Phoenix          | Lauromacrogol 400 | 140911      | 12      |
| gepepharm/Phoenix          | Lauromacrogol 400 | 160312      | 13      |
| gepepharm/Phoenix          | Lauromacrogol 400 | 160312A     | 8       |
| gepepharm/Phoenix          | Lauromacrogol 400 | 180312A     | 1       |
| gepepharm/Phoenix          | Lauromacrogol 400 | 19054203    | 6       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 3813E02384  | 1       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 130109      | 2       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 1614U2384   | 1       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 160312      | 2       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 160312A     | 1       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 19054203    | 2       |
| Gepepharm/Phoenix          | Lauromacrogol 400 | 19054203A   | 1       |
| gepepharm/Phönix           | Lauromacrogol 400 | 110408      | 2       |
| gepepharm/Phönix           | Lauromacrogol 400 | 130109      | 5       |
| gepepharm/Phönix           | Lauromacrogol 400 | 1101409     | 1       |
| gepepharm/Phönix           | Lauromacrogol 400 | 13-0108     | 1       |
| gepepharm/Phönix           | Lauromacrogol 400 | 140911      | 12      |
| gepepharm/Phönix           | Lauromacrogol 400 | 160312      | 5       |
| gepepharm/Phönix           | Lauromacrogol 400 | 160312A     | 3       |
| gepepharm/Phönix           | Lauromacrogol 400 | 160312a     | 2       |
| gepepharm/Phönix           | Lauromacrogol 400 | 19054203    | 4       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 130109      | 7       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 140911      | 4       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 130108      | 1       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 14-1414     | 2       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 16-0290     | 2       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 160312      | 8       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 160312A     | 7       |
| Gepepharm/Phönix           | Lauromacrogol 400 | 19054203    | 9       |
| gepepharm/Phönix 07.09.18  | Lauromacrogol 400 | 160312      | 1       |

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| Supplier                    | Substance         | Batch            | Spectra |
|-----------------------------|-------------------|------------------|---------|
| Gepepharm/Sana              | Lauromacrogol 400 | 140911           | 1       |
| gepepharm/Sanac             | Lauromacrogol 400 | 130109           | 1       |
| gepepharm/sanacorp          | Lauromacrogol 400 | 130109           | 1       |
| gepepharm/sanacorp          | Lauromacrogol 400 | 160312           | 1       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 130109           | 7       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 140911           | 1       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 14-1414          | 1       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 160312           | 3       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 160312A          | 2       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 1905420          | 1       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 19054203         | 3       |
| gepepharm/Sanacorp          | Lauromacrogol 400 | 19054203A        | 1       |
| Gepepharm/Sanacorp          | Lauromacrogol 400 | 130109           | 6       |
| Gepepharm/Sanacorp          | Lauromacrogol 400 | 140911           | 9       |
| Gepepharm/Sanacorp          | Lauromacrogol 400 | 14-1414          | 1       |
| Gepepharm/Sanacorp          | Lauromacrogol 400 | 160312A          | 2       |
| Gepepharm/Sanacorp          | Lauromacrogol 400 | 19054203         | 1       |
| gepepharm/Spangro           | Lauromacrogol 400 | 16031A           | 1       |
| Gepepharm/Spangro           | Lauromacrogol 400 | 160312A          | 1       |
| GepePharm/Spangro           | Lauromacrogol 400 | 160312A          | 1       |
| Gepepharm/V.d.L.            | Lauromacrogol 400 | 130109           | 1       |
| Gepepharm/VDL               | Lauromacrogol 400 | 110408           | 3       |
| Gepepharm/VDL               | Lauromacrogol 400 | 130109           | 6       |
| gepepharm <sup>®</sup> GmbH | Lauromacrogol 400 | 110408           | 1       |
| Gepepharma                  | Lauromacrogol 400 | 160312           | 1       |
| Gepepharma GmbH             | Lauromacrogol 400 | 130109           | 1       |
| Gepepharma GmbH/Phoenix     | Lauromacrogol 400 | 140911           | 3       |
| Gepepharma GmbH/Phoenix     | Lauromacrogol 400 | 160312           | 2       |
| gepepharma/Alliance         | Lauromacrogol 400 | 160312           | 1       |
| Gepepharma/Gehe             | Lauromacrogol 400 | 160312           | 2       |
| Gepepharma/Gehe             | Lauromacrogol 400 | 160312A          | 1       |
| Gepepharma/Krieger          | Lauromacrogol 400 | 19064501         | 1       |
| gepepharma/Phönix           | Lauromacrogol 400 | 130109           | 1       |
| Gepepharma/Phönix           | Lauromacrogol 400 | 16-2090          | 1       |
| Gepepharma/Sanacorp         | Lauromacrogol 400 | 130109           | 1       |
| gepepharmGmbH               | Lauromacrogol 400 | 110408           | 1       |
| gepepharmGmbH               | Lauromacrogol 400 | 160312A          | 1       |
| gepepharmGmbH/ Max Jenne    | Lauromacrogol 400 | 19054203         | 2       |
| GepepharmGmbH/AEP           | Lauromacrogol 400 | 160312A          | 1       |
| GepepharmGmbH/AEP           | Lauromacrogol 400 | 19054203         | 1       |
| gepeppharm                  | Lauromacrogol 400 | 19054203         | 1       |
| gepeppharm / Phönix         | Lauromacrogol 400 | 19054203A        | 1       |
| geppepharm GmbH AEP         | Lauromacrogol 400 | 19054203         | 1       |
| geppepharm GmbH AEP         | Lauromacrogol 400 | 19054203A        | 1       |
| geprpharm GmbH              | Lauromacrogol 400 | 140911           | 1       |
| geprpharmGmbH               | Lauromacrogol 400 | 160312A          | 1       |
| GP/Phoenix                  | Lauromacrogol 400 | 160312           | 1       |
| Hedinger Phönix             | Lauromacrogol 400 | 160312A          | 1       |
| Hedinger/ Sanacorp          | Lauromacrogol 400 | 140911           | 1       |
| Hedinger/Gehe               | Lauromacrogol 400 | 13G02-N03        | 1       |
| Henry Lamotte/Sanacorp      | Lauromacrogol 400 | 14H04-B03-301517 | 1       |
| Heyl/Gehe                   | Lauromacrogol 400 | 18175508         | 1       |
| Ichthyol                    | Lauromacrogol 400 | 110408           | 4       |
| Ichthyol Gesellschaft       | Lauromacrogol 400 | 15G10-B05-315343 | 1       |
| Ichthyol-Gesellschaft       | Lauromacrogol 400 | 160312           | 1       |
| Ichtyol-Gesellschaft/No...  | Lauromacrogol 400 | 17250908         | 1       |
| Jenne                       | Lauromacrogol 400 | 18B26-B06-346398 | 1       |
| Jenne                       | Lauromacrogol 400 | 19064501         | 1       |
| Jenne                       | Lauromacrogol 400 | 19054203A        | 2       |
| Jenne / Gepepharm           | Lauromacrogol 400 | 19054203         | 1       |

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| Supplier                   | Substance         | Batch              | Spectra |
|----------------------------|-------------------|--------------------|---------|
| Kehr                       | Lauromacrogol 400 | 17046502           | 2       |
| Kehr                       | Lauromacrogol 400 | 17250904           | 2       |
| Kehr                       | Lauromacrogol 400 | 17250909           | 1       |
| Kehr/Chemische Fabrik, ... | Lauromacrogol 400 | 19054203           | 1       |
| Fagron                     | Lauromacrogol 400 | 17H21-B07-339505   | 1       |
| Kehr/Fargon                | Lauromacrogol 400 | 18B26-B06-347341   | 1       |
| Kehr/gepepharm             | Lauromacrogol 400 | 140911             | 1       |
| kögl                       | Lauromacrogol 400 | 1908852            | 1       |
| Kögl                       | Lauromacrogol 400 | 177906163716       | 2       |
| Kögl                       | Lauromacrogol 400 | 177906162916       | 1       |
| Kögl                       | Lauromacrogol 400 | 381311161917       | 5       |
| Kögl                       | Lauromacrogol 400 | 381311161917       | 1       |
| Kögl                       | Lauromacrogol 400 | 1700029            | 5       |
| Kögl                       | Lauromacrogol 400 | 17700029           | 1       |
| Kögl                       | Lauromacrogol 400 | 1800519            | 5       |
| Kögl                       | Lauromacrogol 400 | 1802732            | 6       |
| Krieger/ Gepepharm         | Lauromacrogol 400 | 140911             | 2       |
| Krieger/ Gepepharm         | Lauromacrogol 400 | 160312A            | 2       |
| Caelo                      | Lauromacrogol 400 | 17046404           | 1       |
| Fagron                     | Lauromacrogol 400 | 16E18B04-321110    | 1       |
| L12                        | Lauromacrogol 400 | 17A23-B01-330983   | 1       |
| L12                        | Lauromacrogol 400 | 17A23-B01-332868   | 1       |
| L12                        | Lauromacrogol 400 | 17A23-B01-332869   | 1       |
| L12                        | Lauromacrogol 400 | 17H21-B07-341795   | 1       |
| L30                        | Lauromacrogol 400 | 18D30-B09          | 1       |
| Lamotte                    | Lauromacrogol 400 | 15192209           | 1       |
| Löwen City-Apotheke Bar... | Lauromacrogol 400 | 2042015            | 1       |
| Nowed                      | Lauromacrogol 400 | 19054203           | 1       |
| Noweda                     | Lauromacrogol 400 | 13B13-N01          | 1       |
| Noweda                     | Lauromacrogol 400 | 15A26-B02-303625   | 1       |
| Noweda                     | Lauromacrogol 400 | 16E18-B04-328699   | 1       |
| Noweda                     | Lauromacrogol 400 | 160312             | 5       |
| Noweda                     | Lauromacrogol 400 | 1915345            | 1       |
| Noweda                     | Lauromacrogol 400 | 16E18-B04-326089   | 1       |
| Noweda                     | Lauromacrogol 400 | 17-0845            | 1       |
| Noweda                     | Lauromacrogol 400 | 17A23-B01_332867   | 1       |
| Noweda                     | Lauromacrogol 400 | 160312A            | 1       |
| Noweda                     | Lauromacrogol 400 | 17H21-B07-341795   | 1       |
| Noweda                     | Lauromacrogol 400 | 1710026-01         | 2       |
| Noweda                     | Lauromacrogol 400 | 17250908           | 1       |
| Noweda                     | Lauromacrogol 400 | 18J08-B03-355980   | 1       |
| Noweda                     | Lauromacrogol 400 | 19054203           | 5       |
| Noweda                     | Lauromacrogol 400 | 18175513           | 1       |
| Noweda                     | Lauromacrogol 400 | 19131003           | 1       |
| Noweda                     | Lauromacrogol 400 | 1907010-01         | 1       |
| Noweda                     | Lauromacrogol 400 | 20002697002        | 1       |
| Noweda Fagro 20.04.18 E... | Lauromacrogol 400 | 18A18-B98-344798   | 1       |
| Fagron                     | Lauromacrogol 400 | 18a18b98344798     | 1       |
| Noweda/ Caesar&Lorenz G... | Lauromacrogol 400 | 19131009           | 1       |
| Noweda/ Caesar&Lorenz G... | Lauromacrogol 400 | 19131004           | 1       |
| Euro OTC                   | Lauromacrogol 400 | 15A26-B02_303628   | 1       |
| Noweda/ Gepepharm          | Lauromacrogol 400 | 19054203           | 1       |
| noweda/anzag               | Lauromacrogol 400 | 19054203           | 1       |
| Caelo                      | Lauromacrogol 400 | 13K18-B30-288163   | 1       |
| Caelo                      | Lauromacrogol 400 | 15G10-B05-313605   | 1       |
| Caelo                      | Lauromacrogol 400 | 1412296            | 1       |
| Caelo                      | Lauromacrogol 400 | 18175520           | 4       |
| Euro OTC                   | Lauromacrogol 400 | 150303201          | 1       |
| Euro OTC                   | Lauromacrogol 400 | 1710026-01/180606P | 1       |
| Fagron                     | Lauromacrogol 400 | 16E-B04-328737     | 1       |

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| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| noweda/Gepepharm           | Lauromacrogol 400 | 19054203         | 1       |
| Noweda/gepepharm           | Lauromacrogol 400 | 130109           | 1       |
| Noweda/gepepharm           | Lauromacrogol 400 | 140911           | 1       |
| Noweda/gepepharm           | Lauromacrogol 400 | 19054203         | 1       |
| Noweda/Gepepharm           | Lauromacrogol 400 | 160312           | 1       |
| Noweda/Gepepharm           | Lauromacrogol 400 | 182743           | 1       |
| Noweda/Gepepharm GmbH      | Lauromacrogol 400 | 160312           | 1       |
| Noweda/Gepepharm GmbH      | Lauromacrogol 400 | 160312A          | 1       |
| Noweda/Schärer 30,04,21... | Lauromacrogol 400 | 20001966001      | 1       |
| Euro OTC                   | Lauromacrogol 400 | 9139415          | 1       |
| Pharmachem/ Phönix         | Lauromacrogol 400 | 16E18-B04-322722 | 1       |
| Phoenix                    | Lauromacrogol 400 | 110408           | 1       |
| Phoenix                    | Lauromacrogol 400 | 130109           | 2       |
| Phoenix                    | Lauromacrogol 400 | 13-0108          | 1       |
| Phoenix                    | Lauromacrogol 400 | 140911           | 2       |
| Phoenix                    | Lauromacrogol 400 | 16102914         | 1       |
| Phoenix                    | Lauromacrogol 400 | 16102908         | 1       |
| Phoenix                    | Lauromacrogol 400 | 3031             | 1       |
| Phoenix                    | Lauromacrogol 400 | 17046401         | 1       |
| Phoenix                    | Lauromacrogol 400 | 17046502         | 1       |
| Phoenix                    | Lauromacrogol 400 | 160312A          | 10      |
| Phoenix                    | Lauromacrogol 400 | 3205             | 1       |
| Phoenix                    | Lauromacrogol 400 | 1808025-01       | 1       |
| Phoenix                    | Lauromacrogol 400 | 1901029-01       | 1       |
| Phoenix                    | Lauromacrogol 400 | 19054203         | 2       |
| Phoenix                    | Lauromacrogol 400 | 200081501        | 1       |
| Phoenix                    | Lauromacrogol 400 | 191471912        | 1       |
| Phoenix                    | Lauromacrogol 400 | 19064501         | 1       |
| Phoenix (gepepharm)        | Lauromacrogol 400 | 110408           | 1       |
| Caelo                      | Lauromacrogol 400 | 18175501         | 16      |
| Caelo                      | Lauromacrogol 400 | 1901029-01       | 1       |
| Caelo                      | Lauromacrogol 400 | 20D20-T12-076662 | 1       |
| Phoenix/gepepharm          | Lauromacrogol 400 | 110408           | 1       |
| Phoenix/gepepharm          | Lauromacrogol 400 | 140911           | 3       |
| Phoenix/gepepharm          | Lauromacrogol 400 | 19054203         | 2       |
| Phoenix/Gepepharm          | Lauromacrogol 400 | 160312           | 1       |
| Phoenix/Gepepharm          | Lauromacrogol 400 | 19064501         | 2       |
| phoenix/noveda             | Lauromacrogol 400 | 140911           | 3       |
| phönix                     | Lauromacrogol 400 | 15g10b05314366   | 1       |
| phönix                     | Lauromacrogol 400 | 17a23-b01-330983 | 1       |
| phönix                     | Lauromacrogol 400 | 19054203         | 1       |
| Phönix                     | Lauromacrogol 400 | 13B13-N01        | 1       |
| Phönix                     | Lauromacrogol 400 | 12E03-N04        | 1       |
| Phönix                     | Lauromacrogol 400 | 130109           | 1       |
| Phönix                     | Lauromacrogol 400 | 13K18-B30-28816  | 1       |
| Phönix                     | Lauromacrogol 400 | 13-0108130109    | 1       |
| Phönix                     | Lauromacrogol 400 | 140911           | 1       |
| Phönix                     | Lauromacrogol 400 | 160312           | 1       |
| Phönix                     | Lauromacrogol 400 | 170026-01        | 1       |
| Phönix                     | Lauromacrogol 400 | 18A18-B98-344797 | 1       |
| Phönix                     | Lauromacrogol 400 | 18A18-B98-344798 | 2       |
| Phönix                     | Lauromacrogol 400 | 1801043-01       | 2       |
| Phönix                     | Lauromacrogol 400 | 160312A          | 4       |
| Phönix                     | Lauromacrogol 400 | 19054203         | 1       |
| Phönix                     | Lauromacrogol 400 | 18j08-b03-355980 | 1       |
| PHÖNIX                     | Lauromacrogol 400 | 17046411         | 2       |
| Fagron                     | Lauromacrogol 400 | 17A23-B10-335356 | 1       |
| Phönix /fargon             | Lauromacrogol 400 | 18D30-B09-350640 | 1       |
| Bombastus                  | Lauromacrogol 400 | 17250913         | 2       |
| Phönix Gotha               | Lauromacrogol 400 | 12092516         | 1       |

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| Supplier                   | Substance         | Batch              | Spectra |
|----------------------------|-------------------|--------------------|---------|
| Phönix Gotha               | Lauromacrogol 400 | 130109             | 3       |
| Phönix Gotha               | Lauromacrogol 400 | 13B13-N01          | 1       |
| Phönix Gotha               | Lauromacrogol 400 | 13-0599            | 1       |
| Phönix Gotha               | Lauromacrogol 400 | 13G02-N030461/1210 | 1       |
| Phönix Gotha               | Lauromacrogol 400 | 140911             | 1       |
| Phönix/ GepePharm          | Lauromacrogol 400 | 19054203           | 1       |
| Phönix/Apomix              | Lauromacrogol 400 | 3B280217           | 1       |
| Fagron                     | Lauromacrogol 400 | 16E-18-B04-328582  | 1       |
| Fagron                     | Lauromacrogol 400 | 18D30-309-350641   | 1       |
| Phönix/gepepharm           | Lauromacrogol 400 | 130109             | 1       |
| Phönix/Gepepharm           | Lauromacrogol 400 | 19064501           | 1       |
| PKH Halle/AHD              | Lauromacrogol 400 | 160312A            | 1       |
| Reichelt/Phönix            | Lauromacrogol 400 | 17A23-B01-330983   | 1       |
| Sanacoro W.E:01.03.18 ...  | Lauromacrogol 400 | 17A23-b01-330983   | 1       |
| Sanacorp                   | Lauromacrogol 400 | 130109             | 3       |
| Sanacorp                   | Lauromacrogol 400 | 13095802           | 1       |
| Sanacorp                   | Lauromacrogol 400 | 130108             | 1       |
| Sanacorp                   | Lauromacrogol 400 | 13340710           | 1       |
| Sanacorp                   | Lauromacrogol 400 | 160290             | 1       |
| Sanacorp                   | Lauromacrogol 400 | 160312             | 1       |
| Sanacorp                   | Lauromacrogol 400 | 160312A            | 5       |
| Sanacorp                   | Lauromacrogol 400 | 17250913           | 1       |
| Sanacorp                   | Lauromacrogol 400 | 19054203           | 1       |
| Sanacorp                   | Lauromacrogol 400 | 19131006           | 2       |
| Sanacorp                   | Lauromacrogol 400 | 19G09-B02          | 2       |
| Sanacorp                   | Lauromacrogol 400 | 192957005          | 1       |
| Sanacorp /Fargron          | Lauromacrogol 400 | 17A23-B01-330983   | 1       |
| Fagron                     | Lauromacrogol 400 | 18jo8b03355982     | 1       |
| Fagron                     | Lauromacrogol 400 | 18d30b09352739     | 1       |
| Euro OTC                   | Lauromacrogol 400 | 19054203           | 1       |
| Sanacorp/ gepepahrm GmbH   | Lauromacrogol 400 | 160312A            | 5       |
| Caelo                      | Lauromacrogol 400 | 18826-B06-346397   | 1       |
| Caelo                      | Lauromacrogol 400 | 19G09-B02-072831   | 1       |
| Fagron                     | Lauromacrogol 400 | 16E18-B04-322722   | 13      |
| Fagron                     | Lauromacrogol 400 | 19064501A          | 1       |
| Sanacorp/gepepharm         | Lauromacrogol 400 | 19054203           | 6       |
| Schärer & Schläpfer        | Lauromacrogol 400 | 19054203           | 2       |
| Schärer & Schläpfer        | Lauromacrogol 400 | 19064501A          | 2       |
| Schärer & Schläpfer AG     | Lauromacrogol 400 | 16E18-B04-324095   | 1       |
| Schärer & Schläpfer AG/... | Lauromacrogol 400 | 15A26-02           | 1       |
| Schärer & Schläpfer AG/... | Lauromacrogol 400 | 15A26-B02          | 1       |
| Schärer & Schläpfer AG/... | Lauromacrogol 400 | 16E18-B04          | 1       |
| Schärer & Schläpfer/Pho... | Lauromacrogol 400 | 19-1060            | 1       |
| Schärer& Schläpfer/AHD     | Lauromacrogol 400 | 19054203A          | 1       |
| Schärer&Schläpfer AG       | Lauromacrogol 400 | 19054203           | 1       |
| Schärer&Schläpfer AG/ G... | Lauromacrogol 400 | 19054203           | 1       |
| Schärer&Schläpfer AG/ P... | Lauromacrogol 400 | 19064501           | 1       |
| Schärer&Schläpfer AG/ P... | Lauromacrogol 400 | 19054203A          | 2       |
| Schärer&Schläpfer AG/Ge... | Lauromacrogol 400 | 19064501           | 1       |
| Schärer&Schläpfer AG/Ph... | Lauromacrogol 400 | 13B13-N01          | 1       |
| Schärer&Schläpfer/Anzag    | Lauromacrogol 400 | 19054203           | 1       |
| Schärer&SchläpferAG/ AHD   | Lauromacrogol 400 | 19054203           | 1       |
| Schärer/Phönix             | Lauromacrogol 400 | 19054203           | 1       |
| Schärer/Schläpfer /Phö...  | Lauromacrogol 400 | 19054203           | 1       |
| Spangro/gepepharm GmbH     | Lauromacrogol 400 | 160312             | 1       |
| Standgefäß Apotheke, Ve... | Lauromacrogol 400 | 16E18-B04-328582   | 1       |
| Caelo                      | Lauromacrogol 400 | 1410010-10         | 1       |
| Fagron                     | Lauromacrogol 400 | 13B13-N01          | 26      |
| Fagron                     | Lauromacrogol 400 | 9002-92-0          | 1       |
| Stumpf/gepepharm           | Lauromacrogol 400 | 110408             | 1       |

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| Supplier             | Substance               | Batch            | Spectra |
|----------------------|-------------------------|------------------|---------|
| Taoasis              | Lauromacrogol 400       | 17250901         | 1       |
| Wissel               | Lauromacrogol 400       | 14-1414          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 221542           | 1       |
| AHD, 25.07.2013      | Macrogol 4 lauryl ether | 13136202         | 1       |
| AHD/ Spinnrad        | Macrogol 4 lauryl ether | 314400031        | 1       |
| Caelo                | Macrogol 4 lauryl ether | 18215506         | 17      |
| AHD;2,32EUR;19.06.15 | Macrogol 4 lauryl ether | 1014400032       | 1       |
| Anzag                | Macrogol 4 lauryl ether | 12180204         | 1       |
| Anzag                | Macrogol 4 lauryl ether | 15323701         | 1       |
| Anzag                | Macrogol 4 lauryl ether | 818400032        | 1       |
| Apinnrad/Gehe        | Macrogol 4 lauryl ether | 417400031        | 1       |
| Bombastus            | Macrogol 4 lauryl ether | 18040103         | 1       |
| Bombastus            | Macrogol 4 lauryl ether | 18040101         | 1       |
| Caeleo/ Krieger      | Macrogol 4 lauryl ether | 18215508         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 12057806         | 3       |
| Caelo                | Macrogol 4 lauryl ether | 12180202         | 3       |
| Caelo                | Macrogol 4 lauryl ether | 20121112-1       | 1       |
| Caelo                | Macrogol 4 lauryl ether | 13041706         | 3       |
| Caelo                | Macrogol 4 lauryl ether | 13136202         | 2       |
| Caelo                | Macrogol 4 lauryl ether | 13136206         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 13229805         | 6       |
| Caelo                | Macrogol 4 lauryl ether | 7121201          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 123400033        | 1       |
| Caelo                | Macrogol 4 lauryl ether | 14225303         | 5       |
| Caelo                | Macrogol 4 lauryl ether | 14225308         | 4       |
| Caelo                | Macrogol 4 lauryl ether | 15051801         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 715400031        | 1       |
| Caelo                | Macrogol 4 lauryl ether | 16100201         | 19      |
| Caelo                | Macrogol 4 lauryl ether | 16102911         | 8       |
| Caelo                | Macrogol 4 lauryl ether | 17028303         | 18      |
| Caelo                | Macrogol 4 lauryl ether | 7028303          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 188B26-B06       | 1       |
| Caelo                | Macrogol 4 lauryl ether | 18040103         | 12      |
| Caelo                | Macrogol 4 lauryl ether | 18040106         | 4       |
| Caelo                | Macrogol 4 lauryl ether | 2184001          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 18215504         | 15      |
| Caelo                | Macrogol 4 lauryl ether | 16215504         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 17325413         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 1710026          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 15041704         | 12      |
| Caelo                | Macrogol 4 lauryl ether | 19096701         | 14      |
| Caelo                | Macrogol 4 lauryl ether | 15323701         | 19      |
| Caelo                | Macrogol 4 lauryl ether | 19G09-B02        | 1       |
| Caelo                | Macrogol 4 lauryl ether | 3272779          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 19(18215504)     | 1       |
| Caelo                | Macrogol 4 lauryl ether | 19000420003      | 11      |
| Caelo                | Macrogol 4 lauryl ether | 18(17028301)     | 1       |
| Caelo                | Macrogol 4 lauryl ether | 1825504          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 15323704         | 10      |
| Caelo                | Macrogol 4 lauryl ether | 5041801          | 1       |
| Caelo                | Macrogol 4 lauryl ether | 4214A-02868      | 1       |
| Caelo                | Macrogol 4 lauryl ether | 616A-02868       | 1       |
| Caelo                | Macrogol 4 lauryl ether | 17028301         | 37      |
| Caelo                | Macrogol 4 lauryl ether | 190967001        | 13      |
| Caelo                | Macrogol 4 lauryl ether | 11220306         | 1       |
| Caelo                | Macrogol 4 lauryl ether | 12180204         | 2       |
| Caelo                | Macrogol 4 lauryl ether | 13041702         | 4       |
| Caelo                | Macrogol 4 lauryl ether | 14054405         | 7       |
| Caelo                | Macrogol 4 lauryl ether | 2184             | 1       |
| Caelo                | Macrogol 4 lauryl ether | 18D30-B09-352738 | 4       |

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| Supplier                   | Substance               | Batch        | Spectra |
|----------------------------|-------------------------|--------------|---------|
| Caelo                      | Macrogol 4 lauryl ether | 417400031    | 2       |
| Caelo                      | Macrogol 4 lauryl ether | 12057804     | 4       |
| Caelo                      | Macrogol 4 lauryl ether | 18040101     | 30      |
| Caelo                      | Macrogol 4 lauryl ether | 21000436003  | 2       |
| Caelo                      | Macrogol 4 lauryl ether | 1013400032   | 1       |
| Caelo                      | Macrogol 4 lauryl ether | 16100207     | 21      |
| Caelo                      | Macrogol 4 lauryl ether | 1710026-01   | 2       |
| Fagron                     | Macrogol 4 lauryl ether | 18215501     | 1       |
| Caelo                      | Macrogol 4 lauryl ether | 14225306     | 3       |
| Caelo                      | Macrogol 4 lauryl ether | 15041801     | 7       |
| Caelo                      | Macrogol 4 lauryl ether | 15041802     | 1       |
| Caelo                      | Macrogol 4 lauryl ether | 170828301    | 1       |
| Caelo                      | Macrogol 4 lauryl ether | 18215501     | 33      |
| Caelo                      | Macrogol 4 lauryl ether | 13229808     | 2       |
| Caelo                      | Macrogol 4 lauryl ether | 1014400032   | 4       |
| Caelo                      | Macrogol 4 lauryl ether | 19067001     | 1       |
| Caelo                      | Macrogol 4 lauryl ether | 190000420003 | 1       |
| Caesar & Lorenz GmbH       | Macrogol 4 lauryl ether | 19096701     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 14054405     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 14225308     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 16100201     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 17028301     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18040101     | 2       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18040103     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18215501     | 3       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18215504     | 2       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 17028303     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18215506     | 2       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 18215508     | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 190967001    | 3       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 19000420003  | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 19000420004  | 1       |
| Caesar & Loretz GmbH / ... | Macrogol 4 lauryl ether | 18215504     | 1       |
| Caesar & Loretz GmbH / ... | Macrogol 4 lauryl ether | 417400031    | 2       |
| Caesar & Loretz GmbH / ... | Macrogol 4 lauryl ether | 18040101     | 1       |
| Caesar & Loretz GmbH Hi... | Macrogol 4 lauryl ether | 14283001     | 1       |
| Caesar & Loretz GmbH, 4... | Macrogol 4 lauryl ether | 11220306     | 1       |
| Caesar & Loretz GmbH/Kehr  | Macrogol 4 lauryl ether | 18215506     | 1       |
| Caesar & Loretz GmbH/Kehr  | Macrogol 4 lauryl ether | 190967001    | 1       |
| Caesar & Loretz GmbH/No... | Macrogol 4 lauryl ether | 19096701     | 1       |
| Caesar & Loretz/Noweda     | Macrogol 4 lauryl ether | 715400031    | 1       |
| Caesar & Loretz GmbH       | Macrogol 4 lauryl ether | 13229802     | 1       |
| Caesar&loretz,Anzag        | Macrogol 4 lauryl ether | 13041702     | 1       |
| Caesar&loretz,Phoenix      | Macrogol 4 lauryl ether | 14225308     | 1       |
| Caleo/Phönix               | Macrogol 4 lauryl ether | 14225308     | 1       |
| cealo                      | Macrogol 4 lauryl ether | 19000420004  | 1       |
| Cealo                      | Macrogol 4 lauryl ether | 19000420003  | 3       |
| Cealo/Jenne                | Macrogol 4 lauryl ether | 18215506     | 1       |
| Celo/Gehe                  | Macrogol 4 lauryl ether | 16100205     | 2       |
| EuRho >Ph                  | Macrogol 4 lauryl ether | 1710026-01   | 1       |
| EuRho/Noweda               | Macrogol 4 lauryl ether | 1801043-01   | 1       |
| Euro OTC                   | Macrogol 4 lauryl ether | 15323704     | 1       |
| Euro OTC                   | Macrogol 4 lauryl ether | 1610034-01   | 16      |
| Euro OTC                   | Macrogol 4 lauryl ether | 18040101     | 2       |
| Euro OTC                   | Macrogol 4 lauryl ether | 180104301    | 5       |
| Euro OTC                   | Macrogol 4 lauryl ether | 1298974      | 1       |
| Euro OTC                   | Macrogol 4 lauryl ether | 19G09-B02    | 1       |
| Euro OTC                   | Macrogol 4 lauryl ether | 1503032-02   | 8       |
| Euro OTC                   | Macrogol 4 lauryl ether | 1808025-01   | 24      |
| Euro OTC                   | Macrogol 4 lauryl ether | 1901029-01   | 28      |

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| Supplier    | Substance               | Batch            | Spectra |
|-------------|-------------------------|------------------|---------|
| Euro OTC    | Macrogol 4 lauryl ether | 1911015-01       | 25      |
| Euro OTC    | Macrogol 4 lauryl ether | 2003031-01       | 10      |
| Euro OTC    | Macrogol 4 lauryl ether | 14054401         | 1       |
| Euro OTC    | Macrogol 4 lauryl ether | 1407007-01       | 6       |
| Euro OTC    | Macrogol 4 lauryl ether | 1605006-02       | 11      |
| Euro OTC    | Macrogol 4 lauryl ether | 190102901        | 2       |
| Euro OTC    | Macrogol 4 lauryl ether | 1142238          | 3       |
| Euro OTC    | Macrogol 4 lauryl ether | 1907010-01       | 29      |
| EuRoh/ Gehe | Macrogol 4 lauryl ether | 18215501         | 1       |
| Euro OTC    | Macrogol 4 lauryl ether | 1710026-01       | 36      |
| Euro OTC    | Macrogol 4 lauryl ether | 1703033-01       | 31      |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06346398  | 1       |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06-347341 | 15      |
| Fagron      | Macrogol 4 lauryl ether | 18d30-b09-350640 | 4       |
| Fagron      | Macrogol 4 lauryl ether | 19G09-B02-072841 | 7       |
| Fagron      | Macrogol 4 lauryl ether | 15A26B02         | 1       |
| Fagron      | Macrogol 4 lauryl ether | 15G10-B05        | 9       |
| Fagron      | Macrogol 4 lauryl ether | 15G10-B05-315343 | 7       |
| Fagron      | Macrogol 4 lauryl ether | 15G10-B05-315605 | 1       |
| Fagron      | Macrogol 4 lauryl ether | 17A23-B01-332868 | 6       |
| Fagron      | Macrogol 4 lauryl ether | 170303301        | 1       |
| Fagron      | Macrogol 4 lauryl ether | 17028303         | 1       |
| Fagron      | Macrogol 4 lauryl ether | 341796           | 1       |
| Fagron      | Macrogol 4 lauryl ether | 17-0845          | 6       |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06-346397 | 7       |
| Fagron      | Macrogol 4 lauryl ether | 13136202         | 1       |
| Fagron      | Macrogol 4 lauryl ether | 16E18-B04-326871 | 2       |
| Fagron      | Macrogol 4 lauryl ether | 18826-B06        | 2       |
| Fagron      | Macrogol 4 lauryl ether | 18D30-B09        | 15      |
| Fagron      | Macrogol 4 lauryl ether | 14E06-B05-293846 | 5       |
| Fagron      | Macrogol 4 lauryl ether | 17H21-B07-341796 | 15      |
| Fagron      | Macrogol 4 lauryl ether | 19G09-B02        | 21      |
| Fagron      | Macrogol 4 lauryl ether | 19G09-B02-072843 | 3       |
| Fagron      | Macrogol 4 lauryl ether | 20020-T12-076663 | 1       |
| Fagron      | Macrogol 4 lauryl ether | 16E18-B04-327811 | 8       |
| Fagron      | Macrogol 4 lauryl ether | 18D30-B09-350641 | 15      |
| Fagron      | Macrogol 4 lauryl ether | 112-0766602      | 1       |
| Fagron      | Macrogol 4 lauryl ether | 16E18-B04-324095 | 15      |
| Fagron      | Macrogol 4 lauryl ether | 19G09-B02-072832 | 23      |
| Fagron      | Macrogol 4 lauryl ether | 17A23-B01        | 21      |
| Fagron      | Macrogol 4 lauryl ether | 18A18-B98-344799 | 10      |
| Fagron      | Macrogol 4 lauryl ether | 18-0103          | 16      |
| Fagron      | Macrogol 4 lauryl ether | 19G09-B02-072835 | 11      |
| Fagron      | Macrogol 4 lauryl ether | B02-0728305      | 1       |
| Fagron      | Macrogol 4 lauryl ether | 14E06-B05-293848 | 4       |
| Fagron      | Macrogol 4 lauryl ether | 316400031        | 2       |
| Fagron      | Macrogol 4 lauryl ether | 17A23-B01-332867 | 12      |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06        | 12      |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06-346398 | 9       |
| Fagron      | Macrogol 4 lauryl ether | 1907010-01       | 3       |
| Fagron      | Macrogol 4 lauryl ether | 13K18-B30-288163 | 11      |
| Fagron      | Macrogol 4 lauryl ether | 13B13_N01        | 1       |
| Fagron      | Macrogol 4 lauryl ether | 17H21-B07-339505 | 5       |
| Fagron      | Macrogol 4 lauryl ether | 18J08-B03-355980 | 14      |
| Fagron      | Macrogol 4 lauryl ether | 17H21-Bo7-341795 | 1       |
| Fagron      | Macrogol 4 lauryl ether | 18B26-B06-347343 | 7       |
| Fagron      | Macrogol 4 lauryl ether | 18B26B06347342   | 2       |
| Fagron      | Macrogol 4 lauryl ether | 18D30-B09-350642 | 7       |
| Fagron      | Macrogol 4 lauryl ether | 18J08-B03-355982 | 10      |
| Fagron      | Macrogol 4 lauryl ether | 19G09B02072832   | 2       |

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| Supplier                | Substance               | Batch             | Spectra |
|-------------------------|-------------------------|-------------------|---------|
| Fagron                  | Macrolog 4 lauryl ether | 19G09-B02-072831  | 29      |
| Fagron                  | Macrolog 4 lauryl ether | B02-0728402       | 1       |
| Fagron                  | Macrolog 4 lauryl ether | 20020-T12-0766662 | 1       |
| Fiebig                  | Macrolog 4 lauryl ether | b02-0728402       | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 11220306          | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 13136206          | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 14054401          | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 417400031         | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 2240003           | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 17H21-B07341796   | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 218400031         | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 18215501          | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 18D30-B09-352739  | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 18D30-B09-352738  | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 1901029-01        | 1       |
| Gehe                    | Macrolog 4 lauryl ether | 1907010-01        | 2       |
| GEHE                    | Macrolog 4 lauryl ether | 21021172/5        | 1       |
| GEHE                    | Macrolog 4 lauryl ether | 15323704          | 1       |
| GEHE                    | Macrolog 4 lauryl ether | 17028301          | 2       |
| Gehe/ Spinnrad          | Macrolog 4 lauryl ether | 715400031         | 1       |
| Fagron                  | Macrolog 4 lauryl ether | 16E18-B04-328737  | 2       |
| Gehe/Spinnrad           | Macrolog 4 lauryl ether | 715400031         | 1       |
| hedinger                | Macrolog 4 lauryl ether | 734206909-BIP     | 1       |
| Hedinger                | Macrolog 4 lauryl ether | 15041704          | 1       |
| Ichthyol/Gehe           | Macrolog 4 lauryl ether | 316400031         | 1       |
| INTR/Phönix             | Macrolog 4 lauryl ether | 16100205          | 1       |
| Jenne                   | Macrolog 4 lauryl ether | 13136202          | 1       |
| Kehr                    | Macrolog 4 lauryl ether | 16100207          | 2       |
| Kehr                    | Macrolog 4 lauryl ether | 17028303          | 1       |
| L12                     | Macrolog 4 lauryl ether | 18B26-B06-347341  | 1       |
| L30                     | Macrolog 4 lauryl ether | 18B26-B06         | 1       |
| L30                     | Macrolog 4 lauryl ether | 18B26-B06-346396  | 1       |
| noweda                  | Macrolog 4 lauryl ether | 17H21-B07-339505  | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 1111400032        | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 512400031         | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 413400031         | 2       |
| Noweda                  | Macrolog 4 lauryl ether | 123400033         | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 18D30-B09-350640  | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 18B26-B06-347341  | 1       |
| Noweda                  | Macrolog 4 lauryl ether | 818400032         | 2       |
| Noweda                  | Macrolog 4 lauryl ether | 19G09-B02-072831  | 2       |
| Caelo                   | Macrolog 4 lauryl ether | 18215508          | 15      |
| Noweda 10.07.2015       | Macrolog 4 lauryl ether | 1014400032        | 1       |
| Noweda/Spinnrad         | Macrolog 4 lauryl ether | 218400031         | 1       |
| Phoenix                 | Macrolog 4 lauryl ether | 218400031         | 2       |
| Phoenix                 | Macrolog 4 lauryl ether | 18215501          | 1       |
| Caelo                   | Macrolog 4 lauryl ether | 13229801          | 1       |
| Phönix                  | Macrolog 4 lauryl ether | 17H21-B07-339506  | 1       |
| Phönix                  | Macrolog 4 lauryl ether | 18040101          | 1       |
| Raben-Apotheke Mildenau | Macrolog 4 lauryl ether | 314400031         | 1       |
| sanacorp                | Macrolog 4 lauryl ether | 14054405          | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 12180204          | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 1013400032        | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 1014400032        | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 17028301          | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 1710026-01        | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 417400001         | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 17028303          | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 17H21B07339504    | 1       |
| Sanacorp                | Macrolog 4 lauryl ether | 18J08-B03         | 3       |

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| Supplier                    | Substance               | Batch               | Spectra |
|-----------------------------|-------------------------|---------------------|---------|
| Sanacorp, 21.03.17, 9,45EUR | Macrogol 4 lauryl ether | 16100205            | 1       |
| Sanacorp/ Spinnrad          | Macrogol 4 lauryl ether | 218400031           | 2       |
| Sanacorp/ Spinnrad          | Macrogol 4 lauryl ether | 818400032           | 1       |
| Caelo                       | Macrogol 4 lauryl ether | 218400031           | 3       |
| Caelo                       | Macrogol 4 lauryl ether | 417400313           | 1       |
| Sanacorp/Spinnrad           | Macrogol 4 lauryl ether | 818400032           | 2       |
| Schärer&Schlapfer           | Macrogol 4 lauryl ether | 14E06-B05-295979    | 1       |
| Sinnrad GmbH,Bad Seegeb...  | Macrogol 4 lauryl ether | 316400031           | 1       |
| Soinnrad                    | Macrogol 4 lauryl ether | 11012014B           | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 316400031           | 1       |
| Spinnra/ Noweda             | Macrogol 4 lauryl ether | 417400031           | 1       |
| spinnrad                    | Macrogol 4 lauryl ether | 1214000321          | 1       |
| spinnrad                    | Macrogol 4 lauryl ether | 715400031           | 2       |
| spinnrad                    | Macrogol 4 lauryl ether | 512400031           | 1       |
| spinnrad                    | Macrogol 4 lauryl ether | 1213400033          | 1       |
| spinnrad                    | Macrogol 4 lauryl ether | 314400031           | 1       |
| spinnrad                    | Macrogol 4 lauryl ether | 16400031            | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 1111400032          | 2       |
| Spinnrad                    | Macrogol 4 lauryl ether | 512400031           | 2       |
| Spinnrad                    | Macrogol 4 lauryl ether | 12124000321         | 5       |
| Spinnrad                    | Macrogol 4 lauryl ether | 413400031           | 4       |
| Spinnrad                    | Macrogol 4 lauryl ether | 111140032           | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 11B11-N151110400032 | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 1213400033          | 2       |
| Spinnrad                    | Macrogol 4 lauryl ether | 101440032           | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 1014400032          | 3       |
| Spinnrad                    | Macrogol 4 lauryl ether | 715400031           | 6       |
| Spinnrad                    | Macrogol 4 lauryl ether | 725400031           | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 316400031           | 4       |
| Spinnrad                    | Macrogol 4 lauryl ether | 417400031           | 9       |
| Spinnrad                    | Macrogol 4 lauryl ether | 218400031           | 7       |
| Spinnrad                    | Macrogol 4 lauryl ether | 41740031            | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 21800031            | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 314400031           | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 81840032            | 1       |
| Spinnrad                    | Macrogol 4 lauryl ether | 818400032           | 4       |
| Spinnrad                    | Macrogol 4 lauryl ether | 1019400031          | 3       |
| Spinnrad / Alliance HC      | Macrogol 4 lauryl ether | 314400031           | 1       |
| Spinnrad / Anzag            | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad / Noweda           | Macrogol 4 lauryl ether | 512400031           | 1       |
| Spinnrad / Noweda           | Macrogol 4 lauryl ether | 1014400032          | 1       |
| Spinnrad / Noweda           | Macrogol 4 lauryl ether | 417400031           | 1       |
| Spinnrad / Phönix           | Macrogol 4 lauryl ether | 2240003             | 1       |
| Spinnrad / Phönix 17.01...  | Macrogol 4 lauryl ether | 818400032           | 1       |
| Spinnrad / Sanacorp 13....  | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad- Gehe              | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 1111400032          | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 2240003             | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 12124000321         | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 1013400032          | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 314400031           | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 1014400032          | 2       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 316400031           | 1       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 417400031           | 2       |
| Spinnrad GmbH               | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad GmbH / Allianc...  | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad GmbH / Noweda      | Macrogol 4 lauryl ether | 218400031           | 1       |
| Spinnrad GmbH / Noweda      | Macrogol 4 lauryl ether | 818400032           | 1       |
| Spinnrad GmbH / Phönix      | Macrogol 4 lauryl ether | 413400031           | 1       |
| Spinnrad/ Noweda            | Macrogol 4 lauryl ether | 715400031           | 1       |

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| Supplier                  | Substance                       | Batch            | Spectra |
|---------------------------|---------------------------------|------------------|---------|
| Spinnrad/ Sanacorp        | Macrogol 4 lauryl ether         | 101900031        | 1       |
| Spinnrad/ Anzag           | Macrogol 4 lauryl ether         | 12124000321      | 2       |
| Caelo                     | Macrogol 4 lauryl ether         | 1510024-02       | 2       |
| Spinnrad/G                | Macrogol 4 lauryl ether         | 417400031        | 1       |
| Spinnrad/Gehe             | Macrogol 4 lauryl ether         | 1014400032       | 1       |
| Spinnrad/Gehe             | Macrogol 4 lauryl ether         | 715400031        | 1       |
| Spinnrad/Gehe             | Macrogol 4 lauryl ether         | 417400031        | 1       |
| Spinnrad/Gehe             | Macrogol 4 lauryl ether         | 218400031        | 2       |
| Spinnrad/GEHE             | Macrogol 4 lauryl ether         | 8188400032       | 1       |
| Spinnrad/Gehe/08.12.20    | Macrogol 4 lauryl ether         | 1019400031       | 1       |
| Spinnrad/Gehe/10.08.2020  | Macrogol 4 lauryl ether         | 1019400031       | 1       |
| spinnrad/Noweda           | Macrogol 4 lauryl ether         | 1019400031       | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 413400031        | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 512400031        | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 314400031        | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 1014400032       | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 715400031        | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 316400031        | 2       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 818400032        | 1       |
| Spinnrad/Noweda           | Macrogol 4 lauryl ether         | 1019400031       | 2       |
| Spinnrad/Phoenix          | Macrogol 4 lauryl ether         | 1014400032       | 1       |
| Spinnrad/Phoenix          | Macrogol 4 lauryl ether         | 316400031        | 2       |
| Spinnrad/Phoenix          | Macrogol 4 lauryl ether         | 218400031        | 1       |
| Spinnrad/Phoenix          | Macrogol 4 lauryl ether         | 818400032        | 1       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 413400031        | 1       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 417400031        | 2       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 218400031        | 2       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 818400032        | 2       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 818100032        | 1       |
| Spinnrad/Phönix           | Macrogol 4 lauryl ether         | 1019400031       | 1       |
| Spinnrad/Sanacorp         | Macrogol 4 lauryl ether         | 314400031        | 2       |
| Spinnrad/Sanacorp         | Macrogol 4 lauryl ether         | 1014400032       | 1       |
| Spinnrad/Sanacorp         | Macrogol 4 lauryl ether         | 715400031        | 2       |
| Spinnrad/Sanacorp         | Macrogol 4 lauryl ether         | 218400031        | 2       |
| Spinnrad/Sanacorp         | Macrogol 4 lauryl ether         | 1019400031       | 1       |
| Spinnrad/Spangro          | Macrogol 4 lauryl ether         | 818400032        | 1       |
| spinnrad-Noweda           | Macrogol 4 lauryl ether         | 218400031        | 1       |
| VDL;7.75EUR; 30.09.2015   | Macrogol 4 lauryl ether         | 15041801         | 1       |
| 16816637                  | Macrogolglycerol hydroxystea... | 2100060003       | 1       |
| AHD                       | Macrogolglycerol hydroxystea... | 14B14-B06-295486 | 1       |
| Alliance                  | Macrogolglycerol hydroxystea... | 13K07-N02        | 1       |
| Alliance H.               | Macrogolglycerol hydroxystea... | 15378302         | 1       |
| Alliance health           | Macrogolglycerol hydroxystea... | 14283808         | 1       |
| Allianz                   | Macrogolglycerol hydroxystea... | 18204507         | 1       |
| Anzag                     | Macrogolglycerol hydroxystea... | 16247401         | 1       |
| Anzag                     | Macrogolglycerol hydroxystea... | 18204507         | 1       |
| Anzag 07.02.13 ek:4,70EUR | Macrogolglycerol hydroxystea... | 12103807         | 1       |
| BASF SE                   | Macrogolglycerol hydroxystea... | 14B14B06292160   | 1       |
| BASF SE/ Phönix           | Macrogolglycerol hydroxystea... | 39658724U0       | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 14196805         | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 15378304         | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 14B14-B06        | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 17257003         | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 18278406         | 1       |
| Bombastus                 | Macrogolglycerol hydroxystea... | 14K28-B01-309197 | 1       |
| BTC                       | Macrogolglycerol hydroxystea... | 22006            | 6       |
| Caelo                     | Macrogolglycerol hydroxystea... | 191835003        | 1       |
| Caelo                     | Macrogolglycerol hydroxystea... | 10236606         | 1       |
| Caelo                     | Macrogolglycerol hydroxystea... | 21071201         | 1       |
| Caelo                     | Macrogolglycerol hydroxystea... | 12103803         | 4       |

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| Supplier | Substance                       | Batch              | Spectra |
|----------|---------------------------------|--------------------|---------|
| Caelo    | Macrogolglycerol hydroxystea... | 19111202           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 17111202           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 20130912-1         | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 12103807           | 5       |
| Caelo    | Macrogolglycerol hydroxystea... | 12158602           | 2       |
| Caelo    | Macrogolglycerol hydroxystea... | 12158606           | 9       |
| Caelo    | Macrogolglycerol hydroxystea... | 6021304            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 26061303           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 12158611           | 4       |
| Caelo    | Macrogolglycerol hydroxystea... | 1215614            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 13072004           | 12      |
| Caelo    | Macrogolglycerol hydroxystea... | 21121203           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 12071402           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 2101415            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 30091404           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 14196805           | 13      |
| Caelo    | Macrogolglycerol hydroxystea... | 29091402           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 16045403           | 19      |
| Caelo    | Macrogolglycerol hydroxystea... | 140415C            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 14K28-B01-301467   | 2       |
| Caelo    | Macrogolglycerol hydroxystea... | 14283813           | 13      |
| Caelo    | Macrogolglycerol hydroxystea... | 15169405           | 12      |
| Caelo    | Macrogolglycerol hydroxystea... | 15169404           | 16      |
| Caelo    | Macrogolglycerol hydroxystea... | 15169403           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 3005682            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 14C28-b01          | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 16247401           | 29      |
| Caelo    | Macrogolglycerol hydroxystea... | 16045406           | 2       |
| Caelo    | Macrogolglycerol hydroxystea... | 15169410           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 16247405           | 21      |
| Caelo    | Macrogolglycerol hydroxystea... | 16247410           | 9       |
| Caelo    | Macrogolglycerol hydroxystea... | 1624401            | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 16349304           | 18      |
| Caelo    | Macrogolglycerol hydroxystea... | 16349305           | 16      |
| Caelo    | Macrogolglycerol hydroxystea... | 19021802           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 21111816           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 18204504           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 18G13-B05          | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 19040305           | 15      |
| Caelo    | Macrogolglycerol hydroxystea... | 19040303           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 19040306           | 8       |
| Caelo    | Macrogolglycerol hydroxystea... | 200022114004       | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 13072008           | 5       |
| Caelo    | Macrogolglycerol hydroxystea... | 14283810           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 2917E-01308        | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 15169805           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 18204507P-190325-7 | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 12158614           | 4       |
| Caelo    | Macrogolglycerol hydroxystea... | 18278412           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 17257004           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 14K28-B01-309197   | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 18278404           | 2       |
| Caelo    | Macrogolglycerol hydroxystea... | 18278407           | 3       |
| Caelo    | Macrogolglycerol hydroxystea... | 19040302           | 2       |
| Caelo    | Macrogolglycerol hydroxystea... | 15102001           | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 20002214003        | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 30378697V0         | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 15378302           | 28      |
| Caelo    | Macrogolglycerol hydroxystea... | 13K07-N02          | 1       |
| Caelo    | Macrogolglycerol hydroxystea... | 18G13-B05-355855   | 1       |

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| Supplier                   | Substance                       | Batch                | Spectra |
|----------------------------|---------------------------------|----------------------|---------|
| Caelo                      | Macrogolglycerol hydroxystea... | 2115E-01308          | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 17257007             | 2       |
| Caelo                      | Macrogolglycerol hydroxystea... | 18278403             | 37      |
| Caelo                      | Macrogolglycerol hydroxystea... | 18204506             | 8       |
| Caelo                      | Macrogolglycerol hydroxystea... | P146/14              | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 4613M-01308          | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 14K28-B01-301468     | 2       |
| Caelo                      | Macrogolglycerol hydroxystea... | 2100060003           | 3       |
| Caelo                      | Macrogolglycerol hydroxystea... | 182004507            | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 18278410             | 20      |
| Caelo                      | Macrogolglycerol hydroxystea... | 11161504             | 5       |
| Caelo                      | Macrogolglycerol hydroxystea... | 16349310             | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 14b14-b06-2921600855 | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 14K28-B01            | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 14k28-b01-301467     | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 15378304             | 10      |
| Caelo                      | Macrogolglycerol hydroxystea... | 15378309             | 4       |
| Caelo                      | Macrogolglycerol hydroxystea... | 70201688Q0           | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 54764324U0           | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 17257003             | 40      |
| Caelo                      | Macrogolglycerol hydroxystea... | 182784               | 1       |
| Fagron                     | Macrogolglycerol hydroxystea... | 18204509             | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 3452                 | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 12158610             | 2       |
| Caelo                      | Macrogolglycerol hydroxystea... | 18204509             | 25      |
| Caelo                      | Macrogolglycerol hydroxystea... | 2918E-01308          | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 2019Q-01308          | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 200002214004         | 3       |
| Caelo                      | Macrogolglycerol hydroxystea... | 163493105682         | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 13072005             | 1       |
| Caelo                      | Macrogolglycerol hydroxystea... | 18204507             | 32      |
| Caelo                      | Macrogolglycerol hydroxystea... | 18278406             | 23      |
| Caelo                      | Macrogolglycerol hydroxystea... | 169040306            | 1       |
| Caelo/Phönix               | Macrogolglycerol hydroxystea... | 19040305             | 1       |
| Caesar & Loretz            | Macrogolglycerol hydroxystea... | 18204509             | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 18278403             | 6       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 18278404             | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 18204509             | 2       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 18278406             | 3       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 18278410             | 8       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 19040303             | 2       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 19040306             | 2       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 20002214003          | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 20002214004          | 2       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 21000600001          | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 21001311005          | 1       |
| Caesar & Loretz GmbH / ... | Macrogolglycerol hydroxystea... | 18278410             | 1       |
| Caesar & Loretz GmbH Hi... | Macrogolglycerol hydroxystea... | 16247401             | 1       |
| Caesar & Loretz GmbH/Ge... | Macrogolglycerol hydroxystea... | 19040305             | 1       |
| Caesar & Loretz GmbH/Je... | Macrogolglycerol hydroxystea... | 19040306             | 1       |
| Caesar & Loretz GmbH/Kehr  | Macrogolglycerol hydroxystea... | 18278410             | 1       |
| Caesar & Loretz GmbH/No... | Macrogolglycerol hydroxystea... | 18204507             | 1       |
| Caesar & Loretz GmbH/Ph... | Macrogolglycerol hydroxystea... | 19040305             | 1       |
| Caesar & Loretz GmbH/Ph... | Macrogolglycerol hydroxystea... | 18278406             | 1       |
| Caesar & Loretz GmbH/Ph... | Macrogolglycerol hydroxystea... | 20002214004          | 1       |
| Caesar & Loretz GmbH7Sa... | Macrogolglycerol hydroxystea... | 20002214004          | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol hydroxystea... | 12158610             | 1       |
| Caesar u. Loretz/Noweda    | Macrogolglycerol hydroxystea... | 14196805             | 1       |
| Calo/AHD                   | Macrogolglycerol hydroxystea... | 16247401             | 1       |
| E Plus                     | Macrogolglycerol hydroxystea... | 17257003             | 1       |

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| Supplier     | Substance                       | Batch              | Spectra |
|--------------|---------------------------------|--------------------|---------|
| Euro OTC     | Macrogolglycerol hydroxystea... | 16247401           | 1       |
| Euro OTC     | Macrogolglycerol hydroxystea... | 28227168E0         | 1       |
| Euro OTC     | Macrogolglycerol hydroxystea... | 15169404           | 1       |
| Euro OTC     | Macrogolglycerol hydroxystea... | 1483808            | 1       |
| Euro OTC     | Macrogolglycerol hydroxystea... | 18278403           | 1       |
| Fa. BTC      | Macrogolglycerol hydroxystea... | 81830              | 2       |
| Fa. BTC      | Macrogolglycerol hydroxystea... | 101818             | 6       |
| Fagron       | Macrogolglycerol hydroxystea... | 702016880o         | 1       |
| Fafron/Anzag | Macrogolglycerol hydroxystea... | 49426297V0         | 1       |
| Fagrom/VDL   | Macrogolglycerol hydroxystea... | 14K28-B01-301467   | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 12E11-N03          | 4       |
| Fagron       | Macrogolglycerol hydroxystea... | 11K16-N09          | 3       |
| Fagron       | Macrogolglycerol hydroxystea... | 12H24-N06          | 4       |
| Fagron       | Macrogolglycerol hydroxystea... | 79793775L0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 13D23-N03          | 14      |
| Fagron       | Macrogolglycerol hydroxystea... | 13D23-N03          | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 87712168E0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 49426297V0         | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 13K07N02           | 3       |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06-292160   | 14      |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06          | 7       |
| Fagron       | Macrogolglycerol hydroxystea... | 700362-0001        | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 30378697Vo         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 2815               | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 70201688Q0         | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 18G13-B05-355855   | 8       |
| Fagron       | Macrogolglycerol hydroxystea... | 18G13-B05          | 5       |
| Fagron       | Macrogolglycerol hydroxystea... | 31547575L0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 19D30B03362776     | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 19D30-B03_362727   | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 61788-85-0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06-29212160 | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06-295486   | 9       |
| Fagron       | Macrogolglycerol hydroxystea... | 18G13-B05-351723   | 9       |
| Fagron       | Macrogolglycerol hydroxystea... | F13-3685102        | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14K28-B01-301468   | 11      |
| Fagron       | Macrogolglycerol hydroxystea... | 19D30-B03-3622727  | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06292160    | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 87712168E0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14K28-B01-301467   | 14      |
| Fagron       | Macrogolglycerol hydroxystea... | 21A05-F01-376300   | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 19248475L0         | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 20B03-F13          | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 1(18G13B05355855)  | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 20B03-F13-368512   | 7       |
| Fagron       | Macrogolglycerol hydroxystea... | 12D23-N03          | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 13G03-N18          | 4       |
| Fagron       | Macrogolglycerol hydroxystea... | 13K07-N02          | 6       |
| Fagron       | Macrogolglycerol hydroxystea... | 150056P0           | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 13D23N03           | 3       |
| Fagron       | Macrogolglycerol hydroxystea... | 14B14-B06-295468   | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 3415M01308         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 14K28B01301467     | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 36344697V0         | 2       |
| Fagron       | Macrogolglycerol hydroxystea... | 8771216E0          | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 267209T0           | 3       |
| Fagron       | Macrogolglycerol hydroxystea... | 30378697V0         | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 303786970V0        | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 18G13-B05-33855    | 1       |
| Fagron       | Macrogolglycerol hydroxystea... | 18G13-B05355855    | 1       |

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| Supplier               | Substance                       | Batch            | Spectra |
|------------------------|---------------------------------|------------------|---------|
| Fagron                 | Macrogolglycerol hydroxystea... | 18G13B05355855   | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 19D30-B03-362727 | 8       |
| Fagron                 | Macrogolglycerol hydroxystea... | 15E18-B10-309198 | 5       |
| Fagron                 | Macrogolglycerol hydroxystea... | 85739256P0       | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 153356P0         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 13d23-n03        | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 19D30-B03        | 2       |
| Fagron                 | Macrogolglycerol hydroxystea... | 20G09-F02-372329 | 2       |
| Fagron                 | Macrogolglycerol hydroxystea... | 160516172        | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 509A372          | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 14K28-801-301467 | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 14K28-B01        | 6       |
| Fagron                 | Macrogolglycerol hydroxystea... | 54764324U0       | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 17257003         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 31547575L0       | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 20G09-F02-372328 | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 12H24N06         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 14B14B06         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 18G13-B05-357024 | 4       |
| Fagron                 | Macrogolglycerol hydroxystea... | 15E18-B10        | 3       |
| Fagron                 | Macrogolglycerol hydroxystea... | 31547575Lo       | 2       |
| Fagron                 | Macrogolglycerol hydroxystea... | 19D30-B03-362726 | 7       |
| Fagron                 | Macrogolglycerol hydroxystea... | 20B03-F13-368511 | 8       |
| Fargon                 | Macrogolglycerol hydroxystea... | 13G03-N18        | 1       |
| Fargon / Sanacorp      | Macrogolglycerol hydroxystea... | 19D30-B03-362727 | 1       |
| Fiebig                 | Macrogolglycerol hydroxystea... | 16349305         | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 18204501         | 4       |
| Fagron                 | Macrogolglycerol hydroxystea... | 14K28-B01-309197 | 3       |
| Gehe                   | Macrogolglycerol hydroxystea... | 11K16-N09        | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 79793775L0       | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 13K07-N02        | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 14196804         | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 14K28-B01-301    | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 151694050300     | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 16247401         | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 17257003         | 4       |
| Gehe                   | Macrogolglycerol hydroxystea... | 18204509         | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 18278410         | 1       |
| Gehe                   | Macrogolglycerol hydroxystea... | 19d30-b03-362727 | 1       |
| GEHE 02.01.2019        | Macrogolglycerol hydroxystea... | 18204509         | 1       |
| GEHE Kassel 02.01.2019 | Macrogolglycerol hydroxystea... | 18278403         | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 1647401          | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 16247405/1060217 | 1       |
| Gehe/Noweda            | Macrogolglycerol hydroxystea... | 17257003         | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 16349303         | 27      |
| Gutenberg-Apotheke     | Macrogolglycerol hydroxystea... | 13072008         | 1       |
| Hedinger               | Macrogolglycerol hydroxystea... | 13333702         | 1       |
| Kehr                   | Macrogolglycerol hydroxystea... | 16349304         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 11C18-N08        | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 13d23-N03        | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 16247402         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 16247407         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 16349310         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 17257004         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 18204501         | 3       |
| Noweda                 | Macrogolglycerol hydroxystea... | 18204507         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 17257003         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 18278403         | 2       |
| Noweda                 | Macrogolglycerol hydroxystea... | 18278404         | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 19D30-B03-362727 | 1       |

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| Supplier               | Substance                       | Batch             | Spectra |
|------------------------|---------------------------------|-------------------|---------|
| Noweda                 | Macrogolglycerol hydroxystea... | 19040303          | 2       |
| Noweda                 | Macrogolglycerol hydroxystea... | 20002214004       | 1       |
| Noweda                 | Macrogolglycerol hydroxystea... | 20002214003       | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 14B14-B06-2965486 | 1       |
| Phoenix                | Macrogolglycerol hydroxystea... | 3069              | 1       |
| Phoenix                | Macrogolglycerol hydroxystea... | 17257003          | 1       |
| Phoenix                | Macrogolglycerol hydroxystea... | 18278410          | 2       |
| Phoenix                | Macrogolglycerol hydroxystea... | 3400              | 1       |
| Phoenix                | Macrogolglycerol hydroxystea... | 200572306         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 20G09-F02         | 5       |
| phönix                 | Macrogolglycerol hydroxystea... | 14196805          | 1       |
| phönix                 | Macrogolglycerol hydroxystea... | 15378302          | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 11161504          | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 14283813          | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 54764324U0        | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 18204507          | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 18G13-B05-355855  | 1       |
| Phönix                 | Macrogolglycerol hydroxystea... | 21000060003       | 1       |
| Phönix 31.01.2014      | Macrogolglycerol hydroxystea... | 13D23N03          | 1       |
| Phönix Gotha           | Macrogolglycerol hydroxystea... | 282268E0          | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 12L06-N02         | 2       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 2/AKD16           | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 13072004          | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 14B14B06          | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 14196805          | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 1423805           | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 15378309          | 1       |
| Sanacorp               | Macrogolglycerol hydroxystea... | 16247405          | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 14B14-B06-292160  | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 14283805          | 7       |
| Caelo                  | Macrogolglycerol hydroxystea... | 2000214004        | 1       |
| Sanacorp/Fischar       | Macrogolglycerol hydroxystea... | 16045403          | 1       |
| siehe Protokoll        | Macrogolglycerol hydroxystea... | 15378302          | 1       |
| Stadtapotheke Glauchau | Macrogolglycerol hydroxystea... | 19040305          | 1       |
| Caelo                  | Lauromacrogol 400               | 13095802          | 9       |
| Caelo                  | Lauromacrogol 400               | 13340701          | 6       |
| Caelo                  | Lauromacrogol 400               |                   | 6       |
| Euro OTC               | Lauromacrogol 400               | 1610034           | 1       |
| Euro OTC               | Lauromacrogol 400               |                   | 1       |
| Fagron                 | Lauromacrogol 400               | 16E18-B04-326089  | 11      |
| Fagron                 | Lauromacrogol 400               |                   | 1       |
| Fagron                 | Lauromacrogol 400               | 20D20-T12-076662  | 4       |
| Gepepharm GmbH/Gehe    | Lauromacrogol 400               |                   | 1       |
|                        | Lauromacrogol 400               | 160312            | 1       |
| Sanacorp               | Lauromacrogol 400               |                   | 1       |
| Caelo                  | Macrogol 4 lauryl ether         | 16100205          | 12      |
| Caelo                  | Macrogol 4 lauryl ether         | 14054401          | 8       |
| Caelo                  | Macrogol 4 lauryl ether         | 14225301          | 7       |
| Caelo                  | Macrogol 4 lauryl ether         | 19000420004       | 6       |
| Spinnrad/Noweda        | Macrogol 4 lauryl ether         |                   | 1       |
| Caelo                  | Macrogolglycerol hydroxystea... | 20002214004       | 15      |
| Caelo                  | Macrogolglycerol hydroxystea... | 14283808          | 8       |
|                        | Macrogolglycerol hydroxystea... | 13D23-N03         | 1       |
| Fagron                 | Macrogolglycerol hydroxystea... | 12L06-N02         | 13      |
| Fagron                 | Macrogolglycerol hydroxystea... | 21A05-F01-376301  | 4       |

- 234857 spectra from 1121 *Apo-Ident* customers from a total of 46 042 batches from a further 340 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are docu-



mented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 738           | 0              | 63 201        |
| <b>Type B</b> | 0              | 728           | 2              | 90 668        |
| <b>Type C</b> | 0              | 5931          | 575            | 234 857       |

The substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.1870 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.7260 % (> 99.3151 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 91.1620 % (> 91.1159 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Polysorbate 60                            | 7.35                   | 14.57                          |
| Macrogol 20 glycerol monostearate type... | 8.73                   | 22.20                          |
| Polysorbate 20                            | 13.88                  | 32.94                          |
| Macrogol-2-laurylether                    | 15.08                  | —                              |
| Macrogol 8 stearate type I                | 18.21                  | 22.63                          |
| Polysorbate 80                            | 18.98                  | 28.59                          |
| Macrogol ointment                         | 20.97                  | —                              |
| Polyol fatty acid ester                   | 21.50                  | —                              |
| Macrogolglycerol ricinoleate              | 26.66                  | 28.35                          |
| Macrogols 400                             | 48.02                  | —                              |
| Hydrophilic ointment DAB                  | 56.17                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogol 4 lauryl ether / Lauromacrogol 400 / Macrogolglycerol hydroxystearate 40* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30594     | 32283               | 2.84                         | 18.77                           |
| 30765     | 30765               | 0.00                         | 22.33                           |
| 31025     | 32283               | 2.01                         | 18.89                           |
| 31372     | 31372               | 0.00                         | 24.54                           |
| 31381     | 31381               | 0.00                         | 21.08                           |
| 31583     | 31381               | 6.80                         | 21.13                           |
| 31625     | 31625               | 0.00                         | 26.85                           |
| 31768     | 31768               | 0.00                         | 20.80                           |
| 32283     | 32283               | 0.00                         | 22.27                           |
| 32816     | 32816               | 0.00                         | 12.75                           |
| 32824     | 32816               | 8.07                         | 12.70                           |
| 33216     | 31381               | 7.84                         | 19.54                           |
| 35020     | 35020               | 0.00                         | 24.64                           |
| 35140     | 31625               | 3.13                         | 23.81                           |
| 35141     | 31381               | 10.69                        | 19.92                           |
| 35150     | 31768               | 1.99                         | 17.96                           |
| 35464     | 31625               | 6.69                         | 22.98                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogol 8 stearate type I**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30554-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogol 8 stearate type I; Polyäthylenglycol-8-stearat

### Special notes

When selecting the *Macrogol 8 stearate type I* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group  | Type A | Type B | Type C |
|----------------------------|--------|--------|--------|
| Macrogol 8 stearate type I | 6      | 2      | 47     |

## Second-stage model

For differentiation of the substance/substance group *Macrogol 8 stearate type I* the following second-stage model is used:

- [Submodel 10](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogol 8 stearate type I*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate        |
|----------|---------------------|----------|-----------|---------|--------------------|
| Caelo    | Macrogol 8 stere... | 13077501 | 31165     | 40      | 1407187            |
| Caelo    | Macrogol 8 stere... | 13324506 | 31453     | 40      | AR-15-FG-001640-01 |
| Caelo    | Macrogol 8 stere... | 172186   | 33717     | 40      | 20170906*          |
| Caelo    | Macrogol 8 stere... | 173095   | 33900     | 40      | 20180111*          |
| Caelo    | Macrogol 8 stere... | 192346   | 34708     | 40      | 20191010*          |
| Caelo    | Macrogol 8 stere... | 20004032 | 35278     | 40      | 20210205*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 240 spectra of 6 reference samples from the substance/substance group *Macrogol 8 stearate type I*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 699 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Macrogol 8 stearate type I*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                  | Batch  | Sample ID | Spectra |
|----------|----------------------------|--------|-----------|---------|
| Caelo    | Macrogol 8 stereate type I | 162302 | 32339     | 40      |
| Caelo    | Macrogol 8 stereate type I | 182402 | 34339     | 40      |
| Caelo    | Macrogol 8 stereate type I | 162302 | 32701     | 40      |

- 91371 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 171 spectra from 98 *Apo-Ident* customers from 48 batches from the substance/substance group *Macrogol 8 stereate type I*.
- Among them are spectra of independent samples from 47 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance                  | Batch              | Spectra |
|-----------|----------------------------|--------------------|---------|
| Anzag     | Macrogol 8 stereate type I | 16230202           | 1       |
| Bombastus | Macrogol 8 stereate type I | 16230202           | 1       |
| Caelo     | Macrogol 8 stereate type I | 15249601           | 5       |
| Caelo     | Macrogol 8 stereate type I | 12125404           | 1       |
| Caelo     | Macrogol 8 stereate type I | 14074603           | 2       |
| Caelo     | Macrogol 8 stereate type I | 153773             | 1       |
| Caelo     | Macrogol 8 stereate type I | 16063205           | 3       |
| Caelo     | Macrogol 8 stereate type I | 17309505           | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234602           | 7       |
| Caelo     | Macrogol 8 stereate type I | 19234603           | 11      |
| Caelo     | Macrogol 8 stereate type I | 17309502           | 4       |
| Caelo     | Macrogol 8 stereate type I | 17309504           | 22      |
| Caelo     | Macrogol 8 stereate type I | 17309504P-180827-6 | 1       |
| Caelo     | Macrogol 8 stereate type I | 17309504P-181228-2 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234603P-200709-6 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234603P-200217-7 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234602P-191115-4 | 1       |
| Caelo     | Macrogol 8 stereate type I | 18240202P-190718-3 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234603P-200727-4 | 1       |
| Caelo     | Macrogol 8 stereate type I | 18240206P-190926-5 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234602P-191227-3 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234603P-200326-7 | 1       |
| Caelo     | Macrogol 8 stereate type I | 19234602P-191230-2 | 1       |
| Caelo     | Macrogol 8 stereate type I | 17309504P-190308-3 | 1       |
| Caelo     | Macrogol 8 stereate type I | 17309504P-190502-2 | 1       |
| Caelo     | Macrogol 8 stereate type I | 18240202P-190624-7 | 1       |
| Caelo     | Macrogol 8 stereate type I | 18240202           | 10      |
| Caelo     | Macrogol 8 stereate type I | 13304501           | 1       |
| Caelo     | Macrogol 8 stereate type I | 13324501           | 2       |
| Caelo     | Macrogol 8 stereate type I | 13324504           | 4       |

*continued on the next page*

continued from previous page

| Supplier                   | Substance                  | Batch            | Spectra |
|----------------------------|----------------------------|------------------|---------|
| Caelo                      | Macrogol 8 stereate type I | 15377305         | 4       |
| Caelo                      | Macrogol 8 stereate type I | 17218602         | 18      |
| Caelo                      | Macrogol 8 stereate type I | 18240206         | 2       |
| Caelo                      | Macrogol 8 stereate type I | 12H23-N02        | 1       |
| Caelo                      | Macrogol 8 stereate type I | 12E24-N07        | 1       |
| Caelo                      | Macrogol 8 stereate type I | 15377301         | 10      |
| Caelo                      | Macrogol 8 stereate type I | T30911           | 1       |
| Caerol                     | Macrogol 8 stereate type I | 15249601         | 1       |
| Caesar & Loretz GmbH       | Macrogol 8 stereate type I | 17309504         | 2       |
| Caesar & Loretz GmbH       | Macrogol 8 stereate type I | 19234603         | 2       |
| Caesar & Loretz GmbH       | Macrogol 8 stereate type I | 192908002        | 1       |
| Caesar & Loretz GmbH/An... | Macrogol 8 stereate type I | 19234602         | 1       |
| Caesar & Loretz GmbH/Sa... | Macrogol 8 stereate type I | 19234602         | 1       |
| Caesar & Loretz Hilden/... | Macrogol 8 stereate type I | 19234602         | 1       |
| Fagron                     | Macrogol 8 stereate type I | 11K04-N06        | 1       |
| Fagron                     | Macrogol 8 stereate type I | 14A17-B08-290544 | 1       |
| Fagron                     | Macrogol 8 stereate type I | T30911           | 1       |
| Fagron                     | Macrogol 8 stereate type I | T32431           | 1       |
| Fagron                     | Macrogol 8 stereate type I | 12E24-N07        | 1       |
| Fagron                     | Macrogol 8 stereate type I | 13H08-N04        | 1       |
| Fagron                     | Macrogol 8 stereate type I | 1115M-03130      | 1       |
| Fagron                     | Macrogol 8 stereate type I | 14H04-B01-298920 | 1       |
| Fagron                     | Macrogol 8 stereate type I | 1515Q-03130      | 1       |
| Caelo                      | Macrogol 8 stereate type I | 16230202         | 7       |
| Gehe                       | Macrogol 8 stereate type I | 15377301         | 1       |
| Gehe                       | Macrogol 8 stereate type I | 16063202         | 1       |
| Caelo                      | Macrogol 8 stereate type I | 16063202         | 7       |
| Kehr                       | Macrogol 8 stereate type I | 17309504         | 1       |
| Caelo                      | Macrogol 8 stereate type I | 1721602          | 1       |
| Noweda                     | Macrogol 8 stereate type I | 17309504         | 1       |
| Noweda                     | Macrogol 8 stereate type I | 18240202         | 1       |
| Phoenix                    | Macrogol 8 stereate type I | 17309504         | 1       |
| Phönix                     | Macrogol 8 stereate type I | 13324501         | 1       |
| sana                       | Macrogol 8 stereate type I | 13077505         | 1       |
| Sanacorp                   | Macrogol 8 stereate type I | 17309504         | 1       |
| Caelo                      | Macrogol 8 stereate type I | 13324506         | 2       |

- 241 192 spectra from 1121 *Apo-Ident* customers from a total of 46 958 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogol 8 stereate type I* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogol 8 stereate type I* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 240           | 0              | 63 699        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 164           | 7              | 241 192       |



The substance/substance group *Macrogol 8 stearate type I* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 95.9064 % (> 94.1520 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogol 8 stearate type I* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                          | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------------------------|-------------------------------|---------------------------------------|
| Polysorbate 60                            | 9.31                          | 14.19                                 |
| Macrogol 20 glycerol monostearate type... | 20.51                         | 22.57                                 |
| Macrogolglycerol hydroxystearate 40       | 22.53                         | 35.74                                 |
| Lauromacrogol 400                         | 22.64                         | 23.99                                 |
| Macrogol ointment                         | 26.12                         | —                                     |
| Polysorbate 80                            | 28.20                         | 29.65                                 |
| Polysorbate 20                            | 28.37                         | 56.50                                 |
| Polyol fatty acid ester                   | 28.58                         | —                                     |
| Macrogolglycerol ricinoleate              | 28.92                         | 41.78                                 |
| Pasta Cordes®                             | 37.93                         | —                                     |
| Macrogol 4 lauryl ether                   | 39.10                         | 37.09                                 |
| Soft ointment                             | 40.59                         | —                                     |
| Hydrophilic ointment DAB                  | 42.23                         | —                                     |
| Macrogol-2-laurylether                    | 43.84                         | —                                     |
| Macrogols 300                             | 46.95                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogol 8 stearate type I* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31165     | 31165               | 0.00                         | 26.40                           |
| 31453     | 31453               | 0.00                         | 29.72                           |
| 33717     | 33717               | 0.00                         | 32.69                           |
| 33900     | 33900               | 0.00                         | 25.57                           |
| 34708     | 34708               | 0.00                         | 31.74                           |
| 35278     | 35278               | 0.00                         | 29.23                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogol ointment**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30465-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogol ointment; Unguentum polyäthylenglycoli

### Special notes

When selecting the *Macrogol ointment* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Macrogol ointment         | 9      | 8      | 86     |

## Second-stage model

For differentiation of the substance/substance group *Macrogol ointment* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogol ointment*:

| Supplier | Substance         | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------------|----------|-----------|---------|-------------|
| Caelo    | Macrogol ointment | 13002502 | 31004     | 40      | 20130108    |
| Caelo    | Macrogol ointment | 13177801 | 31247     | 40      | 1405327     |
| Caelo    | Macrogol ointment | 14078601 | 31442     | 40      | 20140321    |
| Caelo    | Macrogol ointment | 13177801 | 31486     | 40      | 20130709    |
| Caelo    | Macrogol ointment | 153838   | 31989     | 60      | 20151117*   |
| Caelo    | Macrogol ointment | 162577   | 32493     | 40      | 20160928*   |
| Caelo    | Macrogol ointment | 162578   | 32494     | 40      | 20160928*   |
| Caelo    | Macrogol ointment | 172237   | 33751     | 40      | 20170828*   |
| Caelo    | Macrogol ointment | 190510   | 34531     | 40      | 20190325*   |
| Caelo    | Macrogol ointment | 190511   | 34532     | 40      | 20190325*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 420 spectra of 10 reference samples from the substance/substance group *Macrogol ointment*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 519 spectra from a total of 1298 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 330 spectra of 8 reference samples from the substance/substance group *Macrogol ointment*.
- Among them are spectra of independent samples from 8 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance         | Batch    | Sample ID | Spectra |
|----------|-------------------|----------|-----------|---------|
| Caelo    | Macrogol ointment | 182006   | 34257     | 40      |
| Caelo    | Macrogol ointment | 182587   | 34357     | 40      |
| Caelo    | Macrogol ointment | 20001522 | 34965     | 40      |
| Caelo    | Macrogol ointment | 20002367 | 35109     | 40      |
| Caelo    | Macrogol ointment | 21000675 | 35337     | 40      |
| Caelo    | Macrogol ointment | 21000676 | 35338     | 40      |
| Caelo    | Macrogol ointment | 21001140 | 35339     | 40      |
| Caelo    | Macrogol ointment | 21001538 | 35524     | 50      |

- 91 161 spectra from a total of 2008 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 474 spectra from 200 *Apo-Ident* customers from 90 batches from the substance/substance group *Macrogol ointment*.
- Among them are spectra of independent samples from 86 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance         | Batch       | Spectra |
|----------------------------|-------------------|-------------|---------|
| Alliance Healthcare        | Macrogol ointment | 19278701    | 1       |
| Anzag                      | Macrogol ointment | 12117202    | 1       |
| Anzag/                     | Macrogol ointment | 12261402    | 2       |
| Caelo                      | Macrogol ointment | 13177702    | 3       |
| apomix/ Phoenix Leipzig... | Macrogol ointment | 16314502    | 1       |
| Bahnhof-Apothek/Bahnhof... | Macrogol ointment | 3418A-07196 | 1       |
| Bombastus                  | Macrogol ointment | 13177801    | 1       |
| Bombastus                  | Macrogol ointment | 17319301    | 1       |
| Caelo                      | Macrogol ointment | 10166302    | 1       |
| Caelo                      | Macrogol ointment | 11277702    | 1       |
| Caelo                      | Macrogol ointment | 6091202     | 1       |
| Caelo                      | Macrogol ointment | 12179102    | 2       |
| Caelo                      | Macrogol ointment | 29111202    | 1       |
| Caelo                      | Macrogol ointment | 12353502    | 4       |
| Caelo                      | Macrogol ointment | 12261403    | 2       |
| Caelo                      | Macrogol ointment | 22051304    | 1       |
| Caelo                      | Macrogol ointment | 13002505    | 1       |
| Caelo                      | Macrogol ointment | 19071305    | 1       |
| Caelo                      | Macrogol ointment | 16062002    | 2       |
| Caelo                      | Macrogol ointment | 6031507     | 1       |
| Caelo                      | Macrogol ointment | 14336301    | 7       |
| Caelo                      | Macrogol ointment | 15170701    | 6       |
| Caelo                      | Macrogol ointment | 15383902    | 2       |

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| <b>Supplier</b> | <b>Substance</b>  | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|-------------------|---------------|----------------|
| Caelo           | Macrogol ointment | 16062003      | 8              |
| Caelo           | Macrogol ointment | 16257801      | 5              |
| Caelo           | Macrogol ointment | 16257802      | 4              |
| Caelo           | Macrogol ointment | 16314502      | 10             |
| Caelo           | Macrogol ointment | 17063901      | 6              |
| Caelo           | Macrogol ointment | 18111706      | 1              |
| Caelo           | Macrogol ointment | 171276        | 1              |
| Caelo           | Macrogol ointment | 17319302      | 10             |
| Caelo           | Macrogol ointment | 11727601      | 1              |
| Caelo           | Macrogol ointment | 18057501      | 1              |
| Caelo           | Macrogol ointment | 18200702      | 11             |
| Caelo           | Macrogol ointment | 19004701      | 5              |
| Caelo           | Macrogol ointment | 9051001       | 1              |
| Caelo           | Macrogol ointment | 1917302       | 2              |
| Caelo           | Macrogol ointment | 17127601      | 32             |
| Caelo           | Macrogol ointment | 2817E-02834   | 1              |
| Caelo           | Macrogol ointment | 3518M-02834   | 1              |
| Caelo           | Macrogol ointment | 12117202      | 2              |
| Caelo           | Macrogol ointment | 18057701      | 38             |
| Caelo           | Macrogol ointment | 16062001      | 2              |
| Caelo           | Macrogol ointment | 151707107     | 1              |
| Caelo           | Macrogol ointment | 1418E-02834   | 1              |
| Caelo           | Macrogol ointment | 17127601/5579 | 1              |
| Caelo           | Macrogol ointment | 16186401      | 2              |
| Caelo           | Macrogol ointment | 19177301      | 5              |
| Caelo           | Macrogol ointment | 13275302      | 1              |
| Caelo           | Macrogol ointment | 12353501      | 7              |
| Caelo           | Macrogol ointment | 1012A-02834   | 1              |
| Caelo           | Macrogol ointment | 1731931       | 1              |
| Caelo           | Macrogol ointment | 15170602      | 5              |
| Caelo           | Macrogol ointment | 14219802      | 4              |
| Caelo           | Macrogol ointment | 14336302      | 5              |
| Caelo           | Macrogol ointment | 19278701      | 15             |
| Caelo           | Macrogol ointment | 14219801      | 3              |
| Caelo           | Macrogol ointment | 19177302      | 10             |
| Caelo           | Macrogol ointment | 19051002      | 4              |
| Caelo           | Macrogol ointment | 20001523001   | 14             |
| Caelo           | Macrogol ointment | 13324901      | 1              |
| Caelo           | Macrogol ointment | 16186301      | 17             |
| Caelo           | Macrogol ointment | 170619181     | 1              |
| Caelo           | Macrogol ointment | 13002602      | 4              |
| Caelo           | Macrogol ointment | 13002601      | 1              |
| Caelo           | Macrogol ointment | 18057801      | 8              |
| Caelo           | Macrogol ointment | 19051001      | 21             |
| Caelo           | Macrogol ointment | 4511M-02834   | 1              |
| Caelo           | Macrogol ointment | 15383802      | 4              |
| Caelo           | Macrogol ointment | 3315A-02834   | 1              |
| Caelo           | Macrogol ointment | 3516I-02834   | 1              |
| Caelo           | Macrogol ointment | 18051801      | 1              |
| Caelo           | Macrogol ointment | 13177701      | 1              |
| Caelo           | Macrogol ointment | 13324902      | 2              |
| Caelo           | Macrogol ointment | 14078701      | 1              |
| Caelo           | Macrogol ointment | 16186302      | 2              |
| Caelo           | Macrogol ointment | 18200701      | 10             |
| Caelo           | Macrogol ointment | 20001522001   | 9              |
| Caelo           | Macrogol ointment | 20003775001   | 4              |
| Caelo           | Macrogol ointment | 4617M02834    | 1              |
| Caelo           | Macrogol ointment | 17319301      | 9              |
| Caelo           | Macrogol ointment | 4717Q-02834   | 1              |
| Caelo           | Macrogol ointment | 312E-02834    | 1              |

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| Supplier                   | Substance         | Batch       | Spectra |
|----------------------------|-------------------|-------------|---------|
| Caerlo/Gehe                | Macrogol ointment | 1731902     | 1       |
| Caerlo/Gehe                | Macrogol ointment | 18200701    | 1       |
| Caesar & Lorenz GmbH       | Macrogol ointment | 19051001    | 1       |
| Caesar & Loretz            | Macrogol ointment | 18057701    | 1       |
| Caesar & Loretz            | Macrogol ointment | 18057801    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 14336301    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 14078601    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 19051001    | 4       |
| Caesar & Loretz GmbH       | Macrogol ointment | 19177302    | 2       |
| Caesar & Loretz GmbH       | Macrogol ointment | 18200701    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 19177301    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 1927880     | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 19278802    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 20001522001 | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 19278701    | 1       |
| Caesar & Loretz GmbH       | Macrogol ointment | 20001523001 | 2       |
| Caesar & Loretz GmbH       | Macrogol ointment | 20003775001 | 1       |
| Caesar & Loretz GmbH / ... | Macrogol ointment | 19051001    | 2       |
| Caesar & Loretz GmbH / ... | Macrogol ointment | 18057701    | 1       |
| Caesar & Loretz GmbH/ A... | Macrogol ointment | 20001523001 | 2       |
| Caesar & Loretz GmbH/Gehe  | Macrogol ointment | 19051002    | 1       |
| Caesar & Loretz GmbH/Je... | Macrogol ointment | 19051001    | 2       |
| Caesar & Loretz GmbH/No... | Macrogol ointment | 18200701    | 1       |
| Caesar & Loretz GmbH/No... | Macrogol ointment | 19051001    | 1       |
| Caesar & Loretz GmbH/No... | Macrogol ointment | 19278701    | 1       |
| Caesar & Loretz Hilden     | Macrogol ointment | 18200702    | 1       |
| Caesar & Loretz Hilden     | Macrogol ointment | 19278701    | 1       |
| Cealo/Gehe                 | Macrogol ointment | 17127601    | 1       |
| Cealo/Gehe                 | Macrogol ointment | 19051001    | 2       |
| cesar&lorenz/Phönix        | Macrogol ointment | 11327702    | 1       |
| Ebert+Jacobi               | Macrogol ointment | 11277701    | 1       |
| Euro OTC                   | Macrogol ointment | 16314502    | 3       |
| Fagron                     | Macrogol ointment | 14012201    | 1       |
| Fagron                     | Macrogol ointment | 17127601    | 1       |
| Gehe                       | Macrogol ointment | 18057701    | 1       |
| Gehe                       | Macrogol ointment | 19278701    | 1       |
| GEHE                       | Macrogol ointment | 16186301    | 1       |
| GEHE                       | Macrogol ointment | 16314502    | 1       |
| GEHE                       | Macrogol ointment | 17127601    | 2       |
| Jenne / Infectopharm       | Macrogol ointment | 19051001    | 3       |
| L12                        | Macrogol ointment | 17127601    | 1       |
| Noweda                     | Macrogol ointment | 12179102    | 1       |
| Noweda                     | Macrogol ointment | 19051001    | 1       |
| Noweda                     | Macrogol ointment | 19278701    | 1       |
| Noweda                     | Macrogol ointment | 20001523001 | 1       |
| Caelo                      | Macrogol ointment | 14012201    | 6       |
| Phoenix                    | Macrogol ointment | 19051001    | 1       |
| Phoenix                    | Macrogol ointment | 201001210   | 1       |
| Caelo                      | Macrogol ointment | 19278802    | 11      |
| Sanacorp                   | Macrogol ointment | 13177801    | 1       |
| Sanacorp                   | Macrogol ointment | 19278802    | 1       |
| Caelo                      | Macrogol ointment | 16092003    | 1       |
|                            | Macrogol ointment | 18200702    | 1       |
| Caelo                      | Macrogol ointment | 13002502    | 8       |
| Caelo                      | Macrogol ointment | 13177801    | 6       |
| Caelo                      | Macrogol ointment | 14078601    | 9       |
| Euro OTC                   | Macrogol ointment |             | 1       |



- 240 889 spectra from 1121 *Apo-Ident* customers from a total of 46 919 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogol ointment* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogol ointment* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 420           | 0              | 63 519        |
| <b>Type B</b> | 0              | 330           | 0              | 91 081        |
| <b>Type C</b> | 0              | 474           | 0              | 240 889       |

The substance/substance group *Macrogol ointment* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.5714 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 98.1818 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 100.0000 % (> 98.7342 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogol ointment* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance      | Distance in main model | Distance in second-stage model |
|----------------|------------------------|--------------------------------|
| Macrogols 400  | 34.62                  | —                              |
| Macrogols 300  | 47.12                  | —                              |
| Polysorbate 20 | 77.76                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogol ointment* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31004     | 31989               | 4.91                         | 38.19                           |
| 31247     | 31247               | 0.00                         | 38.70                           |
| 31442     | 33751               | 7.48                         | 27.95                           |
| 31486     | 33751               | 5.45                         | 33.52                           |
| 31989     | 31989               | 0.00                         | 38.01                           |
| 32493     | 32493               | 0.00                         | 34.23                           |
| 32494     | 32494               | 0.00                         | 40.45                           |
| 33751     | 33751               | 0.00                         | 34.37                           |
| 34531     | 34531               | 0.00                         | 41.73                           |
| 34532     | 34532               | 0.00                         | 34.19                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogol-2-laurylether**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31731-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogol-2-laurylether; Dehydol® LS 2

### Special notes

When selecting the *Macrogol-2-laurylether* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Macrogol-2-laurylether    | 2      | 1      | 9      |

## Second-stage model

For differentiation of the substance/substance group *Macrogol-2-laurylether* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogol-2-laurylether*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Macrogol-2-laury... | 14054304 | 31731     | 60      | 1603434     |
| Caelo    | Macrogol-2-laury... | 14054309 | 31867     | 60      | 20140225    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 2 reference samples from the substance/substance group *Macrogol-2-laurylether*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 819 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Macrogol-2-laurylether*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance              | Batch    | Sample ID | Spectra |
|----------|------------------------|----------|-----------|---------|
| Caelo    | Macrogol-2-laurylether | 15411908 | 33273     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 52 spectra from 22 *Apo-Ident* customers from 9 batches from the substance/substance group *Macrogol-2-laurylether*.
- Among them are spectra of independent samples from 9 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance              | Batch    | Spectra |
|----------------------|------------------------|----------|---------|
| Caelo                | Macrogol-2-laurylether | 15411902 | 4       |
| Caelo                | Macrogol-2-laurylether | 15411904 | 29      |
| Caelo                | Macrogol-2-laurylether | 15411910 | 3       |
| Caelo                | Macrogol-2-laurylether | 18093302 | 5       |
| Caelo                | Macrogol-2-laurylether | 18093301 | 2       |
| Caelo                | Macrogol-2-laurylether | 15411903 | 1       |
| Caelo                | Macrogol-2-laurylether | 18093304 | 2       |
| Caelo                | Macrogol-2-laurylether | 18093303 | 3       |
| Caesar & Loretz GmbH | Macrogol-2-laurylether | 18093302 | 1       |
| Phoenix              | Macrogol-2-laurylether | 18093303 | 1       |
| Sanacorp             | Macrogol-2-laurylether | 15411908 | 1       |

- 241 311 spectra from 1121 *Apo-Ident* customers from a total of 46 997 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogol-2-laurylether* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogol-2-laurylether* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 52            | 0              | 241 311       |

The substance/substance group *Macrogol-2-laurylether* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 100.0000 % (> 88.4615 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogol-2-laurylether* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Macrogol 4 lauryl ether                   | 17.05                  | —                              |
| Polysorbate 60                            | 21.31                  | —                              |
| Macrogol 20 glycerol monostearate type... | 24.35                  | —                              |
| Macrogol 8 stearate type I                | 24.92                  | —                              |
| Polyol fatty acid ester                   | 27.08                  | —                              |
| Polysorbate 80                            | 30.70                  | —                              |
| Polysorbate 20                            | 30.99                  | —                              |
| Lauromacrogol 400                         | 31.84                  | —                              |
| Macrogolglycerol hydroxystearate 40       | 36.03                  | —                              |
| Macrogolglycerol ricinoleate              | 37.33                  | —                              |
| Macrogol ointment                         | 37.71                  | —                              |
| Macrogols 400                             | 42.68                  | —                              |
| Triglycerol diisostearate                 | 55.99                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogol-2-laurylether* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31731     | 31731               | 0.00                         | 21.26                           |
| 31867     | 31731               | 5.06                         | 17.05                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical



variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogolglycerol ricinoleate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 10004582-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogolglycerol ricinoleate; Macrogolglyceroli ricinoleas

### Special notes

When selecting the *Macrogolglycerol ricinoleate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Macrogolglycerol ricinoleate | 4      | 3      | 58     |

## Second-stage model

For differentiation of the substance/substance group *Macrogolglycerol ricinoleate* the following second-stage model is used:

- [Submodel 10](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogolglycerol ricinoleate*:

| Supplier | Substance           | Batch     | Sample ID | Spectra | Certificate |
|----------|---------------------|-----------|-----------|---------|-------------|
| Caelo    | Macrogolglycerol... | 13272708  | 31368     | 39      | 1505503     |
| Caelo    | Macrogolglycerol... | 161303    | 32297     | 40      | 20160523*   |
| Fagron   | Macrogolglycerol... | 12E29-N02 | 30766     | 60      | 20120612    |
| Fagron   | Macrogolglycerol... | 12H08-N01 | 31015     | 40      | 20120827    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 179 spectra of 4 reference samples from the substance/substance group *Macrogolglycerol ricinoleate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 760 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Macrogolglycerol ricinoleate*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                    | Batch            | Sample ID | Spectra |
|----------|------------------------------|------------------|-----------|---------|
| Caelo    | Macrogolglycerol ricinoleate | 161545           | 32338     | 40      |
| Caelo    | Macrogolglycerol ricinoleate | 172238           | 33707     | 40      |
| Fagron   | Macrogolglycerol ricinoleate | 20I29-T01-083604 | 35463     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 113 spectra from 71 *Apo-Ident* customers from 58 batches from the substance/substance group *Macrogolglycerol ricinoleate*.
- Among them are spectra of independent samples from 58 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                    | Batch            | Spectra |
|----------------------------|------------------------------|------------------|---------|
| Caelo                      | Macrogolglycerol ricinoleate | 19153603         | 1       |
| BASF Chem trade GmbH/Ph... | Macrogolglycerol ricinoleate | 13B08-N03        | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 44242575L0       | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 14195501         | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 15312307         | 2       |
| Caelo                      | Macrogolglycerol ricinoleate | 16130304         | 2       |
| Caelo                      | Macrogolglycerol ricinoleate | 16154501         | 3       |
| Caelo                      | Macrogolglycerol ricinoleate | 16154504         | 2       |
| Caelo                      | Macrogolglycerol ricinoleate | 17137302         | 3       |
| Caelo                      | Macrogolglycerol ricinoleate | 17223802         | 2       |
| Caelo                      | Macrogolglycerol ricinoleate | 17348304         | 3       |
| Caelo                      | Macrogolglycerol ricinoleate | 6101806          | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 18216906         | 3       |
| Caelo                      | Macrogolglycerol ricinoleate | 20002306004      | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 18216902         | 6       |
| Caelo                      | Macrogolglycerol ricinoleate | 192835003        | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 19143603         | 4       |
| Caelo                      | Macrogolglycerol ricinoleate | 20002306001      | 3       |
| Caelo                      | Macrogolglycerol ricinoleate | 192835005        | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 20004096001      | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 19143605         | 4       |
| Caelo                      | Macrogolglycerol ricinoleate | 3017I-01307      | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 318A-01307       | 1       |
| Caelo                      | Macrogolglycerol ricinoleate | 17348302         | 5       |
| Caelo                      | Macrogolglycerol ricinoleate | 18216908         | 2       |
| Caelo                      | Macrogolglycerol ricinoleate | 192835055        | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol ricinoleate | 19143603         | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol ricinoleate | 20002306001      | 1       |
| Caesar & Loretz GmbH       | Macrogolglycerol ricinoleate | 20002306004      | 2       |
| Caesar & Loretz GmbH       | Macrogolglycerol ricinoleate | 20004096001      | 1       |
| Caesar & Loretz GmbH/Sa... | Macrogolglycerol ricinoleate | 18216906         | 1       |
| E-plus                     | Macrogolglycerol ricinoleate | 18C16-B03-347906 | 1       |
| Fagro/Sanacorp             | Macrogolglycerol ricinoleate | 18C16-B03        | 1       |
| Fagron                     | Macrogolglycerol ricinoleate | 12G02-N11        | 1       |
| Fagron                     | Macrogolglycerol ricinoleate | 13B28-N01        | 1       |

*continued on the next page*

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| Supplier                  | Substance                    | Batch            | Spectra |
|---------------------------|------------------------------|------------------|---------|
| Fagron                    | Macrogolglycerol ricinoleate | 13B08-N03        | 2       |
| Fagron                    | Macrogolglycerol ricinoleate | 13E13-N11        | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 13J24-B03-287433 | 2       |
| Fagron                    | Macrogolglycerol ricinoleate | 13J24-B03-296052 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 14L08-B04        | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 13F12-N17        | 2       |
| Fagron                    | Macrogolglycerol ricinoleate | 17J10-B02-340819 | 4       |
| Fagron                    | Macrogolglycerol ricinoleate | 17J10-B02-342613 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 3242             | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 18K01-B04-360487 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 17J10B02         | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 18K01-B04        | 3       |
| Fagron                    | Macrogolglycerol ricinoleate | 13B08-No3        | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 18K01-B04-360489 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 91218124U0       | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 17J10-B02-343252 | 4       |
| Fagron                    | Macrogolglycerol ricinoleate | 14L08-B04-302328 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 16B08-B01-322893 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 18C16-B03-347906 | 4       |
| Fagron                    | Macrogolglycerol ricinoleate | 19A28-B03-360510 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 18C16-B03-347906 | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 19A28-B03-362627 | 3       |
| Fagron                    | Macrogolglycerol ricinoleate | 14L08B04         | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 67100156P0       | 1       |
| Fagron                    | Macrogolglycerol ricinoleate | 16B08B01         | 1       |
| Fargon/Phönix             | Macrogolglycerol ricinoleate | 18K01-B04-355946 | 1       |
| Nachprüfung von Juni 2018 | Macrogolglycerol ricinoleate | 13J24-B03-269052 | 1       |
| Phoenix                   | Macrogolglycerol ricinoleate | 73353136W0       | 1       |
| Phoenix                   | Macrogolglycerol ricinoleate | 18C16-B03-353773 | 1       |
| Phönix                    | Macrogolglycerol ricinoleate | 16B08-B01-328228 | 1       |
| Sanacorp                  | Macrogolglycerol ricinoleate | 18216906         | 1       |

- 241 250 spectra from 1121 *Apo-Ident* customers from a total of 46 949 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogolglycerol ricinoleate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogolglycerol ricinoleate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 179           | 0              | 63 760        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 113           | 0              | 241 250       |

The substance/substance group *Macrogolglycerol ricinoleate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6480 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 100.0000 % (> 94.6903 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogolglycerol ricinoleate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Polysorbate 80                            | 12.11                  | 14.63                          |
| Polyol fatty acid ester                   | 18.07                  | —                              |
| Polysorbate 60                            | 28.45                  | 29.42                          |
| Macrogol 8 stearate type I                | 28.78                  | 39.69                          |
| Polysorbate 20                            | 29.17                  | 34.88                          |
| Macrogol 20 glycerol monostearate type... | 30.81                  | 23.38                          |
| Macrogolglycerol hydroxystearate 40       | 32.81                  | 18.68                          |
| Lauromacrogol 400                         | 40.36                  | 33.23                          |
| Macrogol ointment                         | 40.74                  | —                              |
| Pasta Cordes®                             | 61.99                  | —                              |
| ⋮                                         | ⋮                      | ⋮                              |
| Macrogol 4 lauryl ether                   | >50                    | 76.19                          |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogolglycerol ricinoleate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30766     | 32297               | 2.42                         | 12.47                           |
| 31015     | 32297               | 4.97                         | 14.29                           |
| 31368     | 31368               | 0.00                         | 11.37                           |
| 32297     | 32297               | 0.00                         | 12.52                           |



The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogols 300**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31151-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogols 300; Polyethylenglycol 300

### Special notes

When selecting the *Macrogols 300* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Macrogols 300             | 8      | 3      | 44     |

## Second-stage model

For differentiation of the substance/substance group *Macrogols 300* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogols 300*:

| Supplier | Substance     | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------|----------|-----------|---------|-------------|
| Caelo    | Macrogols 300 | 13070109 | 31151     | 40      | 1403339     |
| Caelo    | Macrogols 300 | 14043802 | 31370     | 40      | 20140221    |
| Caelo    | Macrogols 300 | 16022102 | 32073     | 60      | 20160222    |
| Caelo    | Macrogols 300 | 160221   | 32209     | 40      | 20160222*   |
| Caelo    | Macrogols 300 | 161609   | 32212     | 40      | 20160607*   |
| Caelo    | Macrogols 300 | 162196   | 32337     | 40      | 20160729*   |
| Caelo    | Macrogols 300 | 182525   | 34312     | 40      | 20181011*   |
| Caelo    | Macrogols 300 | 183201   | 34325     | 40      | 20181214*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 340 spectra of 8 reference samples from the substance/substance group *Macrogols 300*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 8 different batches.
- 63 599 spectra from a total of 1299 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Macrogols 300*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance     | Batch       | Sample ID | Spectra |
|----------|---------------|-------------|-----------|---------|
| Caelo    | Macrogols 300 | 172105      | 33710     | 40      |
| Caelo    | Macrogols 300 | 181748      | 34232     | 40      |
| Caelo    | Macrogols 300 | 20002036004 | 35133     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 122 spectra from 73 *Apo-Ident* customers from 47 batches from the substance/substance group *Macrogols 300*.
- Among them are spectra of independent samples from 44 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier        | Substance     | Batch       | Spectra |
|-----------------|---------------|-------------|---------|
| Caeleo/ Krieger | Macrogols 300 | 18040001    | 1       |
| Caelo           | Macrogols 300 | 1406212102  | 1       |
| Caelo           | Macrogols 300 | 1307109     | 1       |
| Caelo           | Macrogols 300 | 13233304    | 5       |
| Caelo           | Macrogols 300 | 12108103    | 1       |
| Caelo           | Macrogols 300 | 13233304    | 1       |
| Caelo           | Macrogols 300 | 15286402    | 5       |
| Caelo           | Macrogols 300 | 15286409    | 5       |
| Caelo           | Macrogols 300 | 16219601    | 7       |
| Caelo           | Macrogols 300 | 17034402    | 1       |
| Caelo           | Macrogols 300 | 8051813     | 1       |
| Caelo           | Macrogols 300 | 18040002    | 2       |
| Caelo           | Macrogols 300 | 17034406    | 3       |
| Caelo           | Macrogols 300 | 18174803    | 1       |
| Caelo           | Macrogols 300 | 18252502    | 1       |
| Caelo           | Macrogols 300 | 18320102    | 3       |
| Caelo           | Macrogols 300 | 19179903    | 1       |
| Caelo           | Macrogols 300 | 20003587001 | 1       |
| Caelo           | Macrogols 300 | 18252503    | 1       |
| Caelo           | Macrogols 300 | 14183102    | 2       |
| Caelo           | Macrogols 300 | 11336201    | 1       |
| Caelo           | Macrogols 300 | 16160903    | 2       |
| Caelo           | Macrogols 300 | 17210502    | 5       |
| Caelo           | Macrogols 300 | 17034404    | 1       |
| Caelo           | Macrogols 300 | 18320104    | 5       |
| Caelo           | Macrogols 300 | 19179901    | 5       |
| Caelo           | Macrogols 300 | 12272906    | 1       |
| Caelo           | Macrogols 300 | 18040001    | 9       |
| Caelo           | Macrogols 300 | 19243901    | 4       |
| Caelo           | Macrogols 300 | 19179906    | 1       |

*continued on the next page*

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| Supplier                   | Substance     | Batch       | Spectra |
|----------------------------|---------------|-------------|---------|
| Caelo                      | Macrogols 300 | 14145106    | 4       |
| Caelo                      | Macrogols 300 | 16022101    | 4       |
| Caelo                      | Macrogols 300 | 1629601     | 1       |
| Caesar & Loretz GmbH       | Macrogols 300 | 18252501    | 1       |
| Caesar & Loretz GmbH       | Macrogols 300 | 19243901    | 2       |
| Caesar & Loretz GmbH       | Macrogols 300 | 20002036004 | 1       |
| Caesar & Loretz GmbH / ... | Macrogols 300 | 19243901    | 1       |
| Euro OTC                   | Macrogols 300 | 2512051     | 1       |
| Euro OTC                   | Macrogols 300 | 4315A-02102 | 1       |
| Euro OTC                   | Macrogols 300 | 4216Q-02102 | 1       |
| Euro OTC                   | Macrogols 300 | 4312I-02102 | 1       |
| Euro OTC                   | Macrogols 300 | 5214I-02102 | 1       |
| Fiebig                     | Macrogols 300 | 19243901    | 1       |
| Gehe                       | Macrogols 300 | 16219601    | 1       |
| Gehe                       | Macrogols 300 | 17034406    | 1       |
| Krieger                    | Macrogols 300 | 18329104    | 1       |
| Nachtstung-Verlängerung    | Macrogols 300 | 164/17      | 1       |
| Caelo                      | Macrogols 300 | 18252501    | 7       |
| Phoenix                    | Macrogols 300 | 17210502    | 1       |
| Phoenix am 13.03.14        | Macrogols 300 | 13233304    | 1       |
| Phönix                     | Macrogols 300 | 18320106    | 1       |
| Caelo                      | Macrogols 300 | 17034401    | 6       |
| Sanacorp                   | Macrogols 300 | 1703441     | 1       |
| Caelo                      | Macrogols 300 | 160221      | 1       |
| Caelo                      | Macrogols 300 | 162196      | 1       |
| Caelo                      | Macrogols 300 | 14043802    | 1       |

- 241 241 spectra from 1121 *Apo-Ident* customers from a total of 46 959 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogols 300* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogols 300* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 340           | 0              | 63 599        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 121           | 1              | 241 241       |

The substance/substance group *Macrogols 300* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.2353 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.1803 % (> 96.7213 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogols 300* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------|---------------------------|-----------------------------------|
| Macrogols 400     | 26.69                     | —                                 |
| Macrogol ointment | 34.54                     | —                                 |
| Lanolin DAB       | 84.73                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogols 300* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31151     | 31151                  | 0.00                            | 49.35                              |
| 31370     | 31151                  | 4.11                            | 46.02                              |
| 32073     | 32209                  | 0.48                            | 40.65                              |
| 32209     | 32209                  | 0.00                            | 40.35                              |
| 32212     | 32212                  | 0.00                            | 40.08                              |
| 32337     | 32337                  | 0.00                            | 41.41                              |
| 34312     | 34312                  | 0.00                            | 38.28                              |
| 34325     | 34325                  | 0.00                            | 38.51                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Macrogols 400**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30523-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Macrogols 400; Macrogolum 400

### Special notes

When selecting the *Macrogols 400* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Macrogols 400             | 6      | 17     | 241    |

## Second-stage model

For differentiation of the substance/substance group *Macrogols 400* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Macrogols 400*:

| Supplier | Substance     | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------|----------|-----------|---------|-------------|
| Caelo    | Macrogols 400 | 13171112 | 31149     | 40      | 1403644     |
| Caelo    | Macrogols 400 | 14009101 | 31367     | 40      | 20140123    |
| Caelo    | Macrogols 400 | 170137   | 33057     | 40      | 20170125*   |
| Euro OTC | Macrogols 400 | 1510042  | 31814     | 60      | 20151216*   |
| Euro OTC | Macrogols 400 | 1609017  | 32714     | 40      | 20160929*   |
| Euro OTC | Macrogols 400 | 1911028  | 34812     | 40      | 20200128*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 260 spectra of 6 reference samples from the substance/substance group *Macrogols 400*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 679 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 700 spectra of 17 reference samples from the substance/substance group *Macrogols 400*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 17 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance     | Batch    | Sample ID | Spectra |
|----------|---------------|----------|-----------|---------|
| Caelo    | Macrogols 400 | 160022   | 32211     | 40      |
| Caelo    | Macrogols 400 | 162941   | 33096     | 40      |
| Caelo    | Macrogols 400 | 171100   | 33321     | 40      |
| Caelo    | Macrogols 400 | 172833   | 33890     | 40      |
| Caelo    | Macrogols 400 | 190105   | 34463     | 40      |
| Caelo    | Macrogols 400 | 192940   | 34802     | 40      |
| Caelo    | Macrogols 400 | 21001935 | 35603     | 50      |
| Euro OTC | Macrogols 400 | 1603008  | 32185     | 40      |
| Euro OTC | Macrogols 400 | 1412015  | 32187     | 40      |
| Euro OTC | Macrogols 400 | 1607022  | 32461     | 40      |
| Euro OTC | Macrogols 400 | 1610001  | 32712     | 40      |
| Euro OTC | Macrogols 400 | 1702024  | 33226     | 40      |
| Euro OTC | Macrogols 400 | 1711029  | 33932     | 40      |
| Euro OTC | Macrogols 400 | 1807027  | 34214     | 40      |
| Euro OTC | Macrogols 400 | 1906024  | 34655     | 40      |
| Euro OTC | Macrogols 400 | 2009008  | 35126     | 40      |
| Euro OTC | Macrogols 400 | 2105008  | 35581     | 50      |

- 90 791 spectra from a total of 1999 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1553 spectra from 474 *Apo-Ident* customers from 245 batches from the substance/substance group *Macrogols 400*.
- Among them are spectra of independent samples from 241 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance     | Batch            | Spectra |
|----------------------------|---------------|------------------|---------|
| Fagron                     | Macrogols 400 | 17J27-B02-344405 | 2       |
| AHD                        | Macrogols 400 | 13171106         | 1       |
| AHD;19.06.15;3,34EUR       | Macrogols 400 | 14352801         | 1       |
| ALH                        | Macrogols 400 | 16128203         | 1       |
| Fagron                     | Macrogols 400 | 19B11-B02-191384 | 1       |
| Euro OTC                   | Macrogols 400 | 1603008-01       | 4       |
| Alliance Health 14.04.2... | Macrogols 400 | 13272908         | 2       |
| Euro OTC                   | Macrogols 400 | 1206030-02       | 4       |
| Allianz                    | Macrogols 400 | 180396802        | 1       |
| Anzag                      | Macrogols 400 | 16128203         | 1       |
| Anzag                      | Macrogols 400 | 17013701         | 1       |
| Anzag                      | Macrogols 400 | 17110001         | 1       |
| ApoIdent/ Phoenix          | Macrogols 400 | 1711029-01       | 2       |
| Audor Pharma               | Macrogols 400 | 1911028-01       | 1       |
| Bombastus                  | Macrogols 400 | 14352814         | 2       |
| Bombastus                  | Macrogols 400 | 13F06-N11        | 3       |
| Bombastus                  | Macrogols 400 | 3215E-03059      | 1       |
| Bombastus                  | Macrogols 400 | 160300801        | 1       |
| Caelo                      | Macrogols 400 | 13272909         | 3       |
| Caelo                      | Macrogols 400 | 16128203         | 33      |
| Caelo                      | Macrogols 400 | 11293311         | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Macrogols 400    | 12043301     | 3              |
| Caelo           | Macrogols 400    | 12043312     | 2              |
| Caelo           | Macrogols 400    | 12152602     | 4              |
| Caelo           | Macrogols 400    | 12043311     | 1              |
| Caelo           | Macrogols 400    | 12152608     | 6              |
| Caelo           | Macrogols 400    | 12152601     | 1              |
| Caelo           | Macrogols 400    | 20190612-1   | 1              |
| Caelo           | Macrogols 400    | 11293302     | 1              |
| Caelo           | Macrogols 400    | 12152612     | 8              |
| Caelo           | Macrogols 400    | 20021306     | 1              |
| Caelo           | Macrogols 400    | 1213M-03059  | 1              |
| Caelo           | Macrogols 400    | 12152614     | 2              |
| Caelo           | Macrogols 400    | 131711102    | 1              |
| Caelo           | Macrogols 400    | 13171102     | 9              |
| Caelo           | Macrogols 400    | 12277603     | 1              |
| Caelo           | Macrogols 400    | 13171106     | 4              |
| Caelo           | Macrogols 400    | 13171109     | 2              |
| Caelo           | Macrogols 400    | 12277608     | 1              |
| Caelo           | Macrogols 400    | 27111309     | 1              |
| Caelo           | Macrogols 400    | 13272901     | 4              |
| Caelo           | Macrogols 400    | 13272904     | 7              |
| Caelo           | Macrogols 400    | 13171113     | 2              |
| Caelo           | Macrogols 400    | 14009103     | 2              |
| Caelo           | Macrogols 400    | 13272908     | 1              |
| Caelo           | Macrogols 400    | 1409103      | 1              |
| Caelo           | Macrogols 400    | 14009110     | 1              |
| Caelo           | Macrogols 400    | 14009113     | 2              |
| Caelo           | Macrogols 400    | 14009109     | 6              |
| Caelo           | Macrogols 400    | 140211-01    | 1              |
| Caelo           | Macrogols 400    | 14195605     | 4              |
| Caelo           | Macrogols 400    | 14352801     | 4              |
| Caelo           | Macrogols 400    | 14352805     | 2              |
| Caelo           | Macrogols 400    | 14352814     | 17             |
| Caelo           | Macrogols 400    | 14195613     | 1              |
| Caelo           | Macrogols 400    | 14352804     | 4              |
| Caelo           | Macrogols 400    | 1412015-01   | 2              |
| Caelo           | Macrogols 400    | 18081505     | 1              |
| Caelo           | Macrogols 400    | 21092015B    | 1              |
| Caelo           | Macrogols 400    | 15324007     | 3              |
| Caelo           | Macrogols 400    | 15131407     | 2              |
| Caelo           | Macrogols 400    | 16002202     | 4              |
| Caelo           | Macrogols 400    | 16128202     | 3              |
| Caelo           | Macrogols 400    | 16128205     | 7              |
| Caelo           | Macrogols 400    | 161282       | 1              |
| Caelo           | Macrogols 400    | 17013702     | 7              |
| Caelo           | Macrogols 400    | 17013701     | 21             |
| Caelo           | Macrogols 400    | 162941       | 1              |
| Caelo           | Macrogols 400    | 17110003     | 14             |
| Caelo           | Macrogols 400    | 1607022-01   | 1              |
| Caelo           | Macrogols 400    | 18022801     | 1              |
| Caelo           | Macrogols 400    | 18039804     | 1              |
| Caelo           | Macrogols 400    | 18129401     | 14             |
| Caelo           | Macrogols 400    | 16081807     | 1              |
| Caelo           | Macrogols 400    | 18229707     | 13             |
| Caelo           | Macrogols 400    | 19010501     | 35             |
| Caelo           | Macrogols 400    | 19010505     | 16             |
| Caelo           | Macrogols 400    | 19010502     | 4              |
| Caelo           | Macrogols 400    | 19010511     | 1              |
| Caelo           | Macrogols 400    | 19107501     | 22             |
| Caelo           | Macrogols 400    | 190102508    | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Macrogols 400    | 192940001        | 3              |
| Caelo           | Macrogols 400    | 192940006        | 1              |
| Caelo           | Macrogols 400    | 19294004         | 1              |
| Caelo           | Macrogols 400    | 20001841010      | 5              |
| Caelo           | Macrogols 400    | 20004258001      | 1              |
| Caelo           | Macrogols 400    | 14009102         | 4              |
| Caelo           | Macrogols 400    | 17283303         | 12             |
| Caelo           | Macrogols 400    | 180398           | 3              |
| Caelo           | Macrogols 400    | 181294           | 16             |
| Caelo           | Macrogols 400    | 18229705         | 4              |
| Caelo           | Macrogols 400    | 18229704         | 1              |
| Caelo           | Macrogols 400    | 182297           | 8              |
| Caelo           | Macrogols 400    | 190105           | 24             |
| Caelo           | Macrogols 400    | 1910175          | 8              |
| Caelo           | Macrogols 400    | CH18229706       | 1              |
| Caelo           | Macrogols 400    | 2917E-03059      | 1              |
| Caelo           | Macrogols 400    | 192940004        | 21             |
| Caelo           | Macrogols 400    | 19240004         | 1              |
| Caelo           | Macrogols 400    | 11293304         | 1              |
| Caelo           | Macrogols 400    | 13272906         | 2              |
| Caelo           | Macrogols 400    | 19107504         | 2              |
| Caelo           | Macrogols 400    | 15324001         | 6              |
| Caelo           | Macrogols 400    | 19010509         | 8              |
| Caelo           | Macrogols 400    | 14009107         | 8              |
| Caelo           | Macrogols 400    | 191075001        | 4              |
| Caelo           | Macrogols 400    | 18129402         | 1              |
| Caelo           | Macrogols 400    | 12152613         | 3              |
| Caelo           | Macrogols 400    | 16128204/170227M | 1              |
| Caelo           | Macrogols 400    | 1206030-02       | 2              |
| Caelo           | Macrogols 400    | 14352813         | 5              |
| Caelo           | Macrogols 400    | 14195601         | 12             |
| Caelo           | Macrogols 400    | 16294107         | 2              |
| Caelo           | Macrogols 400    | 17013706         | 13             |
| Caelo           | Macrogols 400    | 3790304          | 3              |
| Caelo           | Macrogols 400    | 17283301         | 31             |
| Caelo           | Macrogols 400    | 91075            | 1              |
| Caelo           | Macrogols 400    | 20004258003      | 6              |
| Caelo           | Macrogols 400    | 18039802         | 58             |
| Caelo           | Macrogols 400    | 20001841009      | 2              |
| Caelo           | Macrogols 400    | B-19107506       | 1              |
| Caelo           | Macrogols 400    | 15324002         | 16             |
| Caelo           | Macrogols 400    | 15131406         | 2              |
| Caelo           | Macrogols 400    | 19107506         | 18             |
| Caelo           | Macrogols 400    | 15324008         | 3              |
| Caelo           | Macrogols 400    | 18229703         | 37             |
| Caelo           | Macrogols 400    | 192940005        | 21             |
| Caelo           | Macrogols 400    | 12277607         | 10             |
| Caelo           | Macrogols 400    | 2412U-03059      | 1              |
| Caelo           | Macrogols 400    | 1314I-03059      | 1              |
| Caelo           | Macrogols 400    | 16002203         | 4              |
| Caelo           | Macrogols 400    | 11172705         | 1              |
| Caelo           | Macrogols 400    | 12152607         | 1              |
| Caelo           | Macrogols 400    | 13171103         | 4              |
| Caelo           | Macrogols 400    | 16128204         | 7              |
| Caelo           | Macrogols 400    | 19010507         | 2              |
| Caelo           | Macrogols 400    | 19010508         | 28             |
| Caelo           | Macrogols 400    | 19107502         | 17             |
| Caelo           | Macrogols 400    | 18244802         | 1              |
| Caelo           | Macrogols 400    | 18038304         | 1              |
| Caelo           | Macrogols 400    | 13171104         | 5              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------|------------------|------------------|----------------|
| Caelo                | Macrogols 400    | 15131401         | 2              |
| Caelo                | Macrogols 400    | 20001841002      | 20             |
| Caelo                | Macrogols 400    | 19107507         | 10             |
| Caelo                | Macrogols 400    | 15324003         | 1              |
| Caelo                | Macrogols 400    | 16128201         | 2              |
| Caelo                | Macrogols 400    | 15H28-B11-313603 | 1              |
| Caelo                | Macrogols 400    | 17283302         | 13             |
| Caelo                | Macrogols 400    | 20001841001      | 7              |
| Caelo                | Macrogols 400    | 16294106         | 9              |
| Caelo                | Macrogols 400    | 17J27-B02-344405 | 1              |
| Caelo                | Macrogols 400    | 1901051501       | 1              |
| Caelo                | Macrogols 400    | 18229708         | 2              |
| Caelo                | Macrogols 400    | 2001841002       | 1              |
| Caelo                | Macrogols 400    | 3790505          | 1              |
| Caelo                | Macrogols 400    | 14195602         | 8              |
| Caelo                | Macrogols 400    | 13171107         | 3              |
| Caelo                | Macrogols 400    | 18039602         | 1              |
| Caelo                | Macrogols 400    | 16002201         | 24             |
| Caelo                | Macrogols 400    | 17013705         | 10             |
| Caelo                | Macrogols 400    | 17110006         | 4              |
| Caelo                | Macrogols 400    | 18039803         | 31             |
| Caelo                | Macrogols 400    | 18229702         | 6              |
| Caelo                | Macrogols 400    | 18129405         | 14             |
| Caelo                | Macrogols 400    | 200018411001     | 1              |
| Caelo                | Macrogols 400    | 20001841004      | 1              |
| Caelo                | Macrogols 400    | 3790310          | 1              |
| Caelo                | Macrogols 400    | 14352803         | 15             |
| Caelo                | Macrogols 400    | 17110007         | 6              |
| Caelo                | Macrogols 400    | 18229706         | 40             |
| Caelo                | Macrogols 400    | 190107507        | 1              |
| Caelo                | Macrogols 400    | 38121-03059      | 1              |
| Caeolo/Sanacorp      | Macrogols 400    | 18039802         | 1              |
| Caeolo/Sanacorp      | Macrogols 400    | 19010509         | 1              |
| Caelo                | Macrogols 400    | 20001841008      | 3              |
| Caesar & Loretz GmbH | Macrogols 400    | 14195603         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 18039802         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 18229702         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 18129405         | 2              |
| Caesar & Loretz GmbH | Macrogols 400    | 18229703         | 2              |
| Caesar & Loretz GmbH | Macrogols 400    | 18229706         | 12             |
| Caesar & Loretz GmbH | Macrogols 400    | 18229708         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 19010501         | 12             |
| Caesar & Loretz GmbH | Macrogols 400    | 18229707         | 6              |
| Caesar & Loretz GmbH | Macrogols 400    | 18229704         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 19010505         | 3              |
| Caesar & Loretz GmbH | Macrogols 400    | 19010508         | 8              |
| Caesar & Loretz GmbH | Macrogols 400    | 19010509         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 19107501         | 7              |
| Caesar & Loretz GmbH | Macrogols 400    | 19010511         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 19107502         | 2              |
| Caesar & Loretz GmbH | Macrogols 400    | 19107506         | 8              |
| Caesar & Loretz GmbH | Macrogols 400    | 19107507         | 4              |
| Caesar & Loretz GmbH | Macrogols 400    | 19107509         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 192940001        | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 192940005        | 2              |
| Caesar & Loretz GmbH | Macrogols 400    | 192940           | 3              |
| Caesar & Loretz GmbH | Macrogols 400    | 192940004        | 9              |
| Caesar & Loretz GmbH | Macrogols 400    | 19294001         | 1              |
| Caesar & Loretz GmbH | Macrogols 400    | 20001841002      | 5              |
| Caesar & Loretz GmbH | Macrogols 400    | 20001841004      | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841001  | 3              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841010  | 7              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841005  | 2              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841008  | 1              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841009  | 3              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20004258001  | 4              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20001841007  | 1              |
| Caesar & Loretz GmbH       | Macrogols 400    | 2004258001   | 1              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20004258003  | 1              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20003916004  | 1              |
| Caesar & Loretz GmbH       | Macrogols 400    | 20003916006  | 1              |
| Caesar & Loretz GmbH /     | Macrogols 400    | 19107507     | 1              |
| Caesar & Loretz GmbH / ... | Macrogols 400    | 19010509     | 1              |
| Caesar & Loretz GmbH / ... | Macrogols 400    | 18229707     | 1              |
| Caesar & Loretz GmbH / ... | Macrogols 400    | 19107506     | 1              |
| Caesar & Loretz GmbH/ G... | Macrogols 400    | 19010511     | 1              |
| Caesar & Loretz GmbH/ p... | Macrogols 400    | 18229708     | 1              |
| Caesar & Loretz GmbH/Gehe  | Macrogols 400    | 18229706     | 1              |
| Caesar & Loretz GmbH/Gehe  | Macrogols 400    | 18229707     | 1              |
| Caesar & Loretz GmbH/GEHE  | Macrogols 400    | 20001841002  | 1              |
| Caesar & Loretz GmbH/Ge... | Macrogols 400    | 19107509     | 3              |
| Caesar & Loretz GmbH/Ge... | Macrogols 400    | 19010507     | 1              |
| Caesar & Loretz GmbH/Ge... | Macrogols 400    | 19107503     | 1              |
| Caesar & Loretz GmbH/Ge... | Macrogols 400    | 192940008    | 2              |
| Caesar & Loretz GmbH/Je... | Macrogols 400    | 19010508     | 1              |
| Caesar & Loretz GmbH/Je... | Macrogols 400    | 191075001    | 1              |
| Caesar & Loretz GmbH/Kr... | Macrogols 400    | 19010505     | 2              |
| Caesar & Loretz GmbH/No... | Macrogols 400    | 3790310      | 1              |
| Caesar & Loretz GmbH/No... | Macrogols 400    | 191075001    | 1              |
| Caesar & Loretz GmbH/No... | Macrogols 400    | 192940006    | 1              |
| Caesar & Loretz GmbH/No... | Macrogols 400    | 20001841002  | 1              |
| Caesar & Loretz GmbH/No... | Macrogols 400    | 200018410002 | 1              |
| Caesar & Loretz GmbH/Ph... | Macrogols 400    | 18229707     | 1              |
| Caesar & Loretz GmbH/Ph... | Macrogols 400    | 20001841010  | 1              |
| Caesar & Loretz GmbH/Ph... | Macrogols 400    | 20001841008  | 1              |
| Caesar & Loretz GmbH/Sa... | Macrogols 400    | 19010501     | 1              |
| Caesar & Loretz GmbH/Sa... | Macrogols 400    | 19107501     | 2              |
| Caesar & Loretz GmbH/Sa... | Macrogols 400    | 192940005    | 1              |
| Caesar & Loretz GmbH/Sa... | Macrogols 400    | 192940004    | 1              |
| Caesar & Loretz Hilden/... | Macrogols 400    | 192940004    | 1              |
| Caesar & Loretz Hilden/... | Macrogols 400    | 19107506     | 1              |
| Caesar&Loretz GmbH/ San... | Macrogols 400    | 18039802     | 2              |
| Caesar&Loretz GmbH/Anzag   | Macrogols 400    | 14352803     | 2              |
| Caesar/Noweda              | Macrogols 400    | 13171106     | 1              |
| calo                       | Macrogols 400    | 18039804     | 1              |
| Canea/Phönix               | Macrogols 400    | 14352805     | 1              |
| Cealo/Gehe                 | Macrogols 400    | 12043311     | 1              |
| Euro OTC                   | Macrogols 400    | 1610001-01   | 1              |
| Euro OTC                   | Macrogols 400    | 1702024-01   | 1              |
| Euro OTC                   | Macrogols 400    | 1702024-02   | 2              |
| Euro OTC                   | Macrogols 400    | 1906024-01   | 5              |
| Euro OTC                   | Macrogols 400    | 190602-01    | 1              |
| Euro OTC                   | Macrogols 400    | 1807027_01   | 1              |
| Euro OTC                   | Macrogols 400    | 1807027-01   | 11             |
| Euro OTC                   | Macrogols 400    | 1206030-01   | 4              |
| Euro OTC                   | Macrogols 400    | 16128205     | 1              |
| Euro OTC                   | Macrogols 400    | 2009008-01   | 3              |
| Euro OTC                   | Macrogols 400    | 1711029-01   | 5              |
| Euro OTC                   | Macrogols 400    | 2009008      | 1              |
| Euro OTC                   | Macrogols 400    | 1412015-02   | 1              |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-------------------|------------------|---------------------|----------------|
| Euro OTC          | Macrogols 400    | 1402011-01          | 14             |
| Euro OTC          | Macrogols 400    | 190602401           | 1              |
| Euro OTC          | Macrogols 400    | 180308M/1711029-01  | 1              |
| Euro OTC          | Macrogols 400    | 18229706            | 1              |
| Euro OTC          | Macrogols 400    | 17112019-01         | 1              |
| Euro OTC          | Macrogols 400    | 1510042-01          | 4              |
| Euro OTC          | Macrogols 400    | 1911028-01          | 4              |
| Euro OTC          | Macrogols 400    | 1304030-01          | 10             |
| Euro OTC          | Macrogols 400    | 171102901           | 1              |
| Euro OTC          | Macrogols 400    | 18039802            | 1              |
| Euro OTC          | Macrogols 400    | 9309522             | 1              |
| Euro OTC          | Macrogols 400    | 1304030             | 1              |
| Euro OTC          | Macrogols 400    | 130403001           | 1              |
| Euro OTC          | Macrogols 400    | 1412015-01          | 7              |
| Euro OTC          | Macrogols 400    | 16128201            | 1              |
| Fafron/Anzag      | Macrogols 400    | 1014E-03059         | 1              |
| Fagron            | Macrogols 400    | 13F06-B40-289978    | 1              |
| Fagron            | Macrogols 400    | 14B05-B04-294688    | 5              |
| Fagron            | Macrogols 400    | 14G10-B05-300393    | 2              |
| Fagron            | Macrogols 400    | 15B16-02-B02-308528 | 1              |
| Fagron            | Macrogols 400    | 15B16-B02-308528    | 2              |
| Fagron            | Macrogols 400    | 16K14-B01-331740    | 4              |
| Fagron            | Macrogols 400    | 17110001            | 1              |
| Fagron            | Macrogols 400    | 17J27-B02           | 1              |
| Fagron            | Macrogols 400    | B03-2003400         | 1              |
| Fagron            | Macrogols 400    | 13I26-N21           | 1              |
| Fagron            | Macrogols 400    | 14G10-B05_300393    | 1              |
| Fagron            | Macrogols 400    | 20B24-B03-200340    | 1              |
| Fagron            | Macrogols 400    | 12H02-N05           | 1              |
| Fagron            | Macrogols 400    | 13A25-N02           | 6              |
| Fagron            | Macrogols 400    | 13F06-N11           | 4              |
| Fagron            | Macrogols 400    | 11F07-N01           | 1              |
| Fagron            | Macrogols 400    | 11I13-N04           | 1              |
| Fagron            | Macrogols 400    | 12C21-N10           | 7              |
| Fagron            | Macrogols 400    | 12c21-n10           | 1              |
| Fagron            | Macrogols 400    | 12H02-N05           | 4              |
| Fagron            | Macrogols 400    | 14G10-B05-300394    | 2              |
| Fagron            | Macrogols 400    | 18039802            | 1              |
| Fagron            | Macrogols 400    | 20001841009         | 1              |
| Fagron            | Macrogols 400    | 11/45               | 1              |
| Fagron            | Macrogols 400    | 13126-N21           | 1              |
| Fagron            | Macrogols 400    | 2314A-03059         | 1              |
| Fagron            | Macrogols 400    | 16D07-B09-322539    | 1              |
| Fagron            | Macrogols 400    | 14B05-B04           | 1              |
| Fagron            | Macrogols 400    | 14G10-B05           | 1              |
| Fagron            | Macrogols 400    | 14K26-B01           | 2              |
| Fagron            | Macrogols 400    | 14K26-B01-301176    | 1              |
| FEJ               | Macrogols 400    | 15324004            | 1              |
| Fiebig            | Macrogols 400    | 15131407            | 1              |
| Fiebig            | Macrogols 400    | 15324003            | 1              |
| Fiebig            | Macrogols 400    | 16002203            | 1              |
| Fiebig            | Macrogols 400    | 161628204           | 1              |
| Fiebig            | Macrogols 400    | 166128204           | 1              |
| Fiebig            | Macrogols 400    | 18039803            | 1              |
| Finteler Apotheke | Macrogols 400    | 17013701            | 1              |
| Finteler Apotheke | Macrogols 400    | 17110001            | 1              |
| Galderma          | Macrogols 400    | 17283301            | 1              |
| Gatt-Koller       | Macrogols 400    | 1701872             | 1              |
| Gatt-Koller       | Macrogols 400    | 1802331             | 1              |
| Gehe              | Macrogols 400    | 13272908            | 1              |

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| <b>Supplier</b>   | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-------------------|------------------|------------------|----------------|
| Gehe              | Macrogols 400    | 14352801         | 1              |
| Gehe              | Macrogols 400    | 16002201         | 2              |
| Gehe              | Macrogols 400    | 16128203         | 2              |
| Gehe              | Macrogols 400    | 16K14-B01-331740 | 1              |
| Gehe              | Macrogols 400    | 19107501         | 1              |
| Gehe              | Macrogols 400    | 192940005        | 1              |
| GEHE              | Macrogols 400    | 19010502         | 1              |
| Euro OTC          | Macrogols 400    | 1607022-01       | 6              |
| Caelo             | Macrogols 400    | 16294102         | 9              |
| Euro OTC          | Macrogols 400    | 1402011-11       | 1              |
| Hedinger          | Macrogols 400    | 13F06-N11        | 1              |
| Hedinger          | Macrogols 400    | 18229707         | 4              |
| Hedinger/Phönix   | Macrogols 400    | 20161B           | 1              |
| Henry Lamotte     | Macrogols 400    | 18229703         | 3              |
| Henry Lamotte/AHD | Macrogols 400    | 18039802         | 1              |
| Ichthyol/Alliance | Macrogols 400    | 17110001         | 1              |
| Jenne             | Macrogols 400    | 19010509         | 1              |
| JENNE             | Macrogols 400    | 170013706        | 1              |
| Kehr              | Macrogols 400    | 17013701         | 2              |
| Kehr              | Macrogols 400    | 17283302         | 1              |
| Caelo             | Macrogols 400    | 17110001         | 39             |
| Kögl              | Macrogols 400    | 267208163416     | 1              |
| Kögl              | Macrogols 400    | 1700723          | 1              |
| KÖGL              | Macrogols 400    | 1803626          | 1              |
| Krieger           | Macrogols 400    | 17013706         | 1              |
| L12               | Macrogols 400    | 16294106         | 2              |
| L12               | Macrogols 400    | 17110001         | 2              |
| L30               | Macrogols 400    | 17283301         | 2              |
| L30               | Macrogols 400    | 18229703         | 1              |
| Maros Arznei      | Macrogols 400    | 18039802         | 1              |
| Noveda            | Macrogols 400    | 18229706         | 1              |
| Noweda            | Macrogols 400    | 12152614         | 3              |
| Noweda            | Macrogols 400    | 1215614          | 1              |
| Noweda            | Macrogols 400    | 12043312         | 1              |
| Noweda            | Macrogols 400    | 15131406         | 1              |
| Noweda            | Macrogols 400    | 15324008         | 1              |
| Noweda            | Macrogols 400    | 18229706         | 1              |
| Noweda            | Macrogols 400    | 2009008-01       | 1              |
| OTG/Phönix        | Macrogols 400    | 1412015-01       | 1              |
| Phoenix           | Macrogols 400    | 12152611         | 1              |
| Phoenix           | Macrogols 400    | 16002203         | 1              |
| Phoenix           | Macrogols 400    | 18229706         | 1              |
| Phoenix           | Macrogols 400    | 19010501         | 2              |
| Caelo             | Macrogols 400    | 12152611         | 3              |
| Caelo             | Macrogols 400    | 20003916004      | 3              |
| phönix            | Macrogols 400    | 16128205         | 1              |
| Phönix            | Macrogols 400    | 12152601         | 1              |
| Phönix            | Macrogols 400    | 1206030-01       | 1              |
| Phönix            | Macrogols 400    | 14009109         | 1              |
| Phönix            | Macrogols 400    | 14352814         | 1              |
| Phönix            | Macrogols 400    | 18039802         | 1              |
| Phönix            | Macrogols 400    | 19010501         | 1              |
| Phönix            | Macrogols 400    | 19107501         | 1              |
| PHÖNIX            | Macrogols 400    | 17283303         | 1              |
| PHÖNIX            | Macrogols 400    | 18129401         | 1              |
| Phönix Gotha      | Macrogols 400    | 12277607         | 1              |
| Caelo             | Macrogols 400    | 14195603         | 15             |
| Sanacorp          | Macrogols 400    | 17110006         | 1              |
| Sanacorp          | Macrogols 400    | 17283301         | 3              |

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| Supplier                    | Substance     | Batch           | Spectra |
|-----------------------------|---------------|-----------------|---------|
| Sanacorp                    | Macrogols 400 | 17283302        | 1       |
| Sanacorp                    | Macrogols 400 | 18229706        | 3       |
| Sanacorp                    | Macrogols 400 | 191075001       | 4       |
| Sanacorp                    | Macrogols 400 | 20001841001     | 1       |
| sanacorp, 3,43EUR, 20.09... | Macrogols 400 | 16128201        | 1       |
| Caelo                       | Macrogols 400 | 1822978         | 1       |
| VDL 16.04.14                | Macrogols 400 | 13272906//05R06 | 1       |
| WE:Sanacorp 19.10.2016 ...  | Macrogols 400 | 16128203        | 1       |
|                             | Macrogols 400 | 19107501        | 1       |
| Caelo                       | Macrogols 400 | 13171112        | 5       |
| Caelo                       | Macrogols 400 | 14009101        | 3       |
| Caelo                       | Macrogols 400 |                 | 1       |

- 239 810 spectra from 1121 *Apo-Ident* customers from a total of 46 764 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Macrogols 400* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Macrogols 400* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 260           | 0              | 63 679        |
| <b>Type B</b> | 0              | 700           | 0              | 90 791        |
| <b>Type C</b> | 0              | 1542          | 11             | 239 810       |

The substance/substance group *Macrogols 400* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6923 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.1429 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.2917 % (> 99.0985 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Macrogols 400* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------|---------------------------|-----------------------------------|
| Macrogols 300     | 18.09                     | —                                 |
| Macrogol ointment | 19.69                     | —                                 |
| Polysorbate 20    | 68.34                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Macrogols 400* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31149     | 31149                  | 0.00                            | 24.68                              |
| 31367     | 33057                  | 8.32                            | 21.09                              |
| 31814     | 31814                  | 0.00                            | 25.61                              |
| 32714     | 32714                  | 0.00                            | 23.28                              |
| 33057     | 33057                  | 0.00                            | 23.79                              |
| 34812     | 34812                  | 0.00                            | 27.74                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Mandarin oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31747-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Mandarin oil; Citri reticulatae aetheroleum

### Special notes

When selecting the *Mandarin oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Mandarin oil              | 2      | 2      | 7      |

## Second-stage model

For differentiation of the substance/substance group *Mandarin oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Mandarin oil*:

| Supplier | Substance    | Batch    | Sample ID | Spectra | Certificate |
|----------|--------------|----------|-----------|---------|-------------|
| Caelo    | Mandarin oil | 14064103 | 31747     | 60      | 1602210     |
| Caelo    | Mandarin oil | 15398001 | 31863     | 60      | 20151127    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 2 reference samples from the substance/substance group *Mandarin oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 819 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Mandarin oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance    | Batch  | Sample ID | Spectra |
|----------|--------------|--------|-----------|---------|
| Caelo    | Mandarin oil | 170368 | 33074     | 40      |
| Caelo    | Mandarin oil | 180923 | 34055     | 40      |



- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 22 spectra from 8 *Apo-Ident* customers from 8 batches from the substance/substance group *Mandarin oil*.
- Among them are spectra of independent samples from 7 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance    | Batch         | Spectra |
|----------|--------------|---------------|---------|
| Caelo    | Mandarin oil | 15011601      | 12      |
| Caelo    | Mandarin oil | 15398003      | 1       |
| Caelo    | Mandarin oil | 17036801      | 2       |
| Caelo    | Mandarin oil | 17361201      | 2       |
| Caelo    | Mandarin oil | 18092301      | 1       |
| Taoasis  | Mandarin oil | 412011-124957 | 1       |
| Taoasis  | Mandarin oil | 776-4175      | 2       |
| Caelo    | Mandarin oil | 15398001      | 1       |

- 241 341 spectra from 1121 *Apo-Ident* customers from a total of 46 998 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Mandarin oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Mandarin oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 22            | 0              | 241 341       |

The substance/substance group *Mandarin oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6853 %) | 100.0000 % (> 72.7273 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several

new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Mandarin oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Bitter orange oil | 12.18                  | —                              |
| Grapefruit oil    | 21.58                  | —                              |
| Sweet orange oil  | 22.70                  | —                              |
| Citric oil        | 24.71                  | —                              |
| Caraway oil       | 49.61                  | —                              |
| Bergamot oil      | 95.16                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Mandarin oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31747     | 31747               | 0.00                         | 20.36                           |
| 31863     | 31747               | 4.26                         | 19.37                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Matricaria oil, rich in (-)-alpha-bisabolol</b>               |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30738-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Matricaria oil, rich in (-)-alpha-bisabolol; Oleum chamomillae

### Special notes

When selecting the *Matricaria oil, rich in (-)-alpha-bisabolol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                   | Type A | Type B | Type C |
|---------------------------------------------|--------|--------|--------|
| Matricaria oil, rich in (-)-alpha-bisabolol | 6      | 3      | 25     |

## Second-stage model

For differentiation of the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Matricaria oil, ... | 11221206 | 30738     | 40      | 20110810    |
| Caelo    | Matricaria oil, ... | 13195103 | 31239     | 30      | 1504133     |
| Caelo    | Matricaria oil, ... | 13334702 | 31427     | 60      | 20131009    |
| Caelo    | Matricaria oil, ... | 13334702 | 31428     | 60      | 20131009    |
| Caelo    | Matricaria oil, ... | 190925   | 34442     | 40      | 20190405*   |
| Caelo    | Matricaria oil, ... | 19000642 | 35726     | 50      | 20191216*   |
| Caelo    | Matricaria oil, ... | 20003048 | 35727     | 50      | 20201016*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 330 spectra of 7 reference samples from the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 609 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 100 spectra of 3 reference samples from the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Matricaria oil, rich in (-)-... | 13195101 | 31160     | 20      |
| Caelo    | Matricaria oil, rich in (-)-... | 163310   | 33081     | 40      |
| Caelo    | Matricaria oil, rich in (-)-... | 181173   | 34072     | 40      |

- 91 391 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 37 spectra from 14 *Apo-Ident* customers from 25 batches from the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol*.
- Among them are spectra of independent samples from 25 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance                       | Batch             | Spectra |
|----------------------|---------------------------------|-------------------|---------|
| Caelo                | Matricaria oil, rich in (-)-... | 20003048001       | 1       |
| ASAV                 | Matricaria oil, rich in (-)-... | 10816315857       | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 18091401          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 15080505          | 2       |
| Caelo                | Matricaria oil, rich in (-)-... | 17353505          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 18117302          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 18117306          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 18117304          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 4916E-03052       | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 16048901          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 19000642008       | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 16331005          | 2       |
| Caelo                | Matricaria oil, rich in (-)-... | 17353504          | 5       |
| Caelo                | Matricaria oil, rich in (-)-... | 15137801          | 2       |
| Caelo                | Matricaria oil, rich in (-)-... | 19000642002       | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 16048910          | 4       |
| Caelo                | Matricaria oil, rich in (-)-... | 17353506          | 1       |
| Caelo                | Matricaria oil, rich in (-)-... | 19092502          | 1       |
| Caesar & Loretz GmbH | Matricaria oil, rich in (-)-... | 18117302          | 1       |
| Caesar & Loretz GmbH | Matricaria oil, rich in (-)-... | 18117306          | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 929-115334        | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 16266-119132      | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 6181024-121466    | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 6181024-122141    | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 6181024-123770    | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 6181024-123496    | 1       |
| Taoasis              | Matricaria oil, rich in (-)-... | 2017100477-128584 | 1       |

- 241 326 spectra from 1121 *Apo-Ident* customers from a total of 46 981 batches from a further

342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Matricaria oil, rich in (-)-alpha-bisabolol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 330           | 0              | 63 609        |
| Type B | 0              | 100           | 0              | 91 391        |
| Type C | 0              | 37            | 0              | 241 326       |

The substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.1818 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 94.0000 %) |
| Type C | 100.0000 % (> 99.6851 %) | 100.0000 % (> 83.7838 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Verbena oil, nature-identical | 30.57                  | —                              |
| Geranium oil, genuine         | 38.09                  | —                              |
| Tea tree oil                  | 46.63                  | —                              |
| Acorus oil                    | 52.03                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Matricaria oil, rich in (-)-alpha-bisabolol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30738     | 34442               | 3.95                         | 24.10                           |
| 31239     | 31239               | 0.00                         | 27.88                           |
| 31427     | 31239               | 6.22                         | 22.14                           |
| 31428     | 31239               | 6.42                         | 22.03                           |
| 34442     | 34442               | 0.00                         | 21.43                           |
| 35726     | 35726               | 0.00                         | 26.41                           |
| 35727     | 35727               | 0.00                         | 30.76                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Melissa oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30207-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Melissa oil; Oleum melissae rectific.

### Special notes

When selecting the *Melissa oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Melissa oil               | 4      | 2      | 64     |

## Second-stage model

For differentiation of the substance/substance group *Melissa oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Melissa oil*:

| Supplier | Substance   | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------|----------|-----------|---------|-------------|
| Caelo    | Melissa oil | 13086306 | 31163     | 40      | 1403319     |
| Caelo    | Melissa oil | 13354110 | 31403     | 40      | 20131028    |
| Caelo    | Melissa oil | 163349   | 33080     | 40      | 20161215*   |
| Caelo    | Melissa oil | 183300   | 34641     | 40      | 20181221*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Melissa oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Melissa oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance   | Batch    | Sample ID | Spectra |
|----------|-------------|----------|-----------|---------|
| Caelo    | Melissa oil | 16053609 | 33784     | 40      |
| Caelo    | Melissa oil | 180973   | 34084     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 246 spectra from 106 *Apo-Ident* customers from 67 batches from the substance/substance group *Melissa oil*.
- Among them are spectra of independent samples from 64 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance   | Batch             | Spectra |
|----------------------------|-------------|-------------------|---------|
| Alte Apotheke              | Melissa oil | 16053601          | 1       |
| Anzag 27.02.13 ek: 8.17EUR | Melissa oil | 122833801         | 1       |
| Caelo                      | Melissa oil | 4110I-01993       | 1       |
| Caelo                      | Melissa oil | 11323903          | 1       |
| Caelo                      | Melissa oil | 17091201          | 1       |
| Caelo                      | Melissa oil | 11323911          | 1       |
| Caelo                      | Melissa oil | 1228380           | 1       |
| Caelo                      | Melissa oil | 122283804         | 1       |
| Caelo                      | Melissa oil | 5211R-01993       | 1       |
| Caelo                      | Melissa oil | 20230712-7        | 1       |
| Caelo                      | Melissa oil | 28051311          | 1       |
| Caelo                      | Melissa oil | 13086303          | 1       |
| Caelo                      | Melissa oil | 21111303          | 1       |
| Caelo                      | Melissa oil | 12283801          | 1       |
| Caelo                      | Melissa oil | 190412            | 1       |
| Caelo                      | Melissa oil | 13354113          | 5       |
| Caelo                      | Melissa oil | 14332501          | 8       |
| Caelo                      | Melissa oil | 14332504          | 2       |
| Caelo                      | Melissa oil | 14332502          | 2       |
| Caelo                      | Melissa oil | 14332511          | 14      |
| Caelo                      | Melissa oil | 18081501          | 1       |
| Caelo                      | Melissa oil | 15172303          | 20      |
| Caelo                      | Melissa oil | 14332512          | 1       |
| Caelo                      | Melissa oil | 15172310          | 1       |
| Caelo                      | Melissa oil | 10019704          | 1       |
| Caelo                      | Melissa oil | 21041715          | 1       |
| Caelo                      | Melissa oil | 16334906          | 2       |
| Caelo                      | Melissa oil | 18097301          | 15      |
| Caelo                      | Melissa oil | 16334912          | 3       |
| Caelo                      | Melissa oil | 18330007          | 5       |
| Caelo                      | Melissa oil | 17012014          | 1       |
| Caelo                      | Melissa oil | 25(18097301)      | 1       |
| Caelo                      | Melissa oil | 11323902          | 3       |
| Caelo                      | Melissa oil | 12283809          | 9       |
| Caelo                      | Melissa oil | 1712070M/16053609 | 1       |
| Caelo                      | Melissa oil | 13086304          | 1       |

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| Supplier                     | Substance   | Batch       | Spectra |
|------------------------------|-------------|-------------|---------|
| Caelo                        | Melissa oil | 13086310    | 3       |
| Caelo                        | Melissa oil | 13354105    | 2       |
| Caelo                        | Melissa oil | 13354108    | 1       |
| Caelo                        | Melissa oil | 11287407    | 1       |
| Caelo                        | Melissa oil | 20000819002 | 1       |
| Caelo                        | Melissa oil | 183300003   | 1       |
| Caelo                        | Melissa oil | 1512303     | 1       |
| Caelo                        | Melissa oil | 12283804    | 5       |
| Caelo                        | Melissa oil | 11323909    | 1       |
| Caelo                        | Melissa oil | 13354114    | 1       |
| Caelo                        | Melissa oil | 18097308    | 7       |
| Caelo                        | Melissa oil | 13086308    | 6       |
| Caelo                        | Melissa oil | 20000819008 | 1       |
| Caelo                        | Melissa oil | 14332508    | 2       |
| Caelo                        | Melissa oil | 15172308    | 10      |
| Caelo                        | Melissa oil | 16053609    | 12      |
| Caelo                        | Melissa oil | 18330004    | 6       |
| Caelo                        | Melissa oil | 12283805    | 2       |
| Caeolo                       | Melissa oil | 14332501    | 1       |
| Caesar & Loretz GmbH         | Melissa oil | 18097308    | 2       |
| Caesar & Loretz GmbH         | Melissa oil | 18330003    | 1       |
| Caesar & Loretz GmbH         | Melissa oil | 20000819003 | 1       |
| Caesar & Loretz GmbH, 4. ... | Melissa oil | 11323910    | 1       |
| Caesar & Loretz GmbH/Je. ... | Melissa oil | 20000819002 | 1       |
| Caesar & Loretz GmbH/No. ... | Melissa oil | 18330007    | 1       |
| Caesar&lorenz,Anzag          | Melissa oil | 11323902    | 1       |
| Caleo/Phönix                 | Melissa oil | 16053609    | 1       |
| celo/phönix                  | Melissa oil | 12283805    | 1       |
| Fiebig                       | Melissa oil | 16334906    | 1       |
| Gehe                         | Melissa oil | 1517203     | 1       |
| GEHE                         | Melissa oil | 18097301    | 1       |
| GEHE Kassel 07.01.2019       | Melissa oil | 18097301    | 1       |
| Caelo                        | Melissa oil | 16053601    | 14      |
| Caelo                        | Melissa oil | 16334905    | 20      |
| Nachprüfung                  | Melissa oil | 130863060   | 1       |
| P&M Cosmetics GmbH&Co.KG     | Melissa oil | 200419      | 1       |
| Phoenix                      | Melissa oil | 18097306    | 1       |
| Phönix                       | Melissa oil | 12283809    | 1       |
| Caelo                        | Melissa oil | 13086311    | 7       |
| Sanacorp                     | Melissa oil | 13086306    | 1       |
| Sanacorp                     | Melissa oil | 1334110     | 1       |
| Spangro 7.11.18              | Melissa oil | 18097301    | 1       |
| Caelo                        | Melissa oil | 13086306    | 4       |
| Caelo                        | Melissa oil | 13354110    | 3       |
| Caelo                        | Melissa oil |             | 1       |

- 241 117 spectra from 1121 *Apo-Ident* customers from a total of 46 943 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Melissa oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Melissa oil* and it was evaluated how

many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 160           | 0              | 63 779        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 244           | 2              | 241 117       |

The substance/substance group *Melissa oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.1870 % (> 97.9675 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Melissa oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Citronella oil    | 40.30                  | –                              |
| Tea tree oil      | 44.69                  | –                              |
| Bitter orange oil | 50.34                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Melissa oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31163     | 31163               | 0.00                         | 50.42                           |
| 31403     | 31163               | 4.81                         | 48.03                           |

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| <b>Sample ID</b> | <b>Reference<br/>sample ID</b> | <b>Distance to<br/>reference sample</b> | <b>Distance to<br/>next foreign sample</b> |
|------------------|--------------------------------|-----------------------------------------|--------------------------------------------|
| 33080            | 33080                          | 0.00                                    | 51.28                                      |
| 34641            | 34641                          | 0.00                                    | 51.60                                      |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Methyl salicylate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31038-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Methyl salicylate; Methylum salicylicum

### Special notes

When selecting the *Methyl salicylate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Methyl salicylate         | 4      | 3      | 65     |

## Second-stage model

For differentiation of the substance/substance group *Methyl salicylate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Methyl salicylate*:

| Supplier | Substance         | Batch            | Sample ID | Spectra | Certificate |
|----------|-------------------|------------------|-----------|---------|-------------|
| Caelo    | Methyl salicylate | 12215217         | 31038     | 40      | 1403162     |
| Caelo    | Methyl salicylate | 15409810         | 33280     | 40      | 20160118    |
| Fagron   | Methyl salicylate | 14D03-B04-294169 | 31607     | 60      | 20140414    |
| Fagron   | Methyl salicylate | 16E23-B05-332971 | 33275     | 40      | 20160608    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 180 spectra of 4 reference samples from the substance/substance group *Methyl salicylate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 759 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Methyl salicylate*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance         | Batch            | Sample ID | Spectra |
|----------|-------------------|------------------|-----------|---------|
| Caelo    | Methyl salicylate | 192086           | 34728     | 40      |
| Fagron   | Methyl salicylate | 18B19-B06-346255 | 34047     | 40      |
| Fagron   | Methyl salicylate | 20C03-F04-374159 | 35460     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 111 spectra from 66 *Apo-Ident* customers from 69 batches from the substance/substance group *Methyl salicylate*.
- Among them are spectra of independent samples from 66 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance         | Batch            | Spectra |
|----------------------------|-------------------|------------------|---------|
| ACM                        | Methyl salicylate | KNC1794J14       | 1       |
| Alliance Health 10.06.2... | Methyl salicylate | RMS1332311       | 1       |
| Alliance Health 18.11.2... | Methyl salicylate | 13185102         | 1       |
| Bomb/ Noweda               | Methyl salicylate | RMS1332311       | 1       |
| Caelo                      | Methyl salicylate | 7111203          | 1       |
| Caelo                      | Methyl salicylate | 90328419         | 1       |
| Caelo                      | Methyl salicylate | 13189309         | 2       |
| Caelo                      | Methyl salicylate | 12308313         | 1       |
| Caelo                      | Methyl salicylate | 15B09-B04        | 1       |
| Caelo                      | Methyl salicylate | 15117910         | 3       |
| Caelo                      | Methyl salicylate | 17071301         | 1       |
| Caelo                      | Methyl salicylate | 13-11-n06        | 1       |
| Caelo                      | Methyl salicylate | 13I11-N06        | 1       |
| Caelo                      | Methyl salicylate | 12308307         | 1       |
| Caelo                      | Methyl salicylate | 18039003         | 3       |
| Caelo                      | Methyl salicylate | 15B09-B04303941  | 1       |
| Caelo                      | Methyl salicylate | 3917E-01867      | 1       |
| Caelo                      | Methyl salicylate | 1219Q-01867      | 1       |
| Caelo                      | Methyl salicylate | 17H21B04338848   | 1       |
| Caelo                      | Methyl salicylate | 12215215         | 1       |
| Caelo                      | Methyl salicylate | 15409807         | 1       |
| Caelo                      | Methyl salicylate | 17360503         | 1       |
| Caelo                      | Methyl salicylate | 15117904         | 3       |
| Caesar & Loretz GmbH       | Methyl salicylate | 17360510         | 1       |
| Caesar & Loretz GmbH, 4... | Methyl salicylate | 12215215         | 1       |
| Euro OTC                   | Methyl salicylate | 18B19-B06-346255 | 1       |
| Fagron                     | Methyl salicylate | 11D08-N07        | 3       |
| Fagron                     | Methyl salicylate | 11H30-N14        | 1       |
| Fagron                     | Methyl salicylate | 19061309         | 1       |
| Fagron                     | Methyl salicylate | 13d24-no9        | 1       |
| Fagron                     | Methyl salicylate | 12D24-N09        | 1       |
| Fagron                     | Methyl salicylate | 13I11-N06        | 1       |
| Fagron                     | Methyl salicylate | 30121414         | 1       |
| Fagron                     | Methyl salicylate | 14D03-B04-294170 | 1       |
| Fagron                     | Methyl salicylate | RMS13332311      | 1       |
| Fagron                     | Methyl salicylate | 15B09-B04        | 1       |
| Fagron                     | Methyl salicylate | 15B09-B04_303941 | 1       |
| Fagron                     | Methyl salicylate | 15809-B04        | 1       |
| Fagron                     | Methyl salicylate | 15B09-04-309068  | 1       |
| Fagron                     | Methyl salicylate | 303941           | 1       |
| Fagron                     | Methyl salicylate | 15H04-B01-326798 | 1       |

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| Supplier           | Substance         | Batch             | Spectra |
|--------------------|-------------------|-------------------|---------|
| Fagron             | Methyl salicylate | 24061714          | 1       |
| Fagron             | Methyl salicylate | 16E23-B05         | 1       |
| Fagron             | Methyl salicylate | 16e23-b05-332971  | 1       |
| Fagron             | Methyl salicylate | 18b19-b06-346255  | 1       |
| Fagron             | Methyl salicylate | 18I01-B01-354337  | 1       |
| Fagron             | Methyl salicylate | 18B19-B06         | 1       |
| Fagron             | Methyl salicylate | 13/11-N060013/364 | 1       |
| Fagron             | Methyl salicylate | 13/11-N060025/364 | 1       |
| Fagron             | Methyl salicylate | 14D03-B04-301825  | 1       |
| Fagron             | Methyl salicylate | 18B19-B06-346255  | 2       |
| Fagron             | Methyl salicylate | RMS1409712        | 2       |
| Fagron             | Methyl salicylate | 17H21-B04-338848  | 1       |
| Fagron             | Methyl salicylate | 15H04-B01         | 2       |
| Fagron             | Methyl salicylate | 14D03-B04         | 1       |
| Fagron             | Methyl salicylate | RMS1332311        | 1       |
| Fagron             | Methyl salicylate | 15B09-B04-303941  | 1       |
| Fagron             | Methyl salicylate | 172650-0002       | 2       |
| Fagron             | Methyl salicylate | 711Q-01867        | 1       |
| Fagron             | Methyl salicylate | 13/11-N06         | 4       |
| Fagron             | Methyl salicylate | 1139              | 1       |
| Fagron             | Methyl salicylate | 18/01-B01-358359  | 1       |
| Fagron             | Methyl salicylate | 14D03-B04-292643  | 1       |
| Fargon/Sanacorp    | Methyl salicylate | 18J01-B01-354337  | 1       |
| Caelo              | Methyl salicylate | 10313708          | 3       |
| Kögl               | Methyl salicylate | 157905164116      | 1       |
| Kögl               | Methyl salicylate | 36202170817       | 1       |
| Kögl               | Methyl salicylate | 1800961           | 1       |
| L12                | Methyl salicylate | 18J01-B01-354337  | 1       |
| Caelo              | Methyl salicylate | 14D03-B04-294169  | 1       |
| Fagron             | Methyl salicylate | 12D27-n05         | 1       |
| Fagron             | Methyl salicylate | 13D24-N09         | 6       |
| PHOENIX 08.05.2014 | Methyl salicylate | 13I11-N06         | 1       |
| Phönix             | Methyl salicylate | 13D24-N09         | 1       |
| Caelo              | Methyl salicylate | 13185101          | 3       |
| Caelo              | Methyl salicylate | 13189308          | 1       |
| Fagron             | Methyl salicylate | 12D27-N05         | 5       |
| Fagron             | Methyl salicylate | 12C02-No2         | 1       |
| Fagron             | Methyl salicylate | 14D03-B04-294169  | 4       |

- 241 252 spectra from 1121 *Apo-Ident* customers from a total of 46 939 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Methyl salicylate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Methyl salicylate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 180           | 0              | 63 759        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 111           | 0              | 241 252       |

The substance/substance group *Methyl salicylate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.6667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 100.0000 % (> 94.5946 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Methyl salicylate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>        | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------|-------------------------------|---------------------------------------|
| Hydroxyethyl salicylate | 104.11                        | –                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Methyl salicylate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31038            | 31038                      | 0.00                                | 152.96                                 |
| 31607            | 31038                      | 5.88                                | 154.40                                 |
| 33275            | 31038                      | 2.32                                | 154.05                                 |
| 33280            | 31038                      | 2.76                                | 153.08                                 |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Metronidazole 25% in white petrolatum**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30663-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Metronidazole 25% in white petrolatum

### Special notes

When selecting the *Metronidazole 25% in white petrolatum* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group             | Type A | Type B | Type C |
|---------------------------------------|--------|--------|--------|
| Metronidazole 25% in white petrolatum | 3      | 1      | 13     |



## Second-stage model

For differentiation of the substance/substance group *Metronidazole 25% in white petrolatum* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Metronidazole 25% in white petrolatum*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Metronidazole 25... | 12266401 | 30663     | 40      | 1405100     |
| Caelo    | Metronidazole 25... | 14116801 | 31316     | 40      | 20140411    |
| Caelo    | Metronidazole 25... | 16063101 | 32456     | 40      | 20160229    |
| Caelo    | Metronidazole 25... | 16063101 | 32768     | 40      | 20160229    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Metronidazole 25% in white petrolatum*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 779 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Metronidazole 25% in white petrolatum*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Metronidazole 25% in white p... | 16249701 | 33272     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 57 spectra from 20 *Apo-Ident* customers from 15 batches from the substance/substance group *Metronidazole 25% in white petrolatum*.
- Among them are spectra of independent samples from 13 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                 | Substance                       | Batch    | Spectra |
|--------------------------|---------------------------------|----------|---------|
| Cael Sanacorp 05.02.2016 | Metronidazole 25% in white p... | 15207101 | 1       |
| Caelo                    | Metronidazole 25% in white p... | 14024301 | 4       |
| Caelo                    | Metronidazole 25% in white p... | 14209301 | 1       |
| Caelo                    | Metronidazole 25% in white p... | 13077601 | 3       |
| Caelo                    | Metronidazole 25% in white p... | 1285301  | 1       |
| Caelo                    | Metronidazole 25% in white p... | 14247201 | 3       |
| Caelo                    | Metronidazole 25% in white p... | 13296501 | 3       |
| Caelo                    | Metronidazole 25% in white p... | 15207101 | 6       |
| Caelo                    | Metronidazole 25% in white p... | 13188901 | 2       |
| Caelo                    | Metronidazole 25% in white p... | 13109801 | 4       |
| Caelo                    | Metronidazole 25% in white p... | 16249701 | 8       |
| Caelo                    | Metronidazole 25% in white p... | 13002801 | 2       |
| celo/Jenne               | Metronidazole 25% in white p... | 13077601 | 1       |
| Gehe                     | Metronidazole 25% in white p... | 14209301 | 1       |
| GEHE/26.02.2013          | Metronidazole 25% in white p... | 12306601 | 1       |
| Noweda 20.02.2015        | Metronidazole 25% in white p... | 14247301 | 1       |
| Phoenix                  | Metronidazole 25% in white p... | 16249701 | 1       |
| Sanacorp                 | Metronidazole 25% in white p... | 12306601 | 1       |
| Caelo                    | Metronidazole 25% in white p... | 14116801 | 3       |
| Caelo                    | Metronidazole 25% in white p... | 16063101 | 10      |

- 241 306 spectra from 1121 *Apo-Ident* customers from a total of 46 991 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Metronidazole 25% in white petrolatum* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Metronidazole 25% in white petrolatum* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and

incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 160           | 0              | 63 779        |
| Type B | 0              | 40            | 0              | 91 451        |
| Type C | 0              | 56            | 1              | 241 306       |

The substance/substance group *Metronidazole 25% in white petrolatum* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| Type B | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| Type C | 100.0000 % (> 99.6850 %) | 98.2456 % (> 92.9825 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Metronidazole 25% in white petrolatum* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                 | Distance in main model | Distance in second-stage model |
|---------------------------|------------------------|--------------------------------|
| Pasta Cordes <sup>®</sup> | 41.57                  | –                              |
| Permethrin 25% solution   | 43.71                  | –                              |
| Shea butter, refined      | 47.17                  | –                              |
| Isopropyl palmitate       | 56.32                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Metronidazole 25% in white petrolatum* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30663     | 30663               | 0.00                         | 46.94                           |
| 31316     | 30663               | 10.35                        | 46.81                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32456            | 30663                      | 15.86                               | 48.55                                  |
| 32768            | 30663                      | 18.96                               | 48.21                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Mint oil / Peppermint oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30856-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Mint oil / Peppermint oil; Menthae arvensis aetheroleum partim mentholum depletum; Menthae piperitae aetheroleum; Mint oil; Peppermint oil

### Special notes

When selecting the *Mint oil / Peppermint oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Mint oil / Peppermint oil | 10     | 9      | 356    |

## Second-stage model

For differentiation of the substance/substance group *Mint oil* / *Peppermint oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Mint oil* / *Peppermint oil*:

| Supplier | Substance      | Batch      | Sample ID | Spectra | Certificate |
|----------|----------------|------------|-----------|---------|-------------|
| Caelo    | Mint oil       | 16053503   | 32474     | 40      | 1701393     |
| Caelo    | Mint oil       | 15380507   | 32476     | 40      | 1701394     |
| Caelo    | Mint oil       | 15380507   | 32484     | 40      | 20151116    |
| Caelo    | Mint oil       | 16053503   | 32780     | 40      | 20160309    |
| Caelo    | Mint oil       | 190224     | 34647     | 40      | 20190226*   |
| Caelo    | Peppermint oil | 12114206   | 30856     | 40      | 20120424    |
| Caelo    | Peppermint oil | 13303915   | 31410     | 40      | 1502136     |
| Caelo    | Peppermint oil | 191136     | 34443     | 40      | 20190515*   |
| Euro OTC | Peppermint oil | 1312009-01 | 31294     | 40      | 20140130    |
| Euro OTC | Peppermint oil | 1512011    | 31811     | 60      | 20151214*   |
| Euro OTC | Peppermint oil | 2005001    | 35063     | 40      | 20200615*   |
| Euro OTC | Peppermint oil | 2011012    | 35135     | 40      | 20201126*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 500 spectra of 12 reference samples from the substance/substance group *Mint oil* / *Peppermint oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 10 different batches.
- 63 439 spectra from a total of 1297 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples:

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 360 spectra of 9 reference samples from the substance/substance group *Mint oil / Peppermint oil*.
- Among them are spectra of independent samples from 9 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch    | Sample ID | Spectra |
|----------|----------------|----------|-----------|---------|
| Caelo    | Mint oil       | 15380509 | 32781     | 40      |
| Caelo    | Mint oil       | 16053508 | 32845     | 40      |
| Caelo    | Peppermint oil | 161904   | 32333     | 40      |
| Caelo    | Peppermint oil | 172919   | 33699     | 40      |
| Caelo    | Peppermint oil | 191359   | 34620     | 40      |
| Caelo    | Peppermint oil | 20000648 | 35023     | 40      |
| Euro OTC | Peppermint oil | 1607018  | 32468     | 40      |
| Euro OTC | Peppermint oil | 1703032  | 33229     | 40      |
| Euro OTC | Peppermint oil | 1804008  | 34089     | 40      |

- 91 131 spectra from a total of 2007 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1274 spectra from 546 *Apo-Ident* customers from 360 batches from the substance/substance group *Mint oil / Peppermint oil*.
- Among them are spectra of independent samples from 354 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance      | Batch           | Spectra |
|-----------------------|----------------|-----------------|---------|
| Bombastus             | Mint oil       | 19003993        | 1       |
| Bombastus             | Mint oil       | 19004624        | 1       |
| Caelo                 | Mint oil       | 1061802         | 1       |
| Caelo                 | Mint oil       | 19022401        | 2       |
| Caelo                 | Mint oil       | 16053508        | 1       |
| Caelo                 | Mint oil       | 17134803        | 1       |
| Caelo                 | Mint oil       | 16053514        | 2       |
| Canea Pharma/ Anzag   | Mint oil       | 140519          | 1       |
| Pharmadrog / Anzag    | Mint oil       | L005420         | 1       |
| Recordati Pharma GmbH | Mint oil       | BS04            | 1       |
| Rödler                | Mint oil       | G838            | 1       |
| Spangro 08.11.2018    | Mint oil       | 17358002        | 2       |
| ACM                   | Peppermint oil | 407000718901021 | 1       |
| Caelo                 | Peppermint oil | 13241303        | 8       |
| AHD, 29.11.13         | Peppermint oil | 282542          | 1       |
| Euro OTC              | Peppermint oil | 1512011-01      | 5       |
| Alliance              | Peppermint oil | 56335           | 1       |
| Alliance              | Peppermint oil | 18000796        | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Alliance Healthcare        | Peppermint oil   | 16F01-B03-322190 | 1              |
| Alliance Healthcare        | Peppermint oil   | I9004746         | 1              |
| Fagron                     | Peppermint oil   | 285571           | 1              |
| Anzag                      | Peppermint oil   | 11G19N07         | 1              |
| Anzag                      | Peppermint oil   | 283491           | 1              |
| Anzag                      | Peppermint oil   | 16114611         | 1              |
| Anzag ek:13.70EUR 15.08.12 | Peppermint oil   | 270566           | 1              |
| Bio-Diät / Phönix          | Peppermint oil   | 20553            | 1              |
| bombaſtus                  | Peppermint oil   | 20004136         | 1              |
| Bombastus                  | Peppermint oil   | 300843           | 5              |
| Bombastus                  | Peppermint oil   | 274804           | 1              |
| Bombastus                  | Peppermint oil   | 1001311995       | 1              |
| Bombastus                  | Peppermint oil   | 274976           | 1              |
| Bombastus                  | Peppermint oil   | 277504           | 4              |
| Bombastus                  | Peppermint oil   | 283491           | 4              |
| Bombastus                  | Peppermint oil   | 286376           | 1              |
| Bombastus                  | Peppermint oil   | 283734           | 1              |
| Bombastus                  | Peppermint oil   | 292138           | 6              |
| Bombastus                  | Peppermint oil   | 289675           | 1              |
| Bombastus                  | Peppermint oil   | 292472           | 7              |
| Bombastus                  | Peppermint oil   | 289595           | 1              |
| Bombastus                  | Peppermint oil   | 296017           | 1              |
| Bombastus                  | Peppermint oil   | 304515           | 10             |
| Bombastus                  | Peppermint oil   | 305627           | 2              |
| Bombastus                  | Peppermint oil   | 16114611         | 1              |
| Bombastus                  | Peppermint oil   | 17000387         | 1              |
| Bombastus                  | Peppermint oil   | 311274           | 1              |
| Bombastus                  | Peppermint oil   | 17002163         | 6              |
| Bombastus                  | Peppermint oil   | 19003525         | 1              |
| Bombastus                  | Peppermint oil   | 18000796         | 6              |
| Bombastus                  | Peppermint oil   | 19005885         | 2              |
| Bombastus                  | Peppermint oil   | 271257           | 1              |
| Bombastus                  | Peppermint oil   | 277817           | 2              |
| Bombastus                  | Peppermint oil   | 110(18003400)    | 1              |
| Bombastus                  | Peppermint oil   | 18005114         | 2              |
| Bombastus                  | Peppermint oil   | 18006246         | 1              |
| Bombastus                  | Peppermint oil   | 295985           | 4              |
| Bombastus                  | Peppermint oil   | 14150216         | 1              |
| Bombastus                  | Peppermint oil   | 294802           | 1              |
| Bombastus                  | Peppermint oil   | 307810           | 2              |
| Bombastus                  | Peppermint oil   | 60012008         | 1              |
| Bombastus                  | Peppermint oil   | 18004277         | 2              |
| Bombastus                  | Peppermint oil   | 297256           | 5              |
| Bombastus                  | Peppermint oil   | 298969           | 1              |
| Bombastus                  | Peppermint oil   | 280894           | 1              |
| Bombastus                  | Peppermint oil   | 282542           | 1              |
| Bombastus                  | Peppermint oil   | 286204           | 3              |
| Bombastus                  | Peppermint oil   | 284588           | 1              |
| Bombastus                  | Peppermint oil   | 290301           | 6              |
| Bombastus                  | Peppermint oil   | 299058           | 4              |
| Bombastus                  | Peppermint oil   | 300468           | 3              |
| Bombastus                  | Peppermint oil   | 303064           | 2              |
| Bombastus                  | Peppermint oil   | 18006685         | 7              |
| Bombastus                  | Peppermint oil   | 275481           | 2              |
| Bombastus                  | Peppermint oil   | 297946           | 1              |
| Bombastus                  | Peppermint oil   | 295737           | 5              |
| Bombastus                  | Peppermint oil   | 302909           | 1              |
| Bombastus                  | Peppermint oil   | 311547           | 6              |
| Bombastus                  | Peppermint oil   | 19000237         | 1              |
| Bombastus                  | Peppermint oil   | 287528           | 3              |

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| <b>Supplier</b>    | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------|------------------|--------------|----------------|
| Bombastus          | Peppermint oil   | 287325       | 1              |
| Bombastus          | Peppermint oil   | 288864       | 2              |
| Bombastus          | Peppermint oil   | 294293       | 4              |
| Bombastus          | Peppermint oil   | 295599       | 3              |
| Bombastus          | Peppermint oil   | 19001155     | 1              |
| Bombastus          | Peppermint oil   | 20001965     | 1              |
| Bombastus          | Peppermint oil   | 278812       | 2              |
| Bombastus          | Peppermint oil   | 19004746     | 7              |
| Bombastus          | Peppermint oil   | 309390       | 2              |
| Bombastus          | Peppermint oil   | 290394       | 2              |
| Bombastus          | Peppermint oil   | 80312004     | 1              |
| Bombastus          | Peppermint oil   | 285571       | 2              |
| Bombastus          | Peppermint oil   | 288086       | 1              |
| Bombastus          | Peppermint oil   | 279930       | 4              |
| Bombastus/Sanacorp | Peppermint oil   | 18006685     | 1              |
| Caelo              | Peppermint oil   | 13105306     | 1              |
| Caelo              | Peppermint oil   | 13318004     | 4              |
| Caelo              | Peppermint oil   | 2112E-01995  | 1              |
| Caelo              | Peppermint oil   | 1214206      | 1              |
| Caelo              | Peppermint oil   | 11124709     | 3              |
| Caelo              | Peppermint oil   | 20151112-6   | 1              |
| Caelo              | Peppermint oil   | 1124709      | 1              |
| Caelo              | Peppermint oil   | 11287419     | 1              |
| Caelo              | Peppermint oil   | 11071312     | 1              |
| Caelo              | Peppermint oil   | 688901       | 2              |
| Caelo              | Peppermint oil   | 13105801     | 11             |
| Caelo              | Peppermint oil   | 13105905     | 2              |
| Caelo              | Peppermint oil   | 12114224     | 2              |
| Caelo              | Peppermint oil   | 13303912     | 2              |
| Caelo              | Peppermint oil   | 12180024     | 1              |
| Caelo              | Peppermint oil   | 20111417     | 1              |
| Caelo              | Peppermint oil   | 14150218     | 2              |
| Caelo              | Peppermint oil   | 14369911     | 3              |
| Caelo              | Peppermint oil   | 152555801    | 1              |
| Caelo              | Peppermint oil   | 150415A      | 1              |
| Caelo              | Peppermint oil   | 10235308     | 1              |
| Caelo              | Peppermint oil   | 13I04-N01    | 1              |
| Caelo              | Peppermint oil   | 14B03-B40    | 1              |
| Caelo              | Peppermint oil   | 14369909     | 12             |
| Caelo              | Peppermint oil   | 294293       | 1              |
| Caelo              | Peppermint oil   | 2115E-01995  | 1              |
| Caelo              | Peppermint oil   | 15255801     | 38             |
| Caelo              | Peppermint oil   | 15112908     | 1              |
| Caelo              | Peppermint oil   | 15112909     | 2              |
| Caelo              | Peppermint oil   | 15383704     | 2              |
| Caelo              | Peppermint oil   | 298969       | 1              |
| Caelo              | Peppermint oil   | 15255807     | 1              |
| Caelo              | Peppermint oil   | 15255816     | 30             |
| Caelo              | Peppermint oil   | 15255829     | 1              |
| Caelo              | Peppermint oil   | 4214U-01995  | 1              |
| Caelo              | Peppermint oil   | 15363201     | 2              |
| Caelo              | Peppermint oil   | 16114605     | 1              |
| Caelo              | Peppermint oil   | 16114601     | 1              |
| Caelo              | Peppermint oil   | 8061701      | 1              |
| Caelo              | Peppermint oil   | 5170717      | 1              |
| Caelo              | Peppermint oil   | 16114620     | 1              |
| Caelo              | Peppermint oil   | 15363214     | 9              |
| Caelo              | Peppermint oil   | 16114619     | 4              |
| Caelo              | Peppermint oil   | 1538707      | 1              |
| Caelo              | Peppermint oil   | 17188609     | 53             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Peppermint oil   | 17188612         | 2              |
| Caelo           | Peppermint oil   | 311547           | 5              |
| Caelo           | Peppermint oil   | 17188611         | 1              |
| Caelo           | Peppermint oil   | 26051806         | 1              |
| Caelo           | Peppermint oil   | 1718610          | 1              |
| Caelo           | Peppermint oil   | 16114629         | 1              |
| Caelo           | Peppermint oil   | 18009906         | 1              |
| Caelo           | Peppermint oil   | 180009905        | 1              |
| Caelo           | Peppermint oil   | 22091805         | 1              |
| Caelo           | Peppermint oil   | 18009914         | 1              |
| Caelo           | Peppermint oil   | 18000796         | 1              |
| Caelo           | Peppermint oil   | 18009908         | 1              |
| Caelo           | Peppermint oil   | 1820401          | 1              |
| Caelo           | Peppermint oil   | 18208405         | 2              |
| Caelo           | Peppermint oil   | 1822179          | 1              |
| Caelo           | Peppermint oil   | 18221719         | 3              |
| Caelo           | Peppermint oil   | 18221725         | 1              |
| Caelo           | Peppermint oil   | 19135904         | 1              |
| Caelo           | Peppermint oil   | 19113601         | 1              |
| Caelo           | Peppermint oil   | 19113603         | 3              |
| Caelo           | Peppermint oil   | 19135903         | 1              |
| Caelo           | Peppermint oil   | 19135908         | 2              |
| Caelo           | Peppermint oil   | 36/20            | 1              |
| Caelo           | Peppermint oil   | 19000776001      | 2              |
| Caelo           | Peppermint oil   | 20000648006      | 2              |
| Caelo           | Peppermint oil   | 18221718         | 1              |
| Caelo           | Peppermint oil   | 15255805         | 4              |
| Caelo           | Peppermint oil   | 15B11-B08-308854 | 1              |
| Caelo           | Peppermint oil   | 297256           | 1              |
| Caelo           | Peppermint oil   | 16114607         | 2              |
| Caelo           | Peppermint oil   | 18047501         | 5              |
| Caelo           | Peppermint oil   | 18009905         | 6              |
| Caelo           | Peppermint oil   | 18009909         | 1              |
| Caelo           | Peppermint oil   | 16114627         | 13             |
| Caelo           | Peppermint oil   | 14150215         | 2              |
| Caelo           | Peppermint oil   | 11287421         | 5              |
| Caelo           | Peppermint oil   | 20C16-B07-201867 | 1              |
| Caelo           | Peppermint oil   | 14369910         | 3              |
| Caelo           | Peppermint oil   | 16190405         | 6              |
| Caelo           | Peppermint oil   | 8092001          | 1              |
| Caelo           | Peppermint oil   | 14150220         | 6              |
| Caelo           | Peppermint oil   | 4517A-01995      | 1              |
| Caelo           | Peppermint oil   | 15127004         | 2              |
| Caelo           | Peppermint oil   | 14150221         | 4              |
| Caelo           | Peppermint oil   | 15255811         | 13             |
| Caelo           | Peppermint oil   | 171886095683     | 1              |
| Caelo           | Peppermint oil   | 18221703         | 11             |
| Caelo           | Peppermint oil   | 191359005        | 2              |
| Caelo           | Peppermint oil   | 20000648008      | 5              |
| Caelo           | Peppermint oil   | 13303903         | 5              |
| Caelo           | Peppermint oil   | 12114219         | 4              |
| Caelo           | Peppermint oil   | 3913I-01995      | 1              |
| Caelo           | Peppermint oil   | 1118Q-01995      | 1              |
| Caelo           | Peppermint oil   | 16114604         | 2              |
| Caelo           | Peppermint oil   | 16114613         | 1              |
| Caelo           | Peppermint oil   | 18221712         | 7              |
| Caelo           | Peppermint oil   | 1324302          | 1              |
| Caelo           | Peppermint oil   | 11124706         | 1              |
| Caelo           | Peppermint oil   | 10235317         | 1              |
| Caelo           | Peppermint oil   | 12D10-N04        | 1              |

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| Supplier             | Substance      | Batch            | Spectra |
|----------------------|----------------|------------------|---------|
| Caelo                | Peppermint oil | 14150211         | 1       |
| Caelo                | Peppermint oil | 15235504         | 2       |
| Caelo                | Peppermint oil | 15255806         | 1       |
| Caelo                | Peppermint oil | 17364301         | 2       |
| Caelo                | Peppermint oil | 18221723         | 8       |
| Caelo                | Peppermint oil | 12114225         | 15      |
| Caelo                | Peppermint oil | 14150214         | 16      |
| Caelo                | Peppermint oil | 13A10-N08        | 2       |
| Caelo                | Peppermint oil | 19135902         | 3       |
| Caelo                | Peppermint oil | 20000648007      | 3       |
| Caelo                | Peppermint oil | 18221707         | 1       |
| Caelo                | Peppermint oil | 11287407         | 6       |
| Caelo                | Peppermint oil | 16114625         | 10      |
| Caelo                | Peppermint oil | 1703032-01       | 1       |
| Caelo                | Peppermint oil | 1703032-02       | 2       |
| Caelo                | Peppermint oil | 18208401         | 7       |
| Caelo                | Peppermint oil | 17023004         | 1       |
| Caelo                | Peppermint oil | 15363207         | 1       |
| Caelo                | Peppermint oil | 17188610         | 7       |
| Caelo                | Peppermint oil | 17F08-B07-342991 | 1       |
| Caelo                | Peppermint oil | 19135907         | 1       |
| Caelo                | Peppermint oil | 13/04-N01        | 1       |
| Caelo                | Peppermint oil | 16114603         | 8       |
| Caelo                | Peppermint oil | 15383707         | 1       |
| Caelo                | Peppermint oil | 16114602         | 20      |
| Caelo                | Peppermint oil | 16114628         | 5       |
| Caelo                | Peppermint oil | 17291901         | 3       |
| Caelo                | Peppermint oil | 19004746         | 1       |
| Caelo                | Peppermint oil | 18009910         | 20      |
| Caelo                | Peppermint oil | 12114211         | 2       |
| Caelo                | Peppermint oil | C101761          | 1       |
| Caelo                | Peppermint oil | 13303904         | 6       |
| Caelo                | Peppermint oil | 1330394904       | 1       |
| Caelo                | Peppermint oil | 14150209         | 7       |
| Caelo                | Peppermint oil | 13303914         | 2       |
| Caelo                | Peppermint oil | 1469910          | 1       |
| Caelo                | Peppermint oil | 52/AKD15         | 1       |
| Caelo                | Peppermint oil | 1611602          | 1       |
| Caelo                | Peppermint oil | 1800990          | 1       |
| Caelo                | Peppermint oil | 18221716         | 13      |
| Caelo                | Peppermint oil | 191136001        | 2       |
| Caelo                | Peppermint oil | 191359007        | 16      |
| Caelo                | Peppermint oil | 19000776002      | 2       |
| Caelo                | Peppermint oil | 12020812         | 1       |
| Caelo                | Peppermint oil | 12020815         | 1       |
| Caelo                | Peppermint oil | 15383713         | 1       |
| Caelo                | Peppermint oil | 307839           | 1       |
| Caelo                | Peppermint oil | 18208412         | 2       |
| Caelo                | Peppermint oil | 14150209         | 1       |
| Caesar & Loretz      | Peppermint oil | 16114602         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 18221702         | 13      |
| Caesar & Loretz GmbH | Peppermint oil | 18221716         | 5       |
| Caesar & Loretz GmbH | Peppermint oil | 18208405         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 18221724         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 18208412         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 18221718         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 18221723         | 2       |
| Caesar & Loretz GmbH | Peppermint oil | 19135905         | 3       |
| Caesar & Loretz GmbH | Peppermint oil | 18221703         | 1       |
| Caesar & Loretz GmbH | Peppermint oil | 191359007        | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH       | Peppermint oil   | 19135909         | 1              |
| Caesar & Loretz GmbH       | Peppermint oil   | 20000648008      | 5              |
| Caesar & Loretz GmbH / ... | Peppermint oil   | 18221702         | 1              |
| Caesar & Loretz GmbH, 4... | Peppermint oil   | 12184601         | 2              |
| Caesar & Loretz GmbH/ P... | Peppermint oil   | 18208401         | 1              |
| Caesar & Loretz GmbH/ P... | Peppermint oil   | 18208405         | 1              |
| Caesar & Loretz GmbH/ P... | Peppermint oil   | 19000776001      | 1              |
| Caesar & Loretz GmbH/Fi... | Peppermint oil   | 18221716         | 1              |
| Caesar & Loretz GmbH/Gö... | Peppermint oil   | 19113603         | 1              |
| Caesar & Loretz GmbH/Je... | Peppermint oil   | 18221702         | 2              |
| Caesar & Loretz GmbH/No... | Peppermint oil   | 18221723         | 1              |
| Caesar & Loretz GmbH/No... | Peppermint oil   | 19113601         | 1              |
| Caesar & Loretz GmbH/phö   | Peppermint oil   | 19000776002      | 1              |
| Caesar & Loretz GmbH/Ph... | Peppermint oil   | 18221716         | 1              |
| Caesar & Loretz GmbH/Sa... | Peppermint oil   | 20000648008      | 2              |
| Caesar/Noweda              | Peppermint oil   | 13303915         | 1              |
| Caesar/Noweda              | Peppermint oil   | 15255811         | 1              |
| Cealo/Noweda               | Peppermint oil   | 1804008-01       | 1              |
| EuRho                      | Peppermint oil   | 1404038-01       | 1              |
| EuRho/Noweda               | Peppermint oil   | 17291901         | 1              |
| Euro OTC                   | Peppermint oil   | 1303015-01       | 2              |
| Euro OTC                   | Peppermint oil   | 2005001-01       | 1              |
| Euro OTC                   | Peppermint oil   | 1703032-01       | 3              |
| Euro OTC                   | Peppermint oil   | 1607018-02       | 2              |
| Euro OTC                   | Peppermint oil   | 1504017-01       | 3              |
| Euro OTC                   | Peppermint oil   | 15255816         | 1              |
| Euro OTC                   | Peppermint oil   | 170303           | 1              |
| Euro OTC                   | Peppermint oil   | 909185           | 1              |
| Euro OTC                   | Peppermint oil   | 1069396          | 2              |
| Euro OTC                   | Peppermint oil   | 1804008          | 1              |
| Euro OTC                   | Peppermint oil   | 1404038-01       | 2              |
| Euro OTC                   | Peppermint oil   | 1804008-02       | 2              |
| Euro OTC                   | Peppermint oil   | 1410005-01       | 1              |
| Euro OTC                   | Peppermint oil   | 1804008-01       | 3              |
| Euro OTC                   | Peppermint oil   | 1607018-01       | 3              |
| Euro OTC                   | Peppermint oil   | 190920309        | 1              |
| Euro OTC                   | Peppermint oil   | 16114627         | 1              |
| Euro/Phönix                | Peppermint oil   | 1703032-02       | 1              |
| Euro OTC                   | Peppermint oil   | 1703030-02       | 1              |
| Fagron                     | Peppermint oil   | 11C14-N06        | 2              |
| Fagron                     | Peppermint oil   | 11G19-N07        | 4              |
| Fagron                     | Peppermint oil   | 12D10-N04        | 7              |
| Fagron                     | Peppermint oil   | 11F09-N12        | 1              |
| Fagron                     | Peppermint oil   | 8574769          | 1              |
| Fagron                     | Peppermint oil   | 13A10-N8         | 1              |
| Fagron                     | Peppermint oil   | 13A10-N08        | 5              |
| Fagron                     | Peppermint oil   | 13A10N08         | 2              |
| Fagron                     | Peppermint oil   | 688901           | 1              |
| Fagron                     | Peppermint oil   | 12I19-N09        | 1              |
| Fagron                     | Peppermint oil   | 100030-N05       | 1              |
| Fagron                     | Peppermint oil   | 1304-N01         | 2              |
| Fagron                     | Peppermint oil   | 13104-N10        | 1              |
| Fagron                     | Peppermint oil   | 14B03-B40        | 3              |
| Fagron                     | Peppermint oil   | 14B03-B40-295665 | 3              |
| Fagron                     | Peppermint oil   | 14B03B40         | 1              |
| Fagron                     | Peppermint oil   | 15B11-B08-304115 | 1              |
| Fagron                     | Peppermint oil   | 15255801         | 1              |
| Fagron                     | Peppermint oil   | 15K27-B01        | 1              |
| Fagron                     | Peppermint oil   | 16F01-B03-322190 | 3              |
| Fagron                     | Peppermint oil   | 16F01-B03-322818 | 4              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Fagron          | Peppermint oil   | 16F01-B03-326342 | 6              |
| Fagron          | Peppermint oil   | 16F01-B03-326341 | 1              |
| Fagron          | Peppermint oil   | 17F0-B07-336043  | 1              |
| Fagron          | Peppermint oil   | 17F08-B07-336043 | 1              |
| Fagron          | Peppermint oil   | 18B08-B06-354449 | 2              |
| Fagron          | Peppermint oil   | 19C24B12191227   | 1              |
| Fagron          | Peppermint oil   | 16F01-B03-322189 | 1              |
| Fagron          | Peppermint oil   | 1512011-01       | 1              |
| Fagron          | Peppermint oil   | 19C14B12191227   | 1              |
| Fagron          | Peppermint oil   | 15K27-B01-317773 | 4              |
| Fagron          | Peppermint oil   | 18B08-B06-352613 | 1              |
| Fagron          | Peppermint oil   | 15B11-B08        | 1              |
| Fagron          | Peppermint oil   | 12114206         | 1              |
| Fagron          | Peppermint oil   | 18B08-B06        | 2              |
| Fagron          | Peppermint oil   | 18B08-B06-353685 | 1              |
| Fagron          | Peppermint oil   | 17F08-B07-342991 | 2              |
| Fagron          | Peppermint oil   | 250214PJK02      | 1              |
| Fagron          | Peppermint oil   | 18B08-B06-352613 | 1              |
| Fagron          | Peppermint oil   | 19C14-B12-191227 | 5              |
| Fagron          | Peppermint oil   | 19C14-B12        | 1              |
| Fagron          | Peppermint oil   | 15B11-B08-308854 | 1              |
| Fagron          | Peppermint oil   | 17F08-B07-139332 | 1              |
| Fagron          | Peppermint oil   | 13/04-N10        | 2              |
| Fagron          | Peppermint oil   | 17F08-B07-336043 | 3              |
| Fagron          | Peppermint oil   | 304515           | 1              |
| Fagron          | Peppermint oil   | 17F08-B07-337476 | 1              |
| Fagron          | Peppermint oil   | 1008442          | 3              |
| Fagron          | Peppermint oil   | 11A05-N02        | 1              |
| Fagron          | Peppermint oil   | 15B11B08304117   | 1              |
| Fagron          | Peppermint oil   | 15G08-B99-312672 | 1              |
| Fagron          | Peppermint oil   | 16F01-B03        | 1              |
| Fagron          | Peppermint oil   | 934920           | 1              |
| Fagron          | Peppermint oil   | 1057683          | 2              |
| Fagron          | Peppermint oil   | 18B08-B06-352613 | 1              |
| Fagron          | Peppermint oil   | 18B08-B06-354448 | 1              |
| Fagron          | Peppermint oil   | 267849           | 1              |
| Fagron          | Peppermint oil   | 13i04-N10        | 1              |
| Fagron          | Peppermint oil   | 13I04-N10        | 4              |
| Fagron          | Peppermint oil   | 13I04-N01        | 7              |
| Fagron          | Peppermint oil   | 700599           | 1              |
| Fagron          | Peppermint oil   | 15B11-B08-304117 | 1              |
| Fagron          | Peppermint oil   | 17F08-B07        | 4              |
| Fagron          | Peppermint oil   | 17F08-B07-336086 | 1              |
| Fagron          | Peppermint oil   | 1142326          | 1              |
| Fagron          | Peppermint oil   | 20A14-B01-197082 | 4              |
| Fagron          | Peppermint oil   | 19J21-B14-193446 | 2              |
| Fiebig          | Peppermint oil   | 21022172/1       | 1              |
| Fiebig          | Peppermint oil   | 16114629         | 1              |
| Fiebig          | Peppermint oil   | 17188611         | 2              |
| Fiebig          | Peppermint oil   | 20004136         | 1              |
| Gatt-Koller     | Peppermint oil   | 1802889          | 1              |
| Gehe            | Peppermint oil   | 13303903         | 1              |
| Gehe            | Peppermint oil   | 13105801         | 1              |
| Gehe            | Peppermint oil   | 16114602         | 1              |
| Gehe            | Peppermint oil   | 305627           | 3              |
| Gehe            | Peppermint oil   | 18009910         | 1              |
| GEHE            | Peppermint oil   | 17F08-B07-324991 | 2              |
| GEHE            | Peppermint oil   | 17188609         | 2              |
| GEHE 06.06.2014 | Peppermint oil   | 283491           | 1              |
| Caelo           | Peppermint oil   | 19135905         | 18             |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------|------------------|------------------|----------------|
| Caelo                | Peppermint oil   | 153663207        | 1              |
| Caelo                | Peppermint oil   | 18221702         | 27             |
| Fagron               | Peppermint oil   | 15363207         | 1              |
| Fagron               | Peppermint oil   | 17F08-B07-339333 | 1              |
| Hedinger             | Peppermint oil   | 12114206         | 1              |
| Hedinger/Gehe        | Peppermint oil   | 13105801         | 1              |
| hochhaus-Apotheke    | Peppermint oil   | 16114603         | 1              |
| Ichthyol GmbH/Noweda | Peppermint oil   | 16114611         | 1              |
| Kehr                 | Peppermint oil   | 17188609         | 1              |
| Kögl                 | Peppermint oil   | 1801774          | 1              |
| L12                  | Peppermint oil   | 16114602         | 2              |
| L12                  | Peppermint oil   | 16114625         | 3              |
| Caelo                | Peppermint oil   | 15255817         | 6              |
| L30                  | Peppermint oil   | 17188609         | 2              |
| Noweda               | Peppermint oil   | 12114206         | 1              |
| Noweda               | Peppermint oil   | 15255801         | 1              |
| Noweda               | Peppermint oil   | 17188609         | 1              |
| Noweda               | Peppermint oil   | 18047501         | 1              |
| Noweda               | Peppermint oil   | 18221702         | 3              |
| Noweda               | Peppermint oil   | 18221716         | 1              |
| Noweda               | Peppermint oil   | 191359005        | 1              |
| Noweda 07.11.2019    | Peppermint oil   | 18221723         | 1              |
| Noweda 07.11.2019    | Peppermint oil   | 18006685         | 1              |
| Bombastus            | Peppermint oil   | 285715           | 2              |
| Caelo                | Peppermint oil   | 295985           | 1              |
| Caelo                | Peppermint oil   | 15126904         | 1              |
| Euro OTC             | Peppermint oil   | 1703032-02       | 1              |
| Phoenix              | Peppermint oil   | 12114211         | 1              |
| Phoenix              | Peppermint oil   | 16F01-B03-326341 | 1              |
| Phoenix              | Peppermint oil   | 18221702         | 1              |
| phoenix 27.2.12      | Peppermint oil   | 267518           | 1              |
| Caelo                | Peppermint oil   | 16114611         | 28             |
| Phönix               | Peppermint oil   | 11124710         | 1              |
| Phönix               | Peppermint oil   | 13303915         | 1              |
| Phönix               | Peppermint oil   | 18000796         | 1              |
| Bombastus            | Peppermint oil   | 20001977         | 2              |
| Phönix Gotha         | Peppermint oil   | 14150225         | 1              |
| Caelo                | Peppermint oil   | 18009912         | 1              |
| Primavera            | Peppermint oil   | 7703L22          | 1              |
| Primavera            | Peppermint oil   | 5409142          | 1              |
| Primavera            | Peppermint oil   | 649B25           | 1              |
| Primavera            | Peppermint oil   | 374826           | 1              |
| Primavera            | Peppermint oil   | 367G26           | 1              |
| Primavera/Sanacorp   | Peppermint oil   | 202C25           | 1              |
| sanacorp             | Peppermint oil   | 13I04-N01        | 1              |
| sanacorp             | Peppermint oil   | 14150214         | 1              |
| Sanacorp             | Peppermint oil   | 11287416         | 1              |
| Sanacorp             | Peppermint oil   | 12114219         | 1              |
| Sanacorp             | Peppermint oil   | 12114206         | 1              |
| Sanacorp             | Peppermint oil   | 47/AKD19         | 1              |
| Sanacorp             | Peppermint oil   | 280894           | 1              |
| Sanacorp             | Peppermint oil   | 13303915         | 3              |
| Sanacorp             | Peppermint oil   | 16114625         | 2              |
| Sanacorp             | Peppermint oil   | 309390           | 2              |
| Sanacorp             | Peppermint oil   | 311547           | 1              |
| Sanacorp             | Peppermint oil   | 17002163         | 1              |
| Sanacorp             | Peppermint oil   | 17188609         | 3              |
| Sanacorp             | Peppermint oil   | 18221702         | 1              |
| Sanacorp             | Peppermint oil   | 18009908         | 2              |
| Sanacorp             | Peppermint oil   | 18004277         | 1              |

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| Supplier                   | Substance      | Batch         | Spectra |
|----------------------------|----------------|---------------|---------|
| Sanacorp                   | Peppermint oil | 18005114      | 1       |
| Sanacorp                   | Peppermint oil | 18003400      | 1       |
| Sanacorp                   | Peppermint oil | 1804008-02    | 2       |
| Sanacorp, 16.08.2016, 7... | Peppermint oil | 15255816      | 2       |
| Bombastus                  | Peppermint oil | 307854        | 3       |
| Caelo                      | Peppermint oil | 11124710      | 2       |
| Caelo                      | Peppermint oil | 11287416      | 9       |
| Caelo                      | Peppermint oil | 46/AD1        | 1       |
| Caelo                      | Peppermint oil | 14150225      | 12      |
| Sanacorp                   | Peppermint oil | 19135905      | 1       |
| Sensient                   | Peppermint oil | C9982         | 1       |
| Spangro 18.01.2019         | Peppermint oil | 18221702      | 1       |
| Caelo                      | Peppermint oil | 269560        | 1       |
| Taoasis                    | Peppermint oil | 501319-105273 | 1       |
| Taoasis                    | Peppermint oil | 515574-107811 | 1       |
| Taoasis                    | Peppermint oil | 512777-107965 | 1       |
| Taoasis                    | Peppermint oil | 525728-109630 | 1       |
| Taoasis                    | Peppermint oil | 539490-111157 | 2       |
| Taoasis                    | Peppermint oil | 548992-112346 | 3       |
| Taoasis                    | Peppermint oil | 13486-116309  | 1       |
| Taoasis                    | Peppermint oil | 6316-115825   | 1       |
| Taoasis                    | Peppermint oil | 31145-118741  | 1       |
| Taoasis                    | Peppermint oil | 37979-120290  | 1       |
| Taoasis                    | Peppermint oil | 75404-127882  | 1       |
| Taoasis                    | Peppermint oil | 79725-128653  | 3       |
| Taoasis                    | Peppermint oil | 104959-411    | 1       |
| Taoasis                    | Peppermint oil | 88914-2568    | 1       |
| Taoasis                    | Peppermint oil | 6140-9015     | 1       |
| Taoasis GmbH               | Peppermint oil | 534640-110874 | 1       |
| Taoasis/Phönix             | Peppermint oil | 32724-118746  | 1       |
| Caelo                      | Peppermint oil | 12114206      | 17      |
| Caelo                      | Peppermint oil | 13303915      | 12      |
| Caelo                      | Peppermint oil |               | 2       |
| Fargon                     | Peppermint oil |               | 1       |
| phönix                     | Peppermint oil |               | 1       |
| Taomed                     | Peppermint oil |               | 1       |
|                            | Peppermint oil | 9183299       | 1       |

- 240 089 spectra from 1121 *Apo-Ident* customers from a total of 46 651 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Mint oil* / *Peppermint oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Mint oil* / *Peppermint oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 500           | 0              | 63 439        |
| <b>Type B</b> | 0              | 360           | 0              | 91 131        |
| <b>Type C</b> | 0              | 1249          | 25             | 240 089       |

The substance/substance group *Mint oil / Peppermint oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.8000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.3333 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.0377 % (> 97.8022 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Mint oil / Peppermint oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                          | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-------------------------------------------|-------------------------------|---------------------------------------|
| Juniper oil                               | 27.26                         | —                                     |
| Dwarf pine oil                            | 31.80                         | —                                     |
| Verbena oil, nature-identical             | 33.39                         | —                                     |
| Cedar wood oil                            | 34.99                         | —                                     |
| Cypress oil                               | 36.52                         | —                                     |
| Tea tree oil                              | 36.62                         | —                                     |
| Turpentine oil                            | 36.78                         | —                                     |
| Myrtle oil                                | 37.76                         | —                                     |
| Matricaria oil, rich in (-)-alpha-bisa... | 39.76                         | —                                     |
| Petroleum ether DAB                       | 42.25                         | —                                     |
| Petroleum oil, white, cohobated           | 42.89                         | —                                     |
| Citronella oil                            | 44.15                         | —                                     |
| Juniper wood oil                          | 45.67                         | —                                     |
| Citric oil                                | 46.85                         | —                                     |
| Pine silvestris oil                       | 47.94                         | —                                     |
| Caraway oil                               | 48.89                         | —                                     |
| Acorus oil                                | 49.52                         | —                                     |
| D-alpha tocopherol                        | 50.26                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Mint oil / Peppermint oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30856     | 31410               | 11.43                        | 64.38                           |
| 31294     | 31811               | 1.94                         | 57.38                           |
| 31410     | 31410               | 0.00                         | 66.11                           |
| 31811     | 31811               | 0.00                         | 58.48                           |
| 32474     | 32474               | 0.00                         | 55.40                           |
| 32476     | 32476               | 0.00                         | 55.62                           |
| 32484     | 32476               | 3.83                         | 56.61                           |
| 32780     | 32474               | 3.88                         | 52.93                           |
| 34443     | 34443               | 0.00                         | 31.62                           |
| 34647     | 34647               | 0.00                         | 58.25                           |
| 35063     | 35063               | 0.00                         | 62.15                           |
| 35135     | 35135               | 0.00                         | 60.88                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Myrtle oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31836-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Myrtle oil; Oleum myrte

### Special notes

When selecting the *Myrtle oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Myrtle oil                | 4      | 2      | 5      |

## Second-stage model

For differentiation of the substance/substance group *Myrtle oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Myrtle oil*:

| Supplier | Substance  | Batch    | Sample ID | Spectra | Certificate |
|----------|------------|----------|-----------|---------|-------------|
| Caelo    | Myrtle oil | 15225102 | 31836     | 60      | 1606483     |
| Caelo    | Myrtle oil | 15225103 | 32182     | 40      | 20150721    |
| Caelo    | Myrtle oil | 15225102 | 32349     | 40      | 20150721    |
| Caelo    | Myrtle oil | 182822   | 34449     | 40      | 20181030*   |
| Caelo    | Myrtle oil | 183298   | 34458     | 40      | 20190122*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Myrtle oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 719 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Myrtle oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



| Supplier | Substance  | Batch    | Sample ID | Spectra |
|----------|------------|----------|-----------|---------|
| Caelo    | Myrtle oil | 17227302 | 33879     | 40      |
| Caelo    | Myrtle oil | 173184   | 34082     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 5 spectra from 4 *Apo-Ident* customers from 5 batches from the substance/substance group *Myrtle oil*.
- Among them are spectra of independent samples from 5 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance  | Batch           | Spectra |
|----------|------------|-----------------|---------|
| Caelo    | Myrtle oil | 20000370001     | 1       |
| Caelo    | Myrtle oil | 15225104        | 1       |
| Caelo    | Myrtle oil | 16296202        | 1       |
| Caelo    | Myrtle oil | 183298001       | 1       |
| Taoasis  | Myrtle oil | 2018101113-9208 | 1       |

- 241 358 spectra from 1121 *Apo-Ident* customers from a total of 47 001 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Myrtle oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Myrtle oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 5             | 0              | 241 358       |

The substance/substance group *Myrtle oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6866 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Myrtle oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------|---------------------------|-----------------------------------|
| Turpentine oil                | 17.30                     | —                                 |
| Rosemary oil                  | 20.41                     | —                                 |
| Juniper wood oil              | 21.44                     | —                                 |
| Eucalyptus oil                | 23.09                     | —                                 |
| Cypress oil                   | 24.45                     | —                                 |
| Cajeput (essentiel oil)       | 25.07                     | —                                 |
| Sage oil                      | 28.74                     | —                                 |
| Verbena oil, nature-identical | 35.19                     | —                                 |
| Spruce needle oil             | 42.97                     | —                                 |
| Dwarf pine oil                | 44.46                     | —                                 |
| Juniper oil                   | 45.03                     | —                                 |
| Cineole                       | 46.01                     | —                                 |
| Acorus oil                    | 47.21                     | —                                 |
| Peppermint oil                | 50.25                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Myrtle oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31836     | 31836                  | 0.00                            | 24.76                              |
| 32182     | 31836                  | 2.36                            | 26.45                              |
| 32349     | 31836                  | 2.82                            | 26.58                              |
| 34449     | 34449                  | 0.00                            | 24.45                              |
| 34458     | 34458                  | 0.00                            | 25.07                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at

least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Non-ionic hydrophil ointment</b>                              |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30463-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Non-ionic hydrophil ointment; Non-ionic hydrophil ointment, conserved; Unguentum emulsificans nonionicum aquosum DAB

### Special notes

When selecting the *Non-ionic hydrophil ointment* substance/substance group, the following information is displayed to the user:

- Advice for the identification of Non-ionic hydrophil ointment DAB: Improper storage of samples can result in identification problems. Please homogenises the sample and let it adapt to room temperature before the measurement.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group    | Type A | Type B | Type C |
|------------------------------|--------|--------|--------|
| Non-ionic hydrophil ointment | 15     | 26     | 288    |

## Second-stage model

For differentiation of the substance/substance group *Non-ionic hydrophil ointment* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Non-ionic hydrophil ointment*:

| Supplier  | Substance           | Batch    | Sample ID | Spectra | Certificate |
|-----------|---------------------|----------|-----------|---------|-------------|
| Bombastus | Non-ionic hydrop... | 295368   | 31749     | 60      | 20150625    |
| Bombastus | Non-ionic hydrop... | 300481   | 32105     | 40      | 20160225    |
| Bombastus | Non-ionic hydrop... | 300481   | 32726     | 40      | 20160225    |
| Caelo     | Non-ionic hydrop... | 13138001 | 31001     | 40      | 20130531    |
| Caelo     | Non-ionic hydrop... | 13332901 | 31227     | 40      | 20131104    |
| Caelo     | Non-ionic hydrop... | 13333101 | 31451     | 40      | 1509156     |
| Caelo     | Non-ionic hydrop... | 15151601 | 31748     | 60      | 9129        |
| Caelo     | Non-ionic hydrop... | 161042   | 32088     | 40      | 20160411*   |
| Caelo     | Non-ionic hydrop... | 170744   | 33360     | 40      | 20170413*   |
| Caelo     | Non-ionic hydrop... | 172006   | 34010     | 40      | 20170810*   |
| Caelo     | Non-ionic hydrop... | 20001244 | 34856     | 40      | 20200504*   |
| Caelo     | Non-ionic hydrop... | 19000474 | 34857     | 40      | 20191211*   |
| Caelo     | Non-ionic hydrop... | 20001755 | 35100     | 40      | 20200710*   |
| Caelo     | Non-ionic hydrop... | 20003450 | 35159     | 40      | 20210106*   |
| Caelo     | Non-ionic hydrop... | 21001432 | 35526     | 50      | 20210518*   |
| Caelo     | Non-ionic hydrop... | 21002019 | 35663     | 50      | 20210803*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 700 spectra of 16 reference samples from the substance/substance group *Non-ionic hydrophil ointment*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 15 different batches.
- 63 239 spectra from a total of 1292 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

*Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 1390 spectra of 35 reference samples from the substance/substance group *Non-ionic hydrophil ointment*.
- Among them are spectra of independent samples from 26 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                    | Batch  | Sample ID | Spectra |
|----------|------------------------------|--------|-----------|---------|
| Caelo    | Non-ionic hydrophil ointment | 153446 | 32077     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 153447 | 32078     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 153463 | 32084     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161045 | 32085     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161041 | 32087     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 153465 | 32106     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 160438 | 32107     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161043 | 32110     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161044 | 32112     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161735 | 32417     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161736 | 32418     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161793 | 32419     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161794 | 32421     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 162348 | 32488     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 162349 | 32489     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 162350 | 32490     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170866 | 33361     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170745 | 33362     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170865 | 33363     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170742 | 33366     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170746 | 33367     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170743 | 33369     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 171510 | 34009     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 172946 | 34011     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 181079 | 34154     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 182536 | 34358     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161041 | 32108     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161042 | 32109     | 30      |
| Caelo    | Non-ionic hydrophil ointment | 161043 | 32111     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161044 | 32113     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161045 | 32114     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 161793 | 32420     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170744 | 33364     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170865 | 33365     | 40      |
| Caelo    | Non-ionic hydrophil ointment | 170866 | 33368     | 40      |

- 90 101 spectra from a total of 1988 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information



provided by the customer regarding manufacturer and batch number.

- 1541 spectra from 455 *Apo-Ident* customers from 297 batches from the substance/substance group *Non-ionic hydrophil ointment*.
- Among them are spectra of independent samples from 288 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                    | Batch       | Spectra |
|---------------------|------------------------------|-------------|---------|
| Bombastus           | Non-ionic hydrophil ointment | 271973      | 1       |
| AHD                 | Non-ionic hydrophil ointment | 14069001    | 3       |
| AHD                 | Non-ionic hydrophil ointment | 16104201    | 1       |
| AHD                 | Non-ionic hydrophil ointment | 308111      | 1       |
| AHD                 | Non-ionic hydrophil ointment | 20001244002 | 1       |
| Caelo               | Non-ionic hydrophil ointment | 15286701    | 7       |
| Alliance Healthcare | Non-ionic hydrophil ointment | 18107901    | 1       |
| Berkel AHK          | Non-ionic hydrophil ointment | 13332901    | 3       |
| Berkel AHK          | Non-ionic hydrophil ointment | 13333101    | 2       |
| Berkel AHK          | Non-ionic hydrophil ointment | 15002901    | 6       |
| bom                 | Non-ionic hydrophil ointment | 286003      | 1       |
| Bomb/Gehe           | Non-ionic hydrophil ointment | 301280      | 1       |
| Bombastu/Sanacorp   | Non-ionic hydrophil ointment | 303640      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 275259      | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 286003      | 6       |
| Bombastus           | Non-ionic hydrophil ointment | 286002      | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 288044      | 6       |
| Bombastus           | Non-ionic hydrophil ointment | 296803      | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 303641      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 600807      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 303643      | 4       |
| Bombastus           | Non-ionic hydrophil ointment | 308112      | 9       |
| Bombastus           | Non-ionic hydrophil ointment | 308108      | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 314098      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 311097      | 6       |
| Bombastus           | Non-ionic hydrophil ointment | 17001326    | 13      |
| Bombastus           | Non-ionic hydrophil ointment | 19005914    | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 20004877    | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 20004288    | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 18002339    | 12      |
| Bombastus           | Non-ionic hydrophil ointment | 19002323    | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 278694      | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 267625      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 272063      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 20003239    | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 20001176    | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 293403      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 303644      | 4       |
| Bombastus           | Non-ionic hydrophil ointment | 306522      | 12      |
| Bombastus           | Non-ionic hydrophil ointment | 271977      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 271976      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 303642      | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 308109      | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 19004156    | 7       |
| Bombastus           | Non-ionic hydrophil ointment | 21001476    | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 286001      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 288042      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 290281      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 293402      | 3       |
| Bombastus           | Non-ionic hydrophil ointment | 296802      | 2       |
| Bombastus           | Non-ionic hydrophil ointment | 300480      | 1       |
| Bombastus           | Non-ionic hydrophil ointment | 160905UEN   | 1       |

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| <b>Supplier</b>  | <b>Substance</b>             | <b>Batch</b>     | <b>Spectra</b> |
|------------------|------------------------------|------------------|----------------|
| Bombastus        | Non-ionic hydrophil ointment | 301279           | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 161220NHC/301280 | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 17001324         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 18003691         | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 18002338         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 19002322         | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 172946002        | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 275256           | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 170905NHC/308112 | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 171114NHC/308111 | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 171128NHC/308111 | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 180308NHC/308108 | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 282903           | 4              |
| Bombastus        | Non-ionic hydrophil ointment | 297178           | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 18004818         | 8              |
| Bombastus        | Non-ionic hydrophil ointment | 18004046         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 20002609         | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 21002584         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 282902           | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 271981           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 308110           | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 290283           | 7              |
| Bombastus        | Non-ionic hydrophil ointment | 6861335          | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 308111           | 11             |
| Bombastus        | Non-ionic hydrophil ointment | 18006046         | 4              |
| Bombastus        | Non-ionic hydrophil ointment | 19005022         | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 301280           | 8              |
| Bombastus        | Non-ionic hydrophil ointment | 19004155         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 21001478         | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 19000787         | 7              |
| Bombastus        | Non-ionic hydrophil ointment | 295367           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 297634           | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 311098           | 16             |
| Bombastus        | Non-ionic hydrophil ointment | 297633           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 18001524         | 16             |
| Bombastus        | Non-ionic hydrophil ointment | 190022323        | 1              |
| Bombastus        | Non-ionic hydrophil ointment | 20003240         | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 282904           | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 303640           | 14             |
| Bombastus        | Non-ionic hydrophil ointment | 288043           | 6              |
| Bombastus        | Non-ionic hydrophil ointment | 19000786         | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 266631           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 268754           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 275260           | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 280909           | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 296801           | 4              |
| Bombastus        | Non-ionic hydrophil ointment | 300479           | 6              |
| Bombastus        | Non-ionic hydrophil ointment | 18004817         | 2              |
| Bombastus        | Non-ionic hydrophil ointment | 20002612         | 4              |
| Bombastus        | Non-ionic hydrophil ointment | 18001523         | 3              |
| Bombastus        | Non-ionic hydrophil ointment | 293401           | 1              |
| Bombasus, Noweda | Non-ionic hydrophil ointment | 272063           | 1              |
| Caelo            | Non-ionic hydrophil ointment | 16043801         | 5              |
| Caelo            | Non-ionic hydrophil ointment | 16104101         | 20             |
| Caelo            | Non-ionic hydrophil ointment | 11357801         | 1              |
| Caelo            | Non-ionic hydrophil ointment | 21081202         | 1              |
| Caelo            | Non-ionic hydrophil ointment | 21111203         | 1              |
| Caelo            | Non-ionic hydrophil ointment | 12155901         | 5              |
| Caelo            | Non-ionic hydrophil ointment | 12223601         | 3              |
| Caelo            | Non-ionic hydrophil ointment | 4812I-02543      | 1              |

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| Supplier | Substance                    | Batch       | Spectra |
|----------|------------------------------|-------------|---------|
| Caelo    | Non-ionic hydrophil ointment | 12156101    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 513Q-02543  | 1       |
| Caelo    | Non-ionic hydrophil ointment | 12155801    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 12353001    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 12352801    | 6       |
| Caelo    | Non-ionic hydrophil ointment | 12223501    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 12352901    | 3       |
| Caelo    | Non-ionic hydrophil ointment | 6061305     | 1       |
| Caelo    | Non-ionic hydrophil ointment | 12223301    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 12223602    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 13045401    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 13045102    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 130450401   | 1       |
| Caelo    | Non-ionic hydrophil ointment | 13138201    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 13263501    | 7       |
| Caelo    | Non-ionic hydrophil ointment | 13263401    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 13263601    | 3       |
| Caelo    | Non-ionic hydrophil ointment | CHB13263501 | 1       |
| Caelo    | Non-ionic hydrophil ointment | 13263902    | 3       |
| Caelo    | Non-ionic hydrophil ointment | 13263801    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 13333001    | 3       |
| Caelo    | Non-ionic hydrophil ointment | 13333201    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 20061406    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 13333301    | 3       |
| Caelo    | Non-ionic hydrophil ointment | 14068601    | 10      |
| Caelo    | Non-ionic hydrophil ointment | 14069001    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 14176502    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 14221301    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 15002901    | 7       |
| Caelo    | Non-ionic hydrophil ointment | 14221401    | 6       |
| Caelo    | Non-ionic hydrophil ointment | 14258901    | 6       |
| Caelo    | Non-ionic hydrophil ointment | 17112014A   | 1       |
| Caelo    | Non-ionic hydrophil ointment | 14221501    | 3       |
| Caelo    | Non-ionic hydrophil ointment | 14259201    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 15007402    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 5052015B    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 14259301    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 19081505    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 1326501     | 1       |
| Caelo    | Non-ionic hydrophil ointment | 15286901    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 2766        | 1       |
| Caelo    | Non-ionic hydrophil ointment | 15344701    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 15346501    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 15346301    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 16104501    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 16173401    | 5       |
| Caelo    | Non-ionic hydrophil ointment | 16179303    | 6       |
| Caelo    | Non-ionic hydrophil ointment | 16173601    | 2       |
| Caelo    | Non-ionic hydrophil ointment | 303640      | 1       |
| Caelo    | Non-ionic hydrophil ointment | 16234801    | 20      |
| Caelo    | Non-ionic hydrophil ointment | 17074301    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 162334801   | 1       |
| Caelo    | Non-ionic hydrophil ointment | 21041721    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 16179603    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 16258501    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 16235001    | 4       |
| Caelo    | Non-ionic hydrophil ointment | 17074401    | 14      |
| Caelo    | Non-ionic hydrophil ointment | 17086501    | 8       |
| Caelo    | Non-ionic hydrophil ointment | 16179301    | 1       |
| Caelo    | Non-ionic hydrophil ointment | 308111      | 2       |

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| <b>Supplier</b> | <b>Substance</b>             | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------------------|------------------|----------------|
| Caelo           | Non-ionic hydrophil ointment | 17086601         | 7              |
| Caelo           | Non-ionic hydrophil ointment | 27071704         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 170865015315     | 1              |
| Caelo           | Non-ionic hydrophil ointment | 17074601         | 18             |
| Caelo           | Non-ionic hydrophil ointment | 17151301         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 17151201         | 2              |
| Caelo           | Non-ionic hydrophil ointment | 17200601         | 16             |
| Caelo           | Non-ionic hydrophil ointment | 18121708         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 1720603          | 1              |
| Caelo           | Non-ionic hydrophil ointment | 17200603         | 6              |
| Caelo           | Non-ionic hydrophil ointment | 19021813         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 17294602         | 15             |
| Caelo           | Non-ionic hydrophil ointment | 14051806         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 18107901         | 18             |
| Caelo           | Non-ionic hydrophil ointment | 18200803         | 6              |
| Caelo           | Non-ionic hydrophil ointment | 18002339         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 181007902        | 1              |
| Caelo           | Non-ionic hydrophil ointment | 19000802         | 9              |
| Caelo           | Non-ionic hydrophil ointment | 19000804         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 19176501         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 200001244003     | 1              |
| Caelo           | Non-ionic hydrophil ointment | 21001476         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 13263701         | 4              |
| Caelo           | Non-ionic hydrophil ointment | 297633           | 2              |
| Caelo           | Non-ionic hydrophil ointment | 16104201         | 2              |
| Caelo           | Non-ionic hydrophil ointment | 13138101         | 8              |
| Caelo           | Non-ionic hydrophil ointment | 14259001         | 5              |
| Caelo           | Non-ionic hydrophil ointment | 15105001         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 13263301         | 2              |
| Caelo           | Non-ionic hydrophil ointment | 18107902         | 26             |
| Caelo           | Non-ionic hydrophil ointment | 18253604         | 8              |
| Caelo           | Non-ionic hydrophil ointment | 1318001          | 1              |
| Caelo           | Non-ionic hydrophil ointment | 16179302         | 18             |
| Caelo           | Non-ionic hydrophil ointment | 308112           | 1              |
| Caelo           | Non-ionic hydrophil ointment | 5016I-02543      | 1              |
| Caelo           | Non-ionic hydrophil ointment | 18200802         | 10             |
| Caelo           | Non-ionic hydrophil ointment | 20001244001      | 6              |
| Caelo           | Non-ionic hydrophil ointment | 17342202         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 13045601         | 2              |
| Caelo           | Non-ionic hydrophil ointment | 170328UENA303640 | 1              |
| Caelo           | Non-ionic hydrophil ointment | 179294601        | 1              |
| Caelo           | Non-ionic hydrophil ointment | 15002801         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 13045501         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 18253602         | 11             |
| Caelo           | Non-ionic hydrophil ointment | 6(18253604)      | 1              |
| Caelo           | Non-ionic hydrophil ointment | 15151801         | 5              |
| Caelo           | Non-ionic hydrophil ointment | 15105101         | 10             |
| Caelo           | Non-ionic hydrophil ointment | 13137901         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 13333501         | 5              |
| Caelo           | Non-ionic hydrophil ointment | 11273303         | 1              |
| Caelo           | Non-ionic hydrophil ointment | 17294601         | 34             |
| Caelo           | Non-ionic hydrophil ointment | 9639838          | 1              |
| Caelo           | Non-ionic hydrophil ointment | 17086701         | 3              |
| Caelo           | Non-ionic hydrophil ointment | 3290             | 1              |
| Caelo           | Non-ionic hydrophil ointment | 3339             | 1              |
| Caelo           | Non-ionic hydrophil ointment | 13333401         | 4              |
| Caelo           | Non-ionic hydrophil ointment | 288043           | 1              |
| Caelo           | Non-ionic hydrophil ointment | 1700601          | 1              |
| Caelo           | Non-ionic hydrophil ointment | 290283           | 1              |
| Caelo           | Non-ionic hydrophil ointment | 4(17151101)      | 1              |

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| <b>Supplier</b>      | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------------------|--------------|----------------|
| Caelo                | Non-ionic hydrophil ointment | 170744015335 | 1              |
| Caelo                | Non-ionic hydrophil ointment | 20001755002  | 9              |
| Caelo                | Non-ionic hydrophil ointment | 16234901     | 11             |
| Caelo                | Non-ionic hydrophil ointment | 16179401     | 33             |
| Caelo                | Non-ionic hydrophil ointment | 3718Q-02543  | 1              |
| Caelo                | Non-ionic hydrophil ointment | 17151001     | 6              |
| Caelo                | Non-ionic hydrophil ointment | 12086902     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 12086802     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 14259101     | 4              |
| Caelo                | Non-ionic hydrophil ointment | 15286801     | 7              |
| Caelo                | Non-ionic hydrophil ointment | 5017A-02543  | 1              |
| Caelo                | Non-ionic hydrophil ointment | 20001755003  | 4              |
| Caelo                | Non-ionic hydrophil ointment | 14068901     | 2              |
| Caelo                | Non-ionic hydrophil ointment | 18006046     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 19083602     | 14             |
| Caelo                | Non-ionic hydrophil ointment | 14068401     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 12086901     | 2              |
| Caelo                | Non-ionic hydrophil ointment | 11273001     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 278694       | 1              |
| Caelo                | Non-ionic hydrophil ointment | 13045201     | 3              |
| Caelo                | Non-ionic hydrophil ointment | 13137801     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 16104401     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 170729183    | 1              |
| Caelo                | Non-ionic hydrophil ointment | 17294603     | 9              |
| Caelo                | Non-ionic hydrophil ointment | 19000473001  | 6              |
| Caelo                | Non-ionic hydrophil ointment | 20001244003  | 1              |
| Caelo                | Non-ionic hydrophil ointment | 17074501     | 8              |
| Caelo                | Non-ionic hydrophil ointment | 15027801     | 20             |
| Caelo                | Non-ionic hydrophil ointment | 15002601     | 4              |
| Caelo                | Non-ionic hydrophil ointment | 15105201     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 297634       | 1              |
| Caelo                | Non-ionic hydrophil ointment | 300481       | 2              |
| Caelo                | Non-ionic hydrophil ointment | 19083603     | 17             |
| Caelo                | Non-ionic hydrophil ointment | 19177503     | 18             |
| Caelo                | Non-ionic hydrophil ointment | 18200801     | 39             |
| Caelo                | Non-ionic hydrophil ointment | 14068801     | 2              |
| Caelo                | Non-ionic hydrophil ointment | 60115A       | 1              |
| Caelo                | Non-ionic hydrophil ointment | 15286601     | 3              |
| Caelo                | Non-ionic hydrophil ointment | 14068701     | 2              |
| Caelo                | Non-ionic hydrophil ointment | 15105301     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 15346401     | 11             |
| Caelo                | Non-ionic hydrophil ointment | 17151101     | 4              |
| Caelo                | Non-ionic hydrophil ointment | 18107903     | 8              |
| Caelo                | Non-ionic hydrophil ointment | 182200801    | 1              |
| Caelo                | Non-ionic hydrophil ointment | 21000658001  | 5              |
| Caelo                | Non-ionic hydrophil ointment | 21000658002  | 1              |
| Caelo                | Non-ionic hydrophil ointment | 19000474004  | 13             |
| Caelo                | Non-ionic hydrophil ointment | 288044       | 1              |
| Caelo                | Non-ionic hydrophil ointment | 16173501     | 11             |
| Caelo                | Non-ionic hydrophil ointment | 18253603     | 9              |
| Caelo                | Non-ionic hydrophil ointment | 19177502     | 16             |
| Caelo                | Non-ionic hydrophil ointment | 19000474001  | 12             |
| Caelo                | Non-ionic hydrophil ointment | 51121-02543  | 1              |
| Caeolo ,             | Non-ionic hydrophil ointment | 17086601     | 1              |
| Caelo                | Non-ionic hydrophil ointment | 19177504     | 6              |
| Caesar & Loretz      | Non-ionic hydrophil ointment | 19083604     | 1              |
| Caesar & Loretz GmbH | Non-ionic hydrophil ointment | 18253604     | 1              |
| Caesar & Loretz GmbH | Non-ionic hydrophil ointment | 18200801     | 2              |
| Caesar & Loretz GmbH | Non-ionic hydrophil ointment | 18253603     | 1              |
| Caesar & Loretz GmbH | Non-ionic hydrophil ointment | 19000802     | 2              |

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| <b>Supplier</b>            | <b>Substance</b>             | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19083602     | 4              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 18107902     | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19000803     | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19083603     | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19083604     | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19177502     | 5              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19177503     | 7              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19177504     | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19000474003  | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19000474001  | 5              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19000474004  | 10             |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 19000473001  | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20001244001  | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20001244002  | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20001244003  | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20001755002  | 4              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20003450003  | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20001755003  | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 21000658002  | 3              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 21000658001  | 2              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 20003450004  | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 21001432001  | 2              |
| Caesar & Loretz GmbH / ... | Non-ionic hydrophil ointment | 20001244001  | 2              |
| Caesar & Loretz GmbH Sa... | Non-ionic hydrophil ointment | 20001244001  | 2              |
| Caesar & Loretz GmbH/AHD   | Non-ionic hydrophil ointment | 19000803     | 1              |
| Caesar & Loretz GmbH/Al... | Non-ionic hydrophil ointment | 19000474003  | 1              |
| Caesar & Loretz GmbH/An... | Non-ionic hydrophil ointment | 19177503     | 2              |
| Caesar & Loretz GmbH/Gehe  | Non-ionic hydrophil ointment | 19083602     | 1              |
| Caesar & Loretz GmbH/Gehe  | Non-ionic hydrophil ointment | 20001244001  | 1              |
| Caesar & Loretz GmbH/GEHE  | Non-ionic hydrophil ointment | 19000802     | 1              |
| Caesar & Loretz GmbH/Ge... | Non-ionic hydrophil ointment | 19000804     | 1              |
| Caesar & Loretz GmbH/je... | Non-ionic hydrophil ointment | 21000658001  | 1              |
| Caesar & Loretz GmbH/Je... | Non-ionic hydrophil ointment | 19005914     | 2              |
| Caesar & Loretz GmbH/Kr... | Non-ionic hydrophil ointment | 19177502     | 1              |
| Caesar & Loretz GmbH/Ph... | Non-ionic hydrophil ointment | 21000658001  | 1              |
| Caesar & Loretz GmbH/Ph... | Non-ionic hydrophil ointment | 21001432001  | 1              |
| Caesar & Loretz GmbH/Sa... | Non-ionic hydrophil ointment | 19177502     | 1              |
| Caesar & Loretz GmbH/Sa... | Non-ionic hydrophil ointment | 20001755002  | 1              |
| Caesar & Loretz Hilden     | Non-ionic hydrophil ointment | 18200801     | 1              |
| Caesar & Loretz GmbH       | Non-ionic hydrophil ointment | 12352901     | 1              |
| Caesar/Noweda              | Non-ionic hydrophil ointment | 15346401     | 1              |
| Caesar-Loretz/Fiebig       | Non-ionic hydrophil ointment | 17294601     | 1              |
| Cealo                      | Non-ionic hydrophil ointment | 13138101     | 1              |
| Cealo                      | Non-ionic hydrophil ointment | 16179302     | 1              |
| Cealo/ Phoenix             | Non-ionic hydrophil ointment | 18200801     | 2              |
| Ebert & Jacobi             | Non-ionic hydrophil ointment | 17294601     | 1              |
| Ebert und Jacobi           | Non-ionic hydrophil ointment | 18200801     | 1              |
| Caelo                      | Non-ionic hydrophil ointment | 17074201     | 10             |
| Euro OTC                   | Non-ionic hydrophil ointment | 17200603     | 1              |
| Euro OTC                   | Non-ionic hydrophil ointment | 18253602     | 1              |
| Euro OTC                   | Non-ionic hydrophil ointment | 266631       | 1              |
| Euro OTC                   | Non-ionic hydrophil ointment | 17151301     | 1              |
| Euro OTC                   | Non-ionic hydrophil ointment | 311098       | 1              |
| Fagron                     | Non-ionic hydrophil ointment | 12223301     | 3              |
| Fagron                     | Non-ionic hydrophil ointment | 13045301     | 1              |
| Fagron                     | Non-ionic hydrophil ointment | 182053603    | 1              |
| Fagron                     | Non-ionic hydrophil ointment | 290282       | 1              |
| Fiebig                     | Non-ionic hydrophil ointment | 17200601     | 1              |
| Fiebig                     | Non-ionic hydrophil ointment | 17294602     | 1              |
| Fiebig                     | Non-ionic hydrophil ointment | 18107901     | 1              |

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| Supplier          | Substance                    | Batch       | Spectra |
|-------------------|------------------------------|-------------|---------|
| Fiebig            | Non-ionic hydrophil ointment | 18200801    | 1       |
| Bombastus         | Non-ionic hydrophil ointment | 20002611    | 4       |
| Gehe              | Non-ionic hydrophil ointment | 15027801    | 1       |
| Gehe              | Non-ionic hydrophil ointment | 16104401    | 1       |
| Gehe              | Non-ionic hydrophil ointment | 16179302    | 1       |
| Gehe              | Non-ionic hydrophil ointment | 18200802    | 1       |
| Gehe              | Non-ionic hydrophil ointment | 17200603    | 1       |
| Gehe              | Non-ionic hydrophil ointment | 19083602    | 1       |
| GEHE              | Non-ionic hydrophil ointment | 17200603    | 1       |
| GEHE              | Non-ionic hydrophil ointment | 18253602    | 1       |
| GEHE              | Non-ionic hydrophil ointment | 18253604    | 1       |
| GEHE              | Non-ionic hydrophil ointment | 19083602    | 1       |
| GEHE 10.03.2014   | Non-ionic hydrophil ointment | 13137901    | 1       |
| GEHE 23.09.2014   | Non-ionic hydrophil ointment | 14221301    | 1       |
| Henry Lamotte/AHD | Non-ionic hydrophil ointment | 17086501    | 1       |
| Ichthyol/Phoenix  | Non-ionic hydrophil ointment | 16179402    | 1       |
| Infetopharm       | Non-ionic hydrophil ointment | 18253604    | 1       |
| Kehr              | Non-ionic hydrophil ointment | 17294601    | 1       |
| Kehr              | Non-ionic hydrophil ointment | 18107902    | 1       |
| Kehr              | Non-ionic hydrophil ointment | 18253602    | 1       |
| Martinus-Apotheke | Non-ionic hydrophil ointment | 13138001    | 1       |
| noweda            | Non-ionic hydrophil ointment | 20002611    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 1812U-02543 | 1       |
| Noweda            | Non-ionic hydrophil ointment | 271980      | 1       |
| Noweda            | Non-ionic hydrophil ointment | 13138101    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 2122013c    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 16234801    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 16179302    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 17074601    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 17994601    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 17001326    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 18001523    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 18002338    | 1       |
| Noweda            | Non-ionic hydrophil ointment | 18003691    | 5       |
| Noweda            | Non-ionic hydrophil ointment | 20003238    | 1       |
| Caelo             | Non-ionic hydrophil ointment | 1333101     | 1       |
| Caelo             | Non-ionic hydrophil ointment | 19000803    | 9       |
| Caelo             | Non-ionic hydrophil ointment | 19083604    | 4       |
| Caelo             | Non-ionic hydrophil ointment | 20003450001 | 4       |
| Noweda08.06.2015  | Non-ionic hydrophil ointment | 15027801    | 1       |
| Phoenix           | Non-ionic hydrophil ointment | 16104501    | 2       |
| Phoenix           | Non-ionic hydrophil ointment | 17294601    | 1       |
| Caelo             | Non-ionic hydrophil ointment | 19000474003 | 2       |
| Phönix            | Non-ionic hydrophil ointment | 13045501    | 1       |
| Phönix            | Non-ionic hydrophil ointment | 3033640     | 1       |
| PHÖNIX            | Non-ionic hydrophil ointment | 17151302    | 1       |
| Caelo             | Non-ionic hydrophil ointment | 15287001    | 13      |
| Euro OTC          | Non-ionic hydrophil ointment | 14068601    | 3       |
| Phönix/Bionorica  | Non-ionic hydrophil ointment | 17200601    | 1       |
| Bombastus         | Non-ionic hydrophil ointment | 20001177    | 4       |
| Bombastus         | Non-ionic hydrophil ointment | 18200801    | 1       |
| Bombastus         | Non-ionic hydrophil ointment | 17086701    | 1       |
| Caelo             | Non-ionic hydrophil ointment | 16179402    | 3       |
| Euro OTC          | Non-ionic hydrophil ointment | 19000802    | 1       |
| Post-Apotheke     | Non-ionic hydrophil ointment | 13263701    | 2       |
| Sanacop           | Non-ionic hydrophil ointment | 15105101    | 1       |
| Sanacorp          | Non-ionic hydrophil ointment | 271980      | 1       |
| Sanacorp          | Non-ionic hydrophil ointment | 271981      | 1       |
| Sanacorp          | Non-ionic hydrophil ointment | 13045401    | 1       |
| Sanacorp          | Non-ionic hydrophil ointment | 13138001    | 1       |

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| Supplier  | Substance                    | Batch       | Spectra |
|-----------|------------------------------|-------------|---------|
| Sanacorp  | Non-ionic hydrophil ointment | 14068601    | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 288043      | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 15002901    | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 17086501    | 2       |
| Sanacorp  | Non-ionic hydrophil ointment | 17151301    | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 18200802    | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 18253603    | 1       |
| Sanacorp  | Non-ionic hydrophil ointment | 19000474001 | 1       |
| Caelo     | Non-ionic hydrophil ointment | 20004877    | 1       |
| Caelo     | Non-ionic hydrophil ointment | 12087001    | 3       |
| Caelo     | Non-ionic hydrophil ointment | 20001244002 | 5       |
| vdl       | Non-ionic hydrophil ointment | 11357601    | 2       |
| VDL       | Non-ionic hydrophil ointment | 13332901    | 1       |
| VDL       | Non-ionic hydrophil ointment | 19000802    | 1       |
| VDL       | Non-ionic hydrophil ointment | 1977503     | 1       |
| Caelo     | Non-ionic hydrophil ointment | 13333101    | 10      |
| Bombastus | Non-ionic hydrophil ointment | 300481      | 8       |
| Bombastus | Non-ionic hydrophil ointment | 295368      | 6       |
| Bombastus | Non-ionic hydrophil ointment |             | 1       |
| Caelo     | Non-ionic hydrophil ointment | 13138001    | 14      |
| Caelo     | Non-ionic hydrophil ointment | 13332901    | 8       |
| Caelo     | Non-ionic hydrophil ointment | 15151601    | 9       |
| Caelo     | Non-ionic hydrophil ointment |             | 3       |

- 239 822 spectra from 1121 *Apo-Ident* customers from a total of 46 720 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Non-ionic hydrophil ointment* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Non-ionic hydrophil ointment* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 700           | 0              | 63 239        |
| <b>Type B</b> | 0              | 1351          | 39             | 90 101        |
| <b>Type C</b> | 0              | 1342          | 199            | 239 822       |

The substance/substance group *Non-ionic hydrophil ointment* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.1429 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 97.1942 % (> 96.9784 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 87.0863 % (> 86.8916 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Non-ionic hydrophil ointment* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Base cream DAC                            | 5.00                   | 12.37                          |
| Psorisol base cream Audor®                | 15.20                  | —                              |
| Anionic hydrophilic cream DAB             | 17.67                  | —                              |
| Base cream, hydrophobic DAC               | 19.63                  | —                              |
| Lanette® ointment (conserved)             | 20.36                  | 19.13                          |
| Anionic hydrophilic cream with propyle... | 20.37                  | —                              |
| Eucerin® cum Aqua                         | 24.29                  | 17.74                          |
| Wool alcohol cream SR                     | 25.25                  | 10.15                          |
| Skin care ointment W/L SR                 | 28.52                  | —                              |
| Skin care ointment W/L SR (without pre... | 29.51                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)   | 30.25                  | —                              |
| Hydrophilic cream, non-ionic without p... | 39.37                  | —                              |
| Anionic hydrophlic cream without prese... | 42.81                  | —                              |
| Hydrophilic cream, non-ionic SR (NRF p... | 42.90                  | —                              |
| Wool alcohol cream DAB                    | 45.30                  | 18.29                          |
| Glycolic acid 70%                         | 45.36                  | —                              |
| Potash soap DAC                           | 54.02                  | —                              |
| ⋮                                         | ⋮                      | ⋮                              |
| 2-ethylhexyl laurate                      | >50                    | 154.84                         |
| Squalane                                  | >50                    | 173.63                         |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Non-ionic hydrophil ointment* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31001     | 31748               | 6.43                         | 15.49                           |
| 31227     | 35663               | 2.91                         | 15.30                           |
| 31451     | 31451               | 0.00                         | 15.33                           |
| 31748     | 31748               | 0.00                         | 12.76                           |
| 31749     | 31748               | 3.63                         | 15.20                           |
| 32088     | 32088               | 0.00                         | 14.47                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32105            | 31748                      | 4.79                                | 14.89                                  |
| 32726            | 35159                      | 4.47                                | 19.08                                  |
| 33360            | 33360                      | 0.00                                | 22.47                                  |
| 34010            | 34010                      | 0.00                                | 12.17                                  |
| 34856            | 34856                      | 0.00                                | 19.19                                  |
| 34857            | 34857                      | 0.00                                | 16.21                                  |
| 35100            | 35100                      | 0.00                                | 24.23                                  |
| 35159            | 35159                      | 0.00                                | 23.52                                  |
| 35526            | 35526                      | 0.00                                | 19.90                                  |
| 35663            | 35663                      | 0.00                                | 19.21                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Octyldodecanol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30867-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Octyldodecanol; Octyldodecanolum

### Special notes

When selecting the *Octyldodecanol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Octyldodecanol            | 7      | 3      | 270    |

## Second-stage model

For differentiation of the substance/substance group *Octyldodecanol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Octyldodecanol*:

| Supplier | Substance      | Batch    | Sample ID | Spectra | Certificate        |
|----------|----------------|----------|-----------|---------|--------------------|
| Caelo    | Octyldodecanol | 12165509 | 30867     | 40      | 20120711           |
| Caelo    | Octyldodecanol | 13360010 | 31330     | 40      | AR-15-FG-000314-01 |
| Caelo    | Octyldodecanol | 15135212 | 31753     | 60      | 20150506           |
| Caelo    | Octyldodecanol | 16095507 | 32958     | 40      | 20160421           |
| Caelo    | Octyldodecanol | 163127   | 33093     | 40      | 20161219*          |
| Caelo    | Octyldodecanol | 190136   | 34468     | 40      | 20190211*          |
| Caelo    | Octyldodecanol | 190961   | 34471     | 40      | 20190521*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 300 spectra of 7 reference samples from the substance/substance group *Octyldodecanol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 7 different batches.
- 63 639 spectra from a total of 1300 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Octyldodecanol*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch  | Sample ID | Spectra |
|----------|----------------|--------|-----------|---------|
| Caelo    | Octyldodecanol | 171381 | 34052     | 40      |
| Caelo    | Octyldodecanol | 181120 | 34220     | 40      |
| Caelo    | Octyldodecanol | 192693 | 34804     | 40      |

- 91371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 3672 spectra from 800 *Apo-Ident* customers from 282 batches from the substance/substance group *Octyldodecanol*.
- Among them are spectra of independent samples from 269 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance      | Batch           | Spectra |
|---------------------|----------------|-----------------|---------|
| A.H.D.              | Octyldodecanol | 13044007        | 1       |
| AHD                 | Octyldodecanol | 16312701        | 1       |
| AHD                 | Octyldodecanol | 18112008        | 1       |
| AHD                 | Octyldodecanol | 192693001       | 1       |
| AHD 09.04.2013      | Octyldodecanol | 12165521        | 1       |
| AHD 30.5 preis:6,07 | Octyldodecanol | 13360011//05R06 | 1       |
| AHD, 09.10.2013     | Octyldodecanol | 13044016        | 1       |
| Caelo               | Octyldodecanol | 14371716        | 12      |
| ALH                 | Octyldodecanol | 16099503        | 1       |
| ALH                 | Octyldodecanol | 16095503        | 1       |
| ALH                 | Octyldodecanol | 16095507        | 2       |
| ALH                 | Octyldodecanol | 16312701        | 2       |
| Alliance healthcare | Octyldodecanol | 13044013        | 1       |
| Alliance Healthcare | Octyldodecanol | 18112008        | 1       |
| Alliance Healthcare | Octyldodecanol | 18112006        | 1       |
| Allianz             | Octyldodecanol | 17273001        | 1       |
| Allianz             | Octyldodecanol | 18112001        | 3       |
| Anzag               | Octyldodecanol | 12165519        | 1       |
| Anzag               | Octyldodecanol | 15383005        | 1       |
| Anzag               | Octyldodecanol | 16095503        | 2       |
| Anzag               | Octyldodecanol | 16095507        | 1       |
| Anzag               | Octyldodecanol | 16312701        | 1       |
| Anzag               | Octyldodecanol | 18112001        | 1       |
| Anzag               | Octyldodecanol | 19096105        | 1       |
| Anzag/Gehe          | Octyldodecanol | 1707701         | 2       |
| Anzag/Henry Lamotte | Octyldodecanol | 14371711        | 1       |
| Beiersdorf/Anzag    | Octyldodecanol | 13044007        | 1       |
| Bombastus           | Octyldodecanol | 11060318        | 1       |
| Bombastus           | Octyldodecanol | 14371703        | 1       |
| Bombastus           | Octyldodecanol | 15383008        | 1       |

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| Supplier                 | Substance      | Batch         | Spectra |
|--------------------------|----------------|---------------|---------|
| Bombastus                | Octyldodecanol | 18112001      | 1       |
| Bombastus                | Octyldodecanol | 16095506      | 1       |
| BTC (BASF)               | Octyldodecanol | 22035655      | 5       |
| BTC Ch.Lief.: 0020304728 | Octyldodecanol | 41905Probe1/4 | 1       |
| BTC Ch.Lief.: 0020304728 | Octyldodecanol | 41905Probe4/4 | 1       |
| BTC Ch.Lief.: 0020304728 | Octyldodecanol | 41905Probe2/4 | 1       |
| BTC Ch.Lief.: 0020304728 | Octyldodecanol | 41905Probe3/4 | 1       |
| Caelo                    | Octyldodecanol | 13044016      | 17      |
| Caelo                    | Octyldodecanol | 11060319      | 2       |
| Caelo                    | Octyldodecanol | 11060305      | 1       |
| Caelo                    | Octyldodecanol | 11369003      | 7       |
| Caelo                    | Octyldodecanol | 11369004      | 3       |
| Caelo                    | Octyldodecanol | 26071208      | 1       |
| Caelo                    | Octyldodecanol | 11369016      | 8       |
| Caelo                    | Octyldodecanol | B11060317     | 1       |
| Caelo                    | Octyldodecanol | 11369012      | 2       |
| Caelo                    | Octyldodecanol | 12165506      | 3       |
| Caelo                    | Octyldodecanol | 12165519      | 8       |
| Caelo                    | Octyldodecanol | 13044002      | 10      |
| Caelo                    | Octyldodecanol | 13044007      | 8       |
| Caelo                    | Octyldodecanol | 13044013      | 18      |
| Caelo                    | Octyldodecanol | 13044015      | 9       |
| Caelo                    | Octyldodecanol | 12091304      | 1       |
| Caelo                    | Octyldodecanol | 13092013A     | 1       |
| Caelo                    | Octyldodecanol | 13222002      | 13      |
| Caelo                    | Octyldodecanol | 1322005       | 1       |
| Caelo                    | Octyldodecanol | 12111303      | 1       |
| Caelo                    | Octyldodecanol | 13222008      | 19      |
| Caelo                    | Octyldodecanol | 13360002      | 13      |
| Caelo                    | Octyldodecanol | 13222001      | 1       |
| Caelo                    | Octyldodecanol | 12011401      | 1       |
| Caelo                    | Octyldodecanol | 11012014A     | 1       |
| Caelo                    | Octyldodecanol | 13360005      | 7       |
| Caelo                    | Octyldodecanol | 13360008      | 14      |
| Caelo                    | Octyldodecanol | 24062014B     | 1       |
| Caelo                    | Octyldodecanol | 14130205      | 17      |
| Caelo                    | Octyldodecanol | 14130206      | 18      |
| Caelo                    | Octyldodecanol | 15092014B     | 1       |
| Caelo                    | Octyldodecanol | 31101416      | 1       |
| Caelo                    | Octyldodecanol | 8012015B      | 1       |
| Caelo                    | Octyldodecanol | 14158411      | 6       |
| Caelo                    | Octyldodecanol | 11052015A     | 1       |
| Caelo                    | Octyldodecanol | 14371712      | 1       |
| Caelo                    | Octyldodecanol | 15135205      | 1       |
| Caelo                    | Octyldodecanol | 17082015C     | 1       |
| Caelo                    | Octyldodecanol | 15135203      | 17      |
| Caelo                    | Octyldodecanol | 14371715      | 3       |
| Caelo                    | Octyldodecanol | 14371703      | 1       |
| Caelo                    | Octyldodecanol | 1513202       | 1       |
| Caelo                    | Octyldodecanol | 15135213      | 75      |
| Caelo                    | Octyldodecanol | 15383003      | 9       |
| Caelo                    | Octyldodecanol | 151352        | 1       |
| Caelo                    | Octyldodecanol | 1538005       | 2       |
| Caelo                    | Octyldodecanol | 1538004       | 3       |
| Caelo                    | Octyldodecanol | 153830        | 3       |
| Caelo                    | Octyldodecanol | 153830004     | 1       |
| Caelo                    | Octyldodecanol | 15383008      | 36      |
| Caelo                    | Octyldodecanol | 15383009      | 31      |
| Caelo                    | Octyldodecanol | 15383002      | 3       |
| Caelo                    | Octyldodecanol | 16095502      | 25      |

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| Supplier | Substance      | Batch       | Spectra |
|----------|----------------|-------------|---------|
| Caelo    | Octyldodecanol | 16095503    | 50      |
| Caelo    | Octyldodecanol | 1538009     | 1       |
| Caelo    | Octyldodecanol | 16095506    | 52      |
| Caelo    | Octyldodecanol | 1583009     | 1       |
| Caelo    | Octyldodecanol | 160955      | 2       |
| Caelo    | Octyldodecanol | 16095511    | 72      |
| Caelo    | Octyldodecanol | 1609550     | 1       |
| Caelo    | Octyldodecanol | 1609551     | 1       |
| Caelo    | Octyldodecanol | 16312706    | 34      |
| Caelo    | Octyldodecanol | 16312704    | 5       |
| Caelo    | Octyldodecanol | 17138102    | 97      |
| Caelo    | Octyldodecanol | 27101712    | 1       |
| Caelo    | Octyldodecanol | 17138103    | 12      |
| Caelo    | Octyldodecanol | 4111712     | 1       |
| Caelo    | Octyldodecanol | 1738102     | 2       |
| Caelo    | Octyldodecanol | 1707771     | 1       |
| Caelo    | Octyldodecanol | 17273001    | 100     |
| Caelo    | Octyldodecanol | 187273002   | 1       |
| Caelo    | Octyldodecanol | 1/2/3002    | 1       |
| Caelo    | Octyldodecanol | 17273008    | 70      |
| Caelo    | Octyldodecanol | 1273001     | 1       |
| Caelo    | Octyldodecanol | 17273006    | 1       |
| Caelo    | Octyldodecanol | 18112001    | 91      |
| Caelo    | Octyldodecanol | 160112-01   | 1       |
| Caelo    | Octyldodecanol | 12091806    | 1       |
| Caelo    | Octyldodecanol | 250918A     | 1       |
| Caelo    | Octyldodecanol | 18112006    | 95      |
| Caelo    | Octyldodecanol | 19013603    | 110     |
| Caelo    | Octyldodecanol | 19013610    | 47      |
| Caelo    | Octyldodecanol | 190136404   | 1       |
| Caelo    | Octyldodecanol | 1901360     | 1       |
| Caelo    | Octyldodecanol | 19096102    | 47      |
| Caelo    | Octyldodecanol | 19096103    | 6       |
| Caelo    | Octyldodecanol | 190961001   | 36      |
| Caelo    | Octyldodecanol | 190696102   | 1       |
| Caelo    | Octyldodecanol | 2001252001  | 1       |
| Caelo    | Octyldodecanol | 20003742004 | 4       |
| Caelo    | Octyldodecanol | CHB19096105 | 1       |
| Caelo    | Octyldodecanol | 19013609    | 42      |
| Caelo    | Octyldodecanol | 190961007   | 1       |
| Caelo    | Octyldodecanol | 13222013    | 1       |
| Caelo    | Octyldodecanol | 14158410    | 10      |
| Caelo    | Octyldodecanol | 9013603     | 1       |
| Caelo    | Octyldodecanol | 1695511     | 1       |
| Caelo    | Octyldodecanol | 188112001   | 1       |
| Caelo    | Octyldodecanol | 19013602    | 58      |
| Caelo    | Octyldodecanol | CE11350022  | 2       |
| Caelo    | Octyldodecanol | 18112008    | 57      |
| Caelo    | Octyldodecanol | 14130207    | 30      |
| Caelo    | Octyldodecanol | 20003742006 | 1       |
| Caelo    | Octyldodecanol | 15135207    | 9       |
| Caelo    | Octyldodecanol | 163112701   | 1       |
| Caelo    | Octyldodecanol | 2000125001  | 2       |
| Caelo    | Octyldodecanol | 13360012    | 14      |
| Caelo    | Octyldodecanol | 13044009    | 14      |
| Caelo    | Octyldodecanol | 14130204    | 5       |
| Caelo    | Octyldodecanol | 3314E-02875 | 1       |
| Caelo    | Octyldodecanol | 1718102     | 1       |
| Caelo    | Octyldodecanol | 14158402    | 18      |
| Caelo    | Octyldodecanol | 13044005    | 13      |

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| Supplier | Substance      | Batch              | Spectra |
|----------|----------------|--------------------|---------|
| Caelo    | Octyldodecanol | 13222010           | 1       |
| Caelo    | Octyldodecanol | 18112001P-180820-1 | 1       |
| Caelo    | Octyldodecanol | 18112001P-190312-4 | 1       |
| Caelo    | Octyldodecanol | 10281907           | 1       |
| Caelo    | Octyldodecanol | 20001252001        | 20      |
| Caelo    | Octyldodecanol | 1727001            | 1       |
| Caelo    | Octyldodecanol | 33(18112001)       | 1       |
| Caelo    | Octyldodecanol | 34(19013602)       | 1       |
| Caelo    | Octyldodecanol | 35(19013602)       | 1       |
| Caelo    | Octyldodecanol | 17138105           | 48      |
| Caelo    | Octyldodecanol | 17273002           | 137     |
| Caelo    | Octyldodecanol | 192693009          | 3       |
| Caelo    | Octyldodecanol | 14135206           | 1       |
| Caelo    | Octyldodecanol | 4817E-02875        | 1       |
| Caelo    | Octyldodecanol | 3313               | 1       |
| Caelo    | Octyldodecanol | 13222005           | 4       |
| Caelo    | Octyldodecanol | 13360009           | 2       |
| Caelo    | Octyldodecanol | 14371705           | 4       |
| Caelo    | Octyldodecanol | 1513513            | 1       |
| Caelo    | Octyldodecanol | 717Q-02875         | 1       |
| Caelo    | Octyldodecanol | 13222011           | 9       |
| Caelo    | Octyldodecanol | 14158401           | 2       |
| Caelo    | Octyldodecanol | 15135211           | 11      |
| Caelo    | Octyldodecanol | 12165517           | 2       |
| Caelo    | Octyldodecanol | 13360001           | 3       |
| Caelo    | Octyldodecanol | 29(17077701)       | 1       |
| Caelo    | Octyldodecanol | 18112004           | 10      |
| Caelo    | Octyldodecanol | 13360011           | 15      |
| Caelo    | Octyldodecanol | 11369021           | 3       |
| Caelo    | Octyldodecanol | 516A-02875         | 1       |
| Caelo    | Octyldodecanol | 4916Q-02875        | 1       |
| Caelo    | Octyldodecanol | 30(17273001)       | 1       |
| Caelo    | Octyldodecanol | 31(17273001)       | 1       |
| Caelo    | Octyldodecanol | 32(18112001)       | 1       |
| Caelo    | Octyldodecanol | 18112002           | 64      |
| Caelo    | Octyldodecanol | 1812001            | 1       |
| Caelo    | Octyldodecanol | 9013609            | 1       |
| Caelo    | Octyldodecanol | 198693001          | 1       |
| Caelo    | Octyldodecanol | 4214U-02875        | 1       |
| Caelo    | Octyldodecanol | 11369017           | 5       |
| Caelo    | Octyldodecanol | 12165520           | 9       |
| Caelo    | Octyldodecanol | 2513A-02875        | 1       |
| Caelo    | Octyldodecanol | 13360006           | 14      |
| Caelo    | Octyldodecanol | 14371706           | 16      |
| Caelo    | Octyldodecanol | 1431707            | 1       |
| Caelo    | Octyldodecanol | 14371711           | 25      |
| Caelo    | Octyldodecanol | 1538003            | 1       |
| Caelo    | Octyldodecanol | 1583004            | 1       |
| Caelo    | Octyldodecanol | 17138109           | 30      |
| Caelo    | Octyldodecanol | 17273038           | 1       |
| Caelo    | Octyldodecanol | 18112020           | 1       |
| Caelo    | Octyldodecanol | 1901610            | 1       |
| Caelo    | Octyldodecanol | 190960105          | 1       |
| Caelo    | Octyldodecanol | 200012522001       | 1       |
| Caelo    | Octyldodecanol | 192693001          | 38      |
| Caelo    | Octyldodecanol | 13E07-N03          | 1       |
| Caelo    | Octyldodecanol | 13L02-B05-288974   | 1       |
| Caelo    | Octyldodecanol | 13360003           | 8       |
| Caelo    | Octyldodecanol | 11060317           | 1       |
| Caelo    | Octyldodecanol | 11369014           | 2       |

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| Supplier        | Substance      | Batch             | Spectra |
|-----------------|----------------|-------------------|---------|
| Caelo           | Octyldodecanol | 2xa13360002       | 1       |
| Caelo           | Octyldodecanol | 16312707          | 27      |
| Caelo           | Octyldodecanol | 82695089          | 1       |
| Caelo           | Octyldodecanol | 2613M-02875       | 2       |
| Caelo           | Octyldodecanol | 1314I-02875       | 1       |
| Caelo           | Octyldodecanol | 143710706         | 1       |
| Caelo           | Octyldodecanol | 1098722           | 2       |
| Caelo           | Octyldodecanol | 13044040          | 1       |
| Caelo           | Octyldodecanol | 13222003          | 17      |
| Caelo           | Octyldodecanol | 14371707          | 6       |
| Caelo           | Octyldodecanol | 14371714          | 7       |
| Caelo           | Octyldodecanol | 15383004          | 28      |
| Caelo           | Octyldodecanol | 16095508          | 5       |
| Caelo           | Octyldodecanol | 16312710          | 12      |
| Caelo           | Octyldodecanol | 1707701           | 1       |
| Caelo           | Octyldodecanol | 17138110          | 3       |
| Caelo           | Octyldodecanol | 1801190D/17138109 | 1       |
| Caelo           | Octyldodecanol | 1802080D/17138109 | 1       |
| Caelo           | Octyldodecanol | 18112011          | 84      |
| Caelo           | Octyldodecanol | 18112010          | 52      |
| Caelo           | Octyldodecanol | 19013604          | 9       |
| Caelo           | Octyldodecanol | 20003742003       | 6       |
| Fagron          | Octyldodecanol | 18112004          | 1       |
| Caelo           | Octyldodecanol | 4113A2875         | 1       |
| Caelo           | Octyldodecanol | 12165511          | 9       |
| Caelo           | Octyldodecanol | 14158407          | 2       |
| Caelo           | Octyldodecanol | 163122701         | 1       |
| Caelo           | Octyldodecanol | 12165515          | 13      |
| Caelo           | Octyldodecanol | 16095501          | 3       |
| Caelo           | Octyldodecanol | 16312701          | 85      |
| Caelo           | Octyldodecanol | 17077701          | 25      |
| Caelo           | Octyldodecanol | 190113602         | 1       |
| Caelo           | Octyldodecanol | 19096105          | 68      |
| Caelo           | Octyldodecanol | 192693002         | 59      |
| Caelo           | Octyldodecanol | 192693004         | 5       |
| Caelo           | Octyldodecanol | 19013601          | 1       |
| Caelo           | Octyldodecanol | 12165514          | 4       |
| Caelo           | Octyldodecanol | 12165521          | 10      |
| Caelo           | Octyldodecanol | 13044010          | 12      |
| Caelo           | Octyldodecanol | 133360010         | 1       |
| Caelo           | Octyldodecanol | 14130202          | 1       |
| Caelo           | Octyldodecanol | 14371710          | 5       |
| Caelo           | Octyldodecanol | 15135206          | 35      |
| Caelo           | Octyldodecanol | 15383005          | 53      |
| Caelo           | Octyldodecanol | 7138109           | 1       |
| Caelo           | Octyldodecanol | 190136202         | 1       |
| Caelo           | Octyldodecanol | 20001252002       | 10      |
| Caelo           | Octyldodecanol | 4913M-02875       | 1       |
| Caelo           | Octyldodecanol | 1716I-02875       | 1       |
| Caelo           | Octyldodecanol | 19066105          | 1       |
| Caelo           | Octyldodecanol | 1535203           | 1       |
| Caelo           | Octyldodecanol | 1471714           | 1       |
| Caeo            | Octyldodecanol | 14130205          | 1       |
| Caeol           | Octyldodecanol | 6022014B          | 1       |
| Caeol/Noweda    | Octyldodecanol | 17273008          | 1       |
| Caeol/Phoenix   | Octyldodecanol | 15383005          | 1       |
| Caeol/Phönix    | Octyldodecanol | 16312706          | 1       |
| Caeolo / Phönix | Octyldodecanol | 16312707          | 1       |
| Caeolo/Noweda   | Octyldodecanol | 15383008          | 1       |
| Caeolo/Phoenix  | Octyldodecanol | 18112008          | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caerlo/Sanacorp            | Octyldodecanol   | 18112006     | 1              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 17273002     | 2              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 17273008     | 2              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 19013603     | 1              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 19096102     | 1              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 190961001    | 1              |
| Caesar & Lorenz GmbH       | Octyldodecanol   | 192693002    | 2              |
| Caesar & Loretz            | Octyldodecanol   | 16095508     | 1              |
| Caesar & Loretz            | Octyldodecanol   | 16312707     | 1              |
| Caesar & Loretz            | Octyldodecanol   | 17273008     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 13222008     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 13360010     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 15135206     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 16095511     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 16312701     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 17138105     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 17273002     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112001     | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112008     | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112006     | 5              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112011     | 13             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112002     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112010     | 3              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013601     | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 18112012     | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013602     | 15             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013603     | 22             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013604     | 3              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013610     | 11             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19013609     | 6              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19096105     | 21             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19096102     | 11             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 190961001    | 7              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 192693001    | 16             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 192693002    | 19             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 192693004    | 10             |
| Caesar & Loretz GmbH       | Octyldodecanol   | 19096103     | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 192693005    | 6              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20001252001  | 5              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20001252002  | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20003742003  | 2              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 192693009    | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20003742004  | 3              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20003742006  | 1              |
| Caesar & Loretz GmbH       | Octyldodecanol   | 20003742007  | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 192693002    | 2              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 17138105     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 17273008     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 18112002     | 2              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 18112010     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 16095507     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 17273002     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 19096102     | 2              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 20001252001  | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 19013603     | 1              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 19096102     | 3              |
| Caesar & Loretz GmbH / ... | Octyldodecanol   | 19096105     | 1              |
| Caesar & Loretz GmbH, P... | Octyldodecanol   | 18112002     | 1              |
| Caesar & Loretz GmbH/An... | Octyldodecanol   | 19096105     | 1              |
| Caesar & Loretz GmbH/Fi... | Octyldodecanol   | 19013601     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH/Fi... | Octyldodecanol   | 19013603     | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 19013609     | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 19013610     | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 19096102     | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 192693001    | 2              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 19096105     | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 192693002    | 1              |
| Caesar & Loretz GmbH/Gehe  | Octyldodecanol   | 20001252001  | 1              |
| Caesar & Loretz GmbH/Ge... | Octyldodecanol   | 20001252001  | 1              |
| Caesar & Loretz GmbH/Je... | Octyldodecanol   | 190961001    | 3              |
| Caesar & Loretz GmbH/Je... | Octyldodecanol   | 192693002    | 2              |
| Caesar & Loretz GmbH/Kehr  | Octyldodecanol   | 190961001    | 2              |
| Caesar & Loretz GmbH/Kehr  | Octyldodecanol   | 192693002    | 3              |
| Caesar & Loretz GmbH/Kehr  | Octyldodecanol   | 20001252001  | 1              |
| Caesar & Loretz GmbH/Kr... | Octyldodecanol   | 19013604     | 2              |
| Caesar & Loretz GmbH/No... | Octyldodecanol   | 19013603     | 3              |
| Caesar & Loretz GmbH/No... | Octyldodecanol   | 19013609     | 1              |
| Caesar & Loretz GmbH/No... | Octyldodecanol   | 19096105     | 1              |
| Caesar & Loretz GmbH/NO... | Octyldodecanol   | 18112008     | 1              |
| Caesar & Loretz GmbH/Ph... | Octyldodecanol   | 19013602     | 1              |
| Caesar & Loretz GmbH/Ph... | Octyldodecanol   | 19096105     | 1              |
| Caesar & Loretz GmbH/Ph... | Octyldodecanol   | 20001252002  | 1              |
| Caesar & Loretz GmbH/Ph... | Octyldodecanol   | 20003742003  | 1              |
| Caesar & Loretz GmbH/Ph... | Octyldodecanol   | 19096102     | 1              |
| Caesar & Loretz GmbH/Sa... | Octyldodecanol   | 20003742006  | 1              |
| Caesar & Loretz GmbH-Ph... | Octyldodecanol   | 19096102     | 1              |
| Caesar & Loretz Hilden/... | Octyldodecanol   | 192693001    | 1              |
| Caesar & Loretz/ Noweda    | Octyldodecanol   | 13044009     | 1              |
| Caesar & Loretz/AHC        | Octyldodecanol   | 16095503     | 1              |
| Caesar & Loretz/Noweda     | Octyldodecanol   | 16095503     | 2              |
| Caesar und Loretz GmbH     | Octyldodecanol   | 19013602     | 2              |
| Caesar&Lorenz / Gehe       | Octyldodecanol   | 1900961001   | 1              |
| Caesar&Loretz              | Octyldodecanol   | 16095502     | 1              |
| Caesar&Loretz GmbH         | Octyldodecanol   | 15383004     | 1              |
| Caesar&Loretz GmbH         | Octyldodecanol   | 18112006     | 1              |
| Caesar&Loretz GmbH,09.0... | Octyldodecanol   | 16095507     | 1              |
| Caesar&lorenz,Phoenix      | Octyldodecanol   | 13044016     | 1              |
| Caesar&lorenz,Phoenix      | Octyldodecanol   | 13360006     | 1              |
| Caesar&lorenz,Phoenix      | Octyldodecanol   | 14371711     | 1              |
| caesar&lorenz,Phönix       | Octyldodecanol   | 15135206     | 1              |
| Caesar/Lorenz              | Octyldodecanol   | 13044009     | 1              |
| Caesar/Noweda              | Octyldodecanol   | 13044009     | 1              |
| Caesar/Noweda              | Octyldodecanol   | 13222010     | 1              |
| Caesar/Noweda              | Octyldodecanol   | 15135207     | 1              |
| Caolo                      | Octyldodecanol   | 15383005     | 1              |
| Cealo                      | Octyldodecanol   | 16095503     | 1              |
| Cealo                      | Octyldodecanol   | 18112002     | 1              |
| Cealo / Noweda             | Octyldodecanol   | 13222008     | 1              |
| Cealo/Anzag                | Octyldodecanol   | 16312701     | 2              |
| Cealo/Gehe                 | Octyldodecanol   | 15135212     | 2              |
| Cealo/Noweda               | Octyldodecanol   | 17138102     | 1              |
| Cealo/Noweda               | Octyldodecanol   | 17273008     | 1              |
| Cealo/Phoenix              | Octyldodecanol   | 19013609     | 1              |
| E-Plus                     | Octyldodecanol   | 18112001     | 1              |
| Euro OTC                   | Octyldodecanol   | 13044015     | 1              |
| Euro OTC                   | Octyldodecanol   | 17273003     | 3              |
| Euro OTC                   | Octyldodecanol   | 15383004     | 1              |
| Euro OTC                   | Octyldodecanol   | 16312701     | 1              |
| Euro OTC                   | Octyldodecanol   | 16095511     | 1              |
| Euro OTC                   | Octyldodecanol   | 16095506     | 1              |

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| Supplier    | Substance      | Batch            | Spectra |
|-------------|----------------|------------------|---------|
| Euro/Phönix | Octyldodecanol | 15383009         | 1       |
| Fagron      | Octyldodecanol | 200714112-2      | 1       |
| Fagron      | Octyldodecanol | 12J04-N01        | 3       |
| Fagron      | Octyldodecanol | 12C31-N03        | 1       |
| Fagron      | Octyldodecanol | 13E07-N03        | 3       |
| Fagron      | Octyldodecanol | 13L02-B05-288975 | 1       |
| Fagron      | Octyldodecanol | 14E06-B02-301705 | 2       |
| Fagron      | Octyldodecanol | 15E06-B02-30170  | 1       |
| Fagron      | Octyldodecanol | 16G20-B99-324356 | 12      |
| Fagron      | Octyldodecanol | 17273002         | 3       |
| Fagron      | Octyldodecanol | 17273008         | 1       |
| Fagron      | Octyldodecanol | 15383004         | 1       |
| Fagron      | Octyldodecanol | 14E06-B02-293745 | 1       |
| Fagron      | Octyldodecanol | 14E06-B02-293746 | 1       |
| Fagron      | Octyldodecanol | 14E06-B02-30170  | 1       |
| Fagron      | Octyldodecanol | 11J13-N05        | 5       |
| Fagron      | Octyldodecanol | 18112011         | 2       |
| Fagron      | Octyldodecanol | 10598578         | 1       |
| Fagron      | Octyldodecanol | 16312701         | 1       |
| Fagron      | Octyldodecanol | 14e06-b02-293745 | 1       |
| Fagron      | Octyldodecanol | 15135213         | 1       |
| Fagron      | Octyldodecanol | 13L02-B05        | 2       |
| Fagron      | Octyldodecanol | 14E06-B02        | 5       |
| Fagron      | Octyldodecanol | 14E06-B02-301706 | 1       |
| Fagron      | Octyldodecanol | 17138102         | 1       |
| Fagron      | Octyldodecanol | 18112008         | 1       |
| Fargon      | Octyldodecanol | 11C14-N14        | 1       |
| Fiebig      | Octyldodecanol | 17273008         | 1       |
| Fiebig      | Octyldodecanol | 18112002         | 1       |
| Fiebig      | Octyldodecanol | 18112011         | 2       |
| Fresenius   | Octyldodecanol | 300615100        | 1       |
| gehe        | Octyldodecanol | 17138109         | 1       |
| gehe        | Octyldodecanol | 19096105         | 2       |
| Gehe        | Octyldodecanol | 11369012         | 1       |
| Gehe        | Octyldodecanol | 11369021         | 1       |
| Gehe        | Octyldodecanol | 12165515         | 1       |
| Gehe        | Octyldodecanol | 12165519         | 1       |
| Gehe        | Octyldodecanol | 12165506         | 1       |
| Gehe        | Octyldodecanol | 13044013         | 1       |
| Gehe        | Octyldodecanol | 13360003         | 1       |
| Gehe        | Octyldodecanol | 13360006         | 1       |
| Gehe        | Octyldodecanol | 13360012         | 1       |
| Gehe        | Octyldodecanol | 14371711         | 1       |
| Gehe        | Octyldodecanol | 15135213         | 2       |
| Gehe        | Octyldodecanol | 15383009         | 1       |
| Gehe        | Octyldodecanol | 16095502         | 1       |
| Gehe        | Octyldodecanol | 16312701         | 3       |
| Gehe        | Octyldodecanol | 16095503         | 1       |
| Gehe        | Octyldodecanol | 17077701         | 1       |
| Gehe        | Octyldodecanol | 17138105         | 2       |
| Gehe        | Octyldodecanol | 17138102         | 2       |
| Gehe        | Octyldodecanol | 17138109         | 2       |
| Gehe        | Octyldodecanol | 17273001         | 5       |
| Gehe        | Octyldodecanol | 17273008         | 2       |
| Gehe        | Octyldodecanol | 17273002         | 1       |
| Gehe        | Octyldodecanol | 18112002         | 3       |
| Gehe        | Octyldodecanol | 18112001         | 1       |
| Gehe        | Octyldodecanol | 18112010         | 1       |
| Gehe        | Octyldodecanol | 19013602         | 5       |
| Gehe        | Octyldodecanol | 19013609         | 1       |

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| Supplier                   | Substance      | Batch       | Spectra |
|----------------------------|----------------|-------------|---------|
| Gehe                       | Octyldodecanol | 19096101    | 1       |
| Gehe                       | Octyldodecanol | 192693001   | 1       |
| Gehe                       | Octyldodecanol | 19096105    | 1       |
| GEHE                       | Octyldodecanol | 16095507    | 1       |
| GEHE                       | Octyldodecanol | 16312701    | 1       |
| GEHE                       | Octyldodecanol | 1098685     | 1       |
| GEHE                       | Octyldodecanol | 17273002    | 1       |
| GEHE                       | Octyldodecanol | 17273008    | 3       |
| GEHE                       | Octyldodecanol | 19013603    | 1       |
| GEHE                       | Octyldodecanol | 19013609    | 1       |
| Gehe amax                  | Octyldodecanol | 15135211    | 1       |
| Caelo                      | Octyldodecanol | 1265515     | 1       |
| Hedinger / Noweda          | Octyldodecanol | 17273001    | 1       |
| Hedinger/Noweda            | Octyldodecanol | 17138102    | 3       |
| Henry Lamotte/Noweda       | Octyldodecanol | 17273003    | 4       |
| Ichthyol/Phönix            | Octyldodecanol | 16095503    | 1       |
| Ichthyol-Gesellschaft      | Octyldodecanol | 16095501    | 1       |
| Kehr                       | Octyldodecanol | 16312707    | 1       |
| Kehr                       | Octyldodecanol | 17138102    | 1       |
| Kehr                       | Octyldodecanol | 1098722     | 1       |
| Kehr                       | Octyldodecanol | 17273008    | 3       |
| Klenk                      | Octyldodecanol | 13360003    | 1       |
| Krieger                    | Octyldodecanol | 13360006    | 1       |
| Krieger                    | Octyldodecanol | 16312701    | 1       |
| L12                        | Octyldodecanol | 16095507    | 1       |
| Nachprüfung                | Octyldodecanol | 1018J-02875 | 1       |
| Nachprüfung von Juni 2018  | Octyldodecanol | 14371716    | 1       |
| Noweda                     | Octyldodecanol | 21022171/7  | 1       |
| Noweda                     | Octyldodecanol | 1216551     | 1       |
| Noweda                     | Octyldodecanol | 12165515    | 1       |
| Noweda                     | Octyldodecanol | 13044005    | 1       |
| Noweda                     | Octyldodecanol | 13044016    | 1       |
| Noweda                     | Octyldodecanol | 13044013    | 1       |
| Noweda                     | Octyldodecanol | 13222003    | 1       |
| Noweda                     | Octyldodecanol | 13222008    | 1       |
| Noweda                     | Octyldodecanol | 13360002    | 1       |
| Noweda                     | Octyldodecanol | 13360003    | 1       |
| Noweda                     | Octyldodecanol | 13360012    | 1       |
| Noweda                     | Octyldodecanol | 14371705    | 1       |
| Noweda                     | Octyldodecanol | 15135213    | 1       |
| Noweda                     | Octyldodecanol | 15383009    | 1       |
| Noweda                     | Octyldodecanol | 16095511    | 3       |
| Noweda                     | Octyldodecanol | 16312701    | 1       |
| Noweda                     | Octyldodecanol | 17138102    | 1       |
| Noweda                     | Octyldodecanol | 17138103    | 1       |
| Noweda                     | Octyldodecanol | 17138105    | 1       |
| Noweda                     | Octyldodecanol | 17273001    | 2       |
| Noweda                     | Octyldodecanol | 18112001    | 1       |
| Noweda                     | Octyldodecanol | 18112004    | 2       |
| Noweda                     | Octyldodecanol | 18112011    | 2       |
| Noweda 10.07.2015          | Octyldodecanol | 14371714    | 1       |
| Noweda/ Caesar&Lorenz G... | Octyldodecanol | 19013609    | 1       |
| Fagron                     | Octyldodecanol | 12C21-N03   | 3       |
| Fagron                     | Octyldodecanol | CE11350022  | 1       |
| Caelo                      | Octyldodecanol | 17273003    | 16      |
| Caelo                      | Octyldodecanol | 192693005   | 8       |
| P.W.Beyvers                | Octyldodecanol | 18112001    | 1       |
| Pharmamacher/Noweda        | Octyldodecanol | 18112001    | 1       |
| phoenix                    | Octyldodecanol | 19096102    | 1       |
| Phoenix                    | Octyldodecanol | 13360006    | 1       |

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| Supplier                  | Substance      | Batch            | Spectra |
|---------------------------|----------------|------------------|---------|
| Phoenix                   | Octyldodecanol | 14130207         | 1       |
| Phoenix                   | Octyldodecanol | 14158411         | 1       |
| Phoenix                   | Octyldodecanol | 15383009         | 1       |
| Phoenix                   | Octyldodecanol | 16095503         | 1       |
| Phoenix                   | Octyldodecanol | 16312701         | 3       |
| Phoenix                   | Octyldodecanol | 17138102         | 1       |
| Phoenix                   | Octyldodecanol | 17273002         | 1       |
| Phoenix                   | Octyldodecanol | 17273008         | 1       |
| Phoenix                   | Octyldodecanol | 18112001         | 3       |
| Phoenix                   | Octyldodecanol | 18112008         | 2       |
| Phoenix                   | Octyldodecanol | 18112006         | 1       |
| Phoenix                   | Octyldodecanol | 19013603         | 3       |
| Phoenix                   | Octyldodecanol | 19013602         | 2       |
| Phoenix                   | Octyldodecanol | 19096105         | 3       |
| PHOENIX 30.06.2014        | Octyldodecanol | 13360011         | 1       |
| Phoenix WE 22.03.17 EK... | Octyldodecanol | 16095511         | 1       |
| Phoenix/Fargon            | Octyldodecanol | 12J04-N01        | 1       |
| Phönix                    | Octyldodecanol | 12J04-N01        | 1       |
| Phönix                    | Octyldodecanol | 12165521         | 3       |
| Phönix                    | Octyldodecanol | 13044005         | 1       |
| Phönix                    | Octyldodecanol | 13222008         | 1       |
| Phönix                    | Octyldodecanol | 14130206         | 1       |
| Phönix                    | Octyldodecanol | 1538009          | 1       |
| Phönix                    | Octyldodecanol | 16095506         | 1       |
| Phönix                    | Octyldodecanol | 17077701         | 1       |
| Phönix                    | Octyldodecanol | 17138105         | 1       |
| Phönix                    | Octyldodecanol | 17138109         | 1       |
| Phönix                    | Octyldodecanol | 1098722          | 1       |
| Phönix                    | Octyldodecanol | 17273002         | 2       |
| Phönix                    | Octyldodecanol | 17273001         | 2       |
| Phönix                    | Octyldodecanol | 3175             | 1       |
| Phönix                    | Octyldodecanol | 18112002         | 2       |
| Phönix                    | Octyldodecanol | 18112008         | 4       |
| Phönix                    | Octyldodecanol | 20001252002      | 1       |
| Phönix                    | Octyldodecanol | 20001252001      | 1       |
| Phönix 08.11.12           | Octyldodecanol | 11369021         | 1       |
| Phönix Gotha              | Octyldodecanol | 13044002         | 1       |
| Phönix Gotha              | Octyldodecanol | 18112008         | 1       |
| Phönix Gotha              | Octyldodecanol | 19013603         | 1       |
| Phönix W.E:27.02.18 E...  | Octyldodecanol | 17273001         | 1       |
| Caelo                     | Octyldodecanol | 18112012         | 2       |
| sanacorb                  | Octyldodecanol | 18112001         | 2       |
| sanacorp                  | Octyldodecanol | 14130207         | 2       |
| sanacorp                  | Octyldodecanol | 14371706         | 1       |
| Sanacorp                  | Octyldodecanol | 12165514         | 2       |
| Sanacorp                  | Octyldodecanol | 13044002         | 1       |
| Sanacorp                  | Octyldodecanol | 13044005         | 2       |
| Sanacorp                  | Octyldodecanol | 13E07-N07        | 1       |
| Sanacorp                  | Octyldodecanol | 13222003         | 4       |
| Sanacorp                  | Octyldodecanol | 12142726         | 1       |
| Sanacorp                  | Octyldodecanol | AKD31            | 1       |
| Sanacorp                  | Octyldodecanol | 13222002         | 1       |
| Sanacorp                  | Octyldodecanol | 13222008         | 1       |
| Sanacorp                  | Octyldodecanol | 13360006         | 1       |
| Sanacorp                  | Octyldodecanol | 13102-b05-288974 | 1       |
| Sanacorp                  | Octyldodecanol | 14371711         | 1       |
| Sanacorp                  | Octyldodecanol | 14371716         | 1       |
| Sanacorp                  | Octyldodecanol | 17138102         | 3       |
| Sanacorp                  | Octyldodecanol | 17138105         | 1       |
| Sanacorp                  | Octyldodecanol | 17273001         | 1       |

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| Supplier                   | Substance      | Batch     | Spectra |
|----------------------------|----------------|-----------|---------|
| Sanacorp                   | Octyldodecanol | 18112002  | 1       |
| Sanacorp                   | Octyldodecanol | 18112008  | 1       |
| Sanacorp                   | Octyldodecanol | 19013603  | 1       |
| Sanacorp                   | Octyldodecanol | 19013602  | 1       |
| Sanacorp                   | Octyldodecanol | 18112006  | 1       |
| Sanacorp                   | Octyldodecanol | 19013610  | 1       |
| Sanacorp                   | Octyldodecanol | 19013609  | 1       |
| Sanacorp                   | Octyldodecanol | 192693009 | 1       |
| Sanacorp WE:09.11.17 10... | Octyldodecanol | 17138105  | 1       |
| Sanacorp WE:21.12.17 E...  | Octyldodecanol | 17138109  | 1       |
| Caelo                      | Octyldodecanol | 1812010   | 1       |
| Sanacorp/ Caesar & Lore... | Octyldodecanol | 19013603  | 3       |
| Euro OTC                   | Octyldodecanol | 19013602  | 2       |
| Spangropharm               | Octyldodecanol | 11060317  | 1       |
| Caelo                      | Octyldodecanol | 1136017   | 1       |
| VDL 30.04.14_5.77 euro     | Octyldodecanol | 13360006  | 1       |
| VDL;5,77EUR; 27.04.15      | Octyldodecanol | 14371711  | 2       |
| VDL; 5,77EUR;21.01.2015    | Octyldodecanol | 14158402  | 1       |
| VDL;15.3.16;5,75EUR        | Octyldodecanol | 15383005  | 1       |
| Caelo                      | Octyldodecanol | 16095507  | 68      |
| Caelo                      | Octyldodecanol |           | 4       |
| Caelo                      | Octyldodecanol | 12165509  | 7       |
| Caelo                      | Octyldodecanol | 13360010  | 16      |
| Caelo                      | Octyldodecanol | 15135212  | 19      |
| Caelo                      | Octyldodecanol | 163127    | 1       |
| Euro OTC                   | Octyldodecanol |           | 1       |
|                            | Octyldodecanol |           | 1       |

- 237 691 spectra from 1121 *Apo-Ident* customers from a total of 46 730 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Octyldodecanol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Octyldodecanol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 300           | 0              | 63 639        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 3660          | 12             | 237 691       |

The substance/substance group *Octyldodecanol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.6732 % (> 99.5915 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Octyldodecanol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Macrogol-2-laurylether                    | 30.21                  | —                              |
| Hydrophilic ointment DAB                  | 30.53                  | —                              |
| Macrogol 8 stearate type I                | 32.70                  | —                              |
| Paraffin, white                           | 36.55                  | —                              |
| Wool alcohol ointment SR with white pa... | 38.42                  | —                              |
| Triglycerol diisostearate                 | 43.11                  | —                              |
| Paraffin, yellow                          | 43.82                  | —                              |
| Polyol fatty acid ester                   | 44.91                  | —                              |
| Polysorbate 60                            | 45.50                  | —                              |
| Softisan® 649                             | 47.89                  | —                              |
| Wool alcohol ointment DAB                 | 48.35                  | —                              |
| Unguentum Cordes®                         | 49.27                  | —                              |
| Lauromacrogol 400                         | 52.75                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Octyldodecanol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30867     | 31330               | 3.96                         | 52.74                           |
| 31330     | 31330               | 0.00                         | 53.65                           |
| 31753     | 33093               | 3.24                         | 56.48                           |
| 32958     | 33093               | 4.62                         | 55.54                           |
| 33093     | 33093               | 0.00                         | 55.18                           |
| 34468     | 34468               | 0.00                         | 55.75                           |
| 34471     | 34471               | 0.00                         | 53.13                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Oleic acid**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 32471-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Oleic acid; Acidum oleicum

### Special notes

When selecting the *Oleic acid* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Oleic acid                | 3      | 2      | 1      |



## Second-stage model

For differentiation of the substance/substance group *Oleic acid* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Oleic acid*:

| Supplier | Substance  | Batch    | Sample ID | Spectra | Certificate |
|----------|------------|----------|-----------|---------|-------------|
| Caelo    | Oleic acid | 15298701 | 32471     | 40      | 1702061     |
| Caelo    | Oleic acid | 163091   | 33076     | 40      | 20161212*   |
| Caelo    | Oleic acid | 20001055 | 35037     | 40      | 20200506*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 3 reference samples from the substance/substance group *Oleic acid*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 819 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Oleic acid*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance  | Batch    | Sample ID | Spectra |
|----------|------------|----------|-----------|---------|
| Caelo    | Oleic acid | 172741   | 33898     | 40      |
| Caelo    | Oleic acid | 21000914 | 35283     | 40      |
| Caelo    | Oleic acid | 15298701 | 32475     | 40      |
| Caelo    | Oleic acid | 15298701 | 32747     | 40      |

- 91 331 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1 spectra from 1 *Apo-Ident* customers from 1 batches from the substance/substance group *Oleic acid*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance  | Batch    | Spectra |
|----------|------------|----------|---------|
| Caelo    | Oleic acid | 16309108 | 1       |

- 241 362 spectra from 1121 *Apo-Ident* customers from a total of 47 005 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Oleic acid* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Oleic acid* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 160           | 0              | 91 331        |
| <b>Type C</b> | 0              | 1             | 0              | 241 362       |

The substance/substance group *Oleic acid* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| <b>Type C</b> | 100.0000 % (> 99.6937 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Oleic acid* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------------------------|---------------------------|-----------------------------------|
| Pasta Cordes <sup>®</sup>             | 35.65                     | —                                 |
| Metronidazole 25% in white petrolatum | 39.63                     | —                                 |
| Shea butter, refined                  | 43.83                     | —                                 |
| Permethrin 25% solution               | 45.81                     | —                                 |
| Laurel oil                            | 61.30                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Oleic acid* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 32471     | 32471                  | 0.00                            | 58.64                              |
| 33076     | 33076                  | 0.00                            | 63.45                              |
| 35037     | 35037                  | 0.00                            | 65.03                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Oregano oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30669-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Oregano oil; Oleum origani cretici

### Special notes

When selecting the *Oregano oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Oregano oil               | 5      | 1      | 13     |

## Second-stage model

For differentiation of the substance/substance group *Oregano oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Oregano oil*:

| Supplier | Substance   | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------|----------|-----------|---------|-------------|
| Caelo    | Oregano oil | 11247605 | 30669     | 40      | 20110829    |
| Caelo    | Oregano oil | 13354002 | 31196     | 40      | 1502253     |
| Caelo    | Oregano oil | 13354007 | 31302     | 40      | 20131028    |
| Caelo    | Oregano oil | 13354006 | 31406     | 40      | 20131028    |
| Caelo    | Oregano oil | 14242905 | 31788     | 60      | 20140904    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Oregano oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 100 spectra of 2 reference samples from the substance/substance group *Oregano oil*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance   | Batch    | Sample ID | Spectra |
|----------|-------------|----------|-----------|---------|
| Caelo    | Oregano oil | 16011001 | 32070     | 60      |
| Caelo    | Oregano oil | 16011001 | 33469     | 40      |

- 91 391 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 17 spectra from 12 *Apo-Ident* customers from 14 batches from the substance/substance group *Oregano oil*.
- Among them are spectra of independent samples from 13 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier               | Substance   | Batch         | Spectra |
|------------------------|-------------|---------------|---------|
| /Anzag                 | Oregano oil | 46027A-5558   | 1       |
| Apotheker S Bauer&Comp | Oregano oil | 90131-59-2    | 1       |
| Caelo                  | Oregano oil | 12347604      | 2       |
| Caelo                  | Oregano oil | 16011001      | 1       |
| Caelo                  | Oregano oil | 1601101       | 1       |
| Caelo                  | Oregano oil | 16269801      | 1       |
| Caelo                  | Oregano oil | 15248805      | 1       |
| Caelo                  | Oregano oil | 18068701      | 2       |
| Euro OTC               | Oregano oil | 4431a-3102    | 1       |
| Noweda/Taoasis         | Oregano oil | 43878A-123313 | 1       |
| Taoasis                | Oregano oil | 43878A-123313 | 1       |
| Taoasis                | Oregano oil | 43878A-127300 | 1       |
| Taoasis                | Oregano oil | 124744        | 1       |
| Taoasis / Phönix       | Oregano oil | 4431A-1967    | 1       |
| Taoasis / Phönix       | Oregano oil | 4431A-3102    | 1       |

- 241 346 spectra from 1121 *Apo-Ident* customers from a total of 46 992 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Oregano oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Oregano oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 220           | 0              | 63 719        |
| Type B | 0              | 100           | 0              | 91 391        |
| Type C | 0              | 14            | 3              | 241 346       |

The substance/substance group *Oregano oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 94.0000 %) |
| Type C | 100.0000 % (> 99.6854 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Oregano oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance              | Distance in main model | Distance in second-stage model |
|------------------------|------------------------|--------------------------------|
| Thyme oil, thymol type | 33.14                  | —                              |
| Coriander oil          | 116.59                 | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Oregano oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30669     | 31196               | 6.55                         | 52.91                           |
| 31196     | 31196               | 0.00                         | 50.94                           |
| 31302     | 31196               | 2.96                         | 49.39                           |
| 31406     | 31196               | 6.61                         | 49.95                           |
| 31788     | 31196               | 8.32                         | 49.19                           |



The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Paraffin classification</b>                                   |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30932-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Paraffin classification; Abwaschbare Salbengrundlage (NRF S.31); Emulsifying hydrophobic base gel DAC; Eye ointment, emulsifying DAC; Eye paraffin; Gelatum basalis hydrophobicum; Gelatum basalis hydrophobicum emulsificans; Hydrophilic ointment DAB; Hydrophobic base gel DAC; Lanae alcoholum unguentum; Oculentum emulsificans DAC; Paraffin, light liquid; Paraffin, liquid; Paraffin, white; Paraffin, yellow; Paraffinum liquidum; Paraffinum perliquidum; Unguentum alcoholum lanae SR; Unguentum Cordes®; Unguentum Cordes®; Unguentum emulsificans DAB; Vaseline, white; Vaseline, yellow; Vaselineum album; Vaselineum album pro opthalmicum; Vaselineum flavum; Wool alcohol ointment DAB; Wool alcohol ointment SR with white paraffin; Wool alcohol ointment SR/DAC

### Special notes

When selecting the *Paraffin classification* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Paraffin classification   | 88     | 139    | 3930   |

## Second-stage model

For differentiation of the substance/substance group *Paraffin classification* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Paraffin classification*:

| Supplier | Substance             | Batch            | Sample ID | Spectra | Certificate        |
|----------|-----------------------|------------------|-----------|---------|--------------------|
| Caelo    | Abwaschbare Salb. ... | 180622           | 34160     | 40      | 20180215*          |
| Caelo    | Abwaschbare Salb. ... | 19000678         | 34980     | 40      | 20191217*          |
| Caelo    | Abwaschbare Salb. ... | 21000937         | 35378     | 40      | 20210323*          |
| Caelo    | Abwaschbare Salb. ... | 21001433         | 35518     | 50      | 20210505*          |
| Caelo    | Abwaschbare Salb. ... | 21002194         | 35607     | 50      | 20210730*          |
| Caelo    | Emulsifying hydr. ... | 12343501         | 30933     | 40      | 1405098            |
| Caelo    | Emulsifying hydr. ... | 14276401         | 31570     | 60      | AR-15-FG-014916-01 |
| Caelo    | Emulsifying hydr. ... | 153311           | 31920     | 60      | 20151006*          |
| Caelo    | Emulsifying hydr. ... | 162259           | 32518     | 40      | 20160812*          |
| Caelo    | Emulsifying hydr. ... | 162260           | 32519     | 40      | 20160812*          |
| Caelo    | Emulsifying hydr. ... | 170321           | 33124     | 40      | 20170206*          |
| Caelo    | Emulsifying hydr. ... | 170322           | 33132     | 40      | 20170206*          |
| Caelo    | Emulsifying hydr. ... | 170323           | 33133     | 40      | 20170206*          |
| Caelo    | Emulsifying hydr. ... | 171137           | 33396     | 40      | 20170426*          |
| Caelo    | Emulsifying hydr. ... | 171253           | 33398     | 40      | 20170509*          |
| Caelo    | Emulsifying hydr. ... | 171137           | 33399     | 40      | 20170426*          |
| Caelo    | Emulsifying hydr. ... | 171979           | 33545     | 40      | 20170713*          |
| Caelo    | Emulsifying hydr. ... | 183158           | 34545     | 40      | 20181212*          |
| apomix   | Eye ointment, em. ... | 15B241013        | 31174     | 40      | 1405331            |
| apomix   | Eye ointment, em. ... | 06A090516        | 32946     | 40      | 20160517           |
| apomix   | Eye ointment, em. ... | 10A041016        | 32947     | 40      | 20161017           |
| apomix   | Eye ointment, em. ... | 10A050919        | 34678     | 40      | 20190916           |
| Caelo    | Eye paraffin          | 13338710         | 31445     | 40      | 20131108           |
| Caelo    | Eye paraffin          | 13338711         | 31610     | 60      | AR-15-FG-008217-01 |
| Caelo    | Eye paraffin          | 162718           | 32900     | 40      | 20161020*          |
| Caelo    | Hydrophilic oint. ... | 14024802         | 31456     | 40      | AR-14-FG-012697-01 |
| Caelo    | Hydrophilic oint. ... | 14024802         | 31567     | 60      | 20140129           |
| Caelo    | Hydrophilic oint. ... | 13245302         | 31611     | 60      | 20131008           |
| Caelo    | Hydrophilic oint. ... | 154164           | 31909     | 60      | 20151215*          |
| Caelo    | Hydrophilic oint. ... | 154165           | 31910     | 60      | 20151215*          |
| Fagron   | Hydrophilic oint. ... | 14G08-T08-013954 | 31612     | 60      | 20140829           |
| Fagron   | Hydrophilic oint. ... | 19D25-T11-066650 | 34675     | 40      | 20190805           |
| Caelo    | Hydrophobic base. ... | 12229003         | 30932     | 40      | 1405121            |
| Caelo    | Hydrophobic base. ... | 13299604         | 31168     | 40      | 20130909           |
| Caelo    | Hydrophobic base. ... | 14044601         | 31446     | 40      | AR-15-FG-007940-01 |
| Caelo    | Paraffin, light ...   | 13248007         | 34550     | 60      | AR-15-FG-002534-01 |
| Caelo    | Paraffin, light ...   | 161710           | 34555     | 40      | 20160704*          |
| Euro OTC | Paraffin, light ...   | 1409007-01       | 34551     | 60      | 20140929           |
| Euro OTC | Paraffin, light ...   | 1506021          | 34552     | 60      | 20150622*          |
| Euro OTC | Paraffin, light ...   | 1511029          | 34553     | 60      | 20151208*          |
| Fagron   | Paraffin, light ...   | 15B18-B01-333364 | 34559     | 40      | 20150302           |
| Caelo    | Paraffin, liquid      | 12324307         | 34858     | 40      | 20121031           |

*continued on the next page*

continued from previous page

| Supplier  | Substance             | Batch            | Sample ID | Spectra | Certificate        |
|-----------|-----------------------|------------------|-----------|---------|--------------------|
| Caelo     | Paraffin, liquid      | 13390602         | 34859     | 60      | AR-15-FG-002530-01 |
| Euro OTC  | Paraffin, liquid      | 1509011          | 34860     | 60      | 20150918*          |
| Euro OTC  | Paraffin, liquid      | 1511030          | 34861     | 60      | 20151208*          |
| Euro OTC  | Paraffin, liquid      | 1607039          | 34865     | 40      | 20160826*          |
| Fagron    | Paraffin, liquid      | 16E30-B05-327577 | 34867     | 40      | 20160614           |
| Bombastus | Paraffin, white       | 290271           | 31601     | 60      | 20140929           |
| Bombastus | Paraffin, white       | 19001675         | 34509     | 40      | 20190322           |
| Caelo     | Paraffin, white       | 12374502         | 31009     | 40      | 20130102           |
| Caelo     | Paraffin, white       | 12032413         | 31010     | 40      | 20120203           |
| Caelo     | Paraffin, white       | 13341601         | 31437     | 40      | 20131108           |
| Caelo     | Paraffin, white       | 13268421         | 31468     | 40      | 20130823           |
| Caelo     | Paraffin, white       | 153276           | 31916     | 60      | 20151001*          |
| Caelo     | Paraffin, white       | 153368           | 31917     | 60      | 20151012*          |
| Caelo     | Paraffin, white       | 153368           | 31918     | 60      | 20151012*          |
| Caelo     | Paraffin, white       | 162274           | 32495     | 40      | 20160804*          |
| Euro OTC  | Paraffin, white       | 1405014-01       | 31590     | 60      | 20140702           |
| Euro OTC  | Paraffin, white       | 1509019          | 31736     | 70      | 20150929*          |
| Fagron    | Paraffin, white       | 18K01-T06-063753 | 34510     | 40      | 20190227           |
| Fagron    | Paraffin, white       | 17E02-T01-049359 | 34511     | 40      | 20171123           |
| Caelo     | Paraffin, yellow      | 12321908         | 31473     | 40      | AR-15-FG-002511-01 |
| Caelo     | Paraffin, yellow      | 153304           | 31940     | 60      | 20151001*          |
| Caelo     | Paraffin, yellow      | 153305           | 31941     | 60      | 20151001*          |
| Euro OTC  | Paraffin, yellow      | 1401017-01       | 31541     | 60      | 20140210           |
| Euro OTC  | Paraffin, yellow      | 1401017-01       | 31586     | 60      | 20140210           |
| Euro OTC  | Paraffin, yellow      | 1811024-01       | 34433     | 40      | 20190122           |
| Euro OTC  | Paraffin, yellow      | 1904027          | 34498     | 40      | 20190527*          |
| Ichthyol  | Unguentum Cordes®     | 13A067           | 31602     | 60      | 1507406            |
| Ichthyol  | Unguentum Cordes®     | 15A137           | 31807     | 60      | 20150804           |
| Ichthyol  | Unguentum Cordes®     | 15A150           | 31954     | 60      | 20150930           |
| Ichthyol  | Unguentum Cordes®     | 20A0125          | 34838     | 40      | 20200525           |
| Ichthyol  | Unguentum Cordes®     | 20A0126          | 34844     | 40      | 20200526           |
| Ichthyol  | Unguentum Cordes®     | 20A0049          | 35103     | 40      | 20200324           |
| Caelo     | Wool alcohol oin. . . | 12244302         | 31228     | 70      | AR-15-FG-001376-01 |
| Caelo     | Wool alcohol oin. . . | 14067001         | 31441     | 40      | 20140307           |
| Caelo     | Wool alcohol oin. . . | 153421           | 31999     | 40      | 20151012*          |
| Caelo     | Wool alcohol oin. . . | 153562           | 32017     | 60      | 20151028*          |
| Caelo     | Wool alcohol oin. . . | 20001899         | 35324     | 40      | 20200622*          |
| Euro OTC  | Wool alcohol oin. . . | 1211017-01       | 31522     | 60      | AR-14-FG-012695-01 |
| Euro OTC  | Wool alcohol oin. . . | 1608040          | 32777     | 40      | 20160915*          |
| Euro OTC  | Wool alcohol oin. . . | 1911030          | 34813     | 40      | 20200127*          |
| Caelo     | Wool alcohol oin. . . | 14032501         | 31272     | 40      | 1507263            |
| Caelo     | Wool alcohol oin. . . | 153347           | 31921     | 60      | 20150930*          |
| Caelo     | Wool alcohol oin. . . | 162513           | 32517     | 40      | 20160907*          |
| Caelo     | Wool alcohol oin. . . | 16251301         | 33614     | 40      | 20160907           |
| Caelo     | Wool alcohol oin. . . | 190042           | 34542     | 40      | 20190110*          |
| Caelo     | Wool alcohol oin. . . | 191899           | 34799     | 40      | 20190723*          |
| Caelo     | Wool alcohol oin. . . | 21000778         | 35362     | 40      | 20210312*          |
| apomix    | Wool alcohol oin. . . | 02A070515        | 31744     | 60      | AR-16-FG-004495-01 |
| apomix    | Wool alcohol oin. . . | 01A180215        | 31949     | 60      | 20150223           |
| apomix    | Wool alcohol oin. . . | 01A210519        | 34679     | 40      | 20190520           |

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 4400 spectra of 92 reference samples from the substance/substance group *Paraffin classification*. These samples are listed above in the *calibration samples* section. The reference samples come from 88 different batches.
- 59 539 spectra from a total of 1219 batches from further 210 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this *chemometric model*, the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in *Appendix A*. The samples in *Appendix A* were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 6121 spectra of 145 reference samples from the substance/substance group *Paraffin classification*.
- Among them are spectra of independent samples from 139 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch     | Sample ID | Spectra |
|----------|---------------------------------|-----------|-----------|---------|
| Caelo    | Abwaschbare Salbengrundlage ... | 182529    | 34308     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 181406    | 34155     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 182502    | 34307     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 192443    | 34801     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 20000220  | 34854     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 20001587  | 34855     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 20003042  | 35151     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 21000556  | 35376     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 21000557  | 35377     | 40      |
| Caelo    | Emulsifying hydrophobic base... | 21002112  | 35605     | 50      |
| Caelo    | Emulsifying hydrophobic base... | 21002113  | 35606     | 50      |
| apomix   | Eye ointment, emulsifying DAC   | 08A150517 | 33503     | 40      |
| apomix   | Eye ointment, emulsifying DAC   | 13C071216 | 33504     | 40      |
| apomix   | Eye ointment, emulsifying DAC   | 13A121120 | 35144     | 40      |
| Caelo    | Eye paraffin                    | 15441514  | 33491     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 161668    | 32389     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 161670    | 32391     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 162824    | 32866     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 162825    | 32867     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 162826    | 32868     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 162827    | 32869     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 162828    | 32870     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 170403    | 33134     | 40      |

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| Supplier | Substance                | Batch            | Sample ID | Spectra |
|----------|--------------------------|------------------|-----------|---------|
| Caelo    | Hydrophilic ointment DAB | 170406           | 33135     | 40      |
| Caelo    | Hydrophilic ointment DAB | 170402           | 33159     | 40      |
| Caelo    | Hydrophilic ointment DAB | 170405           | 33160     | 40      |
| Caelo    | Hydrophilic ointment DAB | 171855           | 33554     | 40      |
| Caelo    | Hydrophilic ointment DAB | 171563           | 33555     | 40      |
| Caelo    | Hydrophilic ointment DAB | 171564           | 33556     | 40      |
| Caelo    | Hydrophilic ointment DAB | 170830           | 34025     | 40      |
| Caelo    | Hydrophilic ointment DAB | 172906           | 34026     | 40      |
| Caelo    | Hydrophilic ointment DAB | 173302           | 34027     | 40      |
| Caelo    | Hydrophilic ointment DAB | 182075           | 34261     | 40      |
| Caelo    | Hydrophilic ointment DAB | 191909           | 34781     | 40      |
| Caelo    | Hydrophilic ointment DAB | 20002047         | 35098     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21000361         | 35331     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21000362         | 35332     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21000363         | 35333     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21000364         | 35334     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21000365         | 35335     | 40      |
| Caelo    | Hydrophilic ointment DAB | 21001473         | 35521     | 50      |
| Caelo    | Hydrophilic ointment DAB | 21001471         | 35522     | 50      |
| Caelo    | Hydrophilic ointment DAB | 21001474         | 35523     | 50      |
| Caelo    | Hydrophobic base gel DAC | 16151105         | 33223     | 40      |
| Caelo    | Hydrophobic base gel DAC | 173204           | 34018     | 40      |
| Caelo    | Hydrophobic base gel DAC | 21001592         | 35515     | 50      |
| Caelo    | Paraffin, light liquid   | 12102101         | 34549     | 40      |
| Euro OTC | Paraffin, light liquid   | 1604009          | 34554     | 40      |
| Euro OTC | Paraffin, light liquid   | 1608007          | 34556     | 40      |
| Euro OTC | Paraffin, light liquid   | 1701052          | 34557     | 40      |
| Euro OTC | Paraffin, light liquid   | 1706017          | 34558     | 40      |
| Euro OTC | Paraffin, light liquid   | 1802016          | 34560     | 40      |
| Euro OTC | Paraffin, light liquid   | 1810001          | 34561     | 40      |
| Euro OTC | Paraffin, light liquid   | 1902012          | 34562     | 40      |
| Euro OTC | Paraffin, light liquid   | 1909016          | 34697     | 40      |
| Euro OTC | Paraffin, light liquid   | 2006036          | 35080     | 40      |
| Euro OTC | Paraffin, liquid         | 1904026          | 34659     | 40      |
| Euro OTC | Paraffin, liquid         | 1909010          | 34694     | 40      |
| Euro OTC | Paraffin, liquid         | 1602026          | 34862     | 40      |
| Euro OTC | Paraffin, liquid         | 1604045          | 34863     | 40      |
| Euro OTC | Paraffin, liquid         | 1606032          | 34864     | 40      |
| Euro OTC | Paraffin, liquid         | 1610017          | 34866     | 40      |
| Euro OTC | Paraffin, liquid         | 1701033          | 34868     | 40      |
| Euro OTC | Paraffin, liquid         | 1707002          | 34869     | 40      |
| Euro OTC | Paraffin, liquid         | 1709002          | 34870     | 40      |
| Euro OTC | Paraffin, liquid         | 1710025          | 34871     | 40      |
| Euro OTC | Paraffin, liquid         | 1801041          | 34872     | 40      |
| Euro OTC | Paraffin, liquid         | 1806004          | 34873     | 40      |
| Euro OTC | Paraffin, liquid         | 1810002          | 34874     | 40      |
| Euro OTC | Paraffin, liquid         | 1901011          | 34875     | 40      |
| Euro OTC | Paraffin, liquid         | 2002013          | 35062     | 40      |
| Euro OTC | Paraffin, liquid         | 2007019          | 35124     | 40      |
| Euro OTC | Paraffin, liquid         | 2107029          | 35626     | 50      |
| Fagron   | Paraffin, liquid         | 19H09-T01-070898 | 34760     | 40      |
| Caelo    | Paraffin, white          | 90292119         | 30006     | 39      |
| Caelo    | Paraffin, white          | 11374906         | 30466     | 30      |
| Caelo    | Paraffin, white          | 153497           | 31919     | 60      |
| Caelo    | Paraffin, white          | 161380           | 32223     | 40      |
| Caelo    | Paraffin, white          | 162411           | 32901     | 40      |
| Euro OTC | Paraffin, white          | 1602009          | 32191     | 40      |
| Euro OTC | Paraffin, white          | 1605019          | 32282     | 40      |
| Euro OTC | Paraffin, white          | 1608041          | 32711     | 40      |
| Euro OTC | Paraffin, white          | 1612007          | 32982     | 40      |

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| Supplier | Substance                       | Batch      | Sample ID | Spectra |
|----------|---------------------------------|------------|-----------|---------|
| Euro OTC | Paraffin, white                 | 1705015    | 33445     | 40      |
| Euro OTC | Paraffin, white                 | 1709016    | 33659     | 40      |
| Euro OTC | Paraffin, white                 | 1712008    | 33934     | 40      |
| Euro OTC | Paraffin, white                 | 1804011    | 34098     | 40      |
| Euro OTC | Paraffin, white                 | 1811025-01 | 34434     | 40      |
| Euro OTC | Paraffin, white                 | 1904028    | 34661     | 40      |
| Euro OTC | Paraffin, white                 | 2003054    | 34836     | 40      |
| Euro OTC | Paraffin, white                 | 2101013    | 35245     | 40      |
| Caelo    | Paraffin, yellow                | 153306     | 31942     | 60      |
| Caelo    | Paraffin, yellow                | 180920     | 34161     | 40      |
| Caelo    | Paraffin, yellow                | 181915     | 34255     | 40      |
| Caelo    | Paraffin, yellow                | 20000002   | 34981     | 40      |
| Caelo    | Paraffin, yellow                | 20001760   | 35110     | 40      |
| Euro OTC | Paraffin, yellow                | 1701027    | 32987     | 40      |
| Euro OTC | Paraffin, yellow                | 1705016    | 33444     | 42      |
| Euro OTC | Paraffin, yellow                | 1709015    | 33663     | 40      |
| Euro OTC | Paraffin, yellow                | 1804012    | 34099     | 40      |
| Euro OTC | Paraffin, yellow                | 1911029    | 34810     | 40      |
| Ichthyol | Unguentum Cordes®               | 16A061     | 32912     | 40      |
| Ichthyol | Unguentum Cordes®               | 18A101     | 34364     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 153423     | 32011     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153424     | 32012     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153427     | 32013     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153428     | 32014     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153429     | 32015     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153558     | 32016     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153563     | 32018     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153619     | 32019     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153618     | 32020     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 153620     | 32021     | 60      |
| Caelo    | Wool alcohol ointment DAB       | 161102     | 32098     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161101     | 32099     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161103     | 32100     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161104     | 32101     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161105     | 32102     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161106     | 32103     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 161107     | 32104     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 162488     | 32511     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 162951     | 32864     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 162952     | 32865     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 163318     | 33184     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 163317     | 33185     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 172062     | 33547     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 171416     | 33548     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 182509     | 34353     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 192090     | 34798     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 21001945   | 35609     | 50      |
| Caelo    | Wool alcohol ointment DAB       | 21001946   | 35610     | 50      |
| Euro OTC | Wool alcohol ointment DAB       | 1811023-01 | 34435     | 40      |
| Euro OTC | Wool alcohol ointment DAB       | 2101042    | 35247     | 40      |
| Caelo    | Wool alcohol ointment SR wit... | 180745     | 34143     | 40      |
| Caelo    | Wool alcohol ointment SR wit... | 181899     | 34271     | 40      |
| Caelo    | Wool alcohol ointment SR wit... | 19000657   | 34979     | 40      |
| Caelo    | Wool alcohol ointment SR wit... | 20002124   | 35093     | 40      |
| Caelo    | Wool alcohol ointment SR wit... | 20003440   | 35157     | 40      |
| apomix   | Wool alcohol ointment SR/DAC    | 01B310517  | 33615     | 40      |
| Caelo    | Hydrophilic ointment DAB        | 161668     | 32390     | 40      |
| Caelo    | Paraffin, white                 | 161380     | 32224     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 162488     | 32512     | 40      |
| Caelo    | Wool alcohol ointment DAB       | 20001899   | 34962     | 40      |

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| Supplier | Substance                       | Batch     | Sample ID | Spectra |
|----------|---------------------------------|-----------|-----------|---------|
| Caelo    | Wool alcohol ointment SR wit... | 14032501  | 31448     | 40      |
| apomix   | Wool alcohol ointment SR/DAC    | 01B310517 | 33616     | 40      |

- 85 370 spectra from a total of 1875 batches from further 332 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 22 369 spectra from 1064 *Apo-Ident* customers from 3839 batches from the substance/substance group *Paraffin classification*.
- Among them are spectra of independent samples from 3711 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance                       | Batch       | Spectra |
|----------------------|---------------------------------|-------------|---------|
| Caelo                | Abwaschbare Salbengrundlage ... | 20001329001 | 1       |
| Caesar & Loretz GmbH | Abwaschbare Salbengrundlage ... | 20001666002 | 1       |
| Caesar & Loretz GmbH | Abwaschbare Salbengrundlage ... | 20003915003 | 3       |
| AHD                  | Emulsifying hydrophobic base... | 18250301    | 1       |
| Anzag 05.11.12       | Emulsifying hydrophobic base... | 271106      | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 255106      | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 271106      | 2       |
| Bombastus            | Emulsifying hydrophobic base... | 262696      | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 11041301    | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 11071308    | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 22111307    | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 22011402    | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 18075802    | 1       |
| Bombastus            | Emulsifying hydrophobic base... | 18315801    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 13361004    | 7       |
| Caelo                | Emulsifying hydrophobic base... | 11105002    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 30071201    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 11301605    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 12182303    | 3       |
| Caelo                | Emulsifying hydrophobic base... | 12160201    | 4       |
| Caelo                | Emulsifying hydrophobic base... | 12078001    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 28051301    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 20081302    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 16225902    | 2       |
| Caelo                | Emulsifying hydrophobic base... | 20000850001 | 1       |
| Caelo                | Emulsifying hydrophobic base... | 20003042005 | 2       |
| Caelo                | Emulsifying hydrophobic base... | 14276301    | 5       |
| Caelo                | Emulsifying hydrophobic base... | 15964101    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 15205102    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 171137703   | 1       |
| Caelo                | Emulsifying hydrophobic base... | 15269102    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 17197901    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 13177602    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 13340814    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 16172402    | 1       |
| Caelo                | Emulsifying hydrophobic base... | 20001587001 | 4       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Caelo                      | Emulsifying hydrophobic base... | 21000557002      | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 15205101         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 20003511001      | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 18075804         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 15331101         | 2       |
| Caelo                      | Emulsifying hydrophobic base... | 13066802         | 10      |
| Caelo                      | Emulsifying hydrophobic base... | 15276104         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 2018-J-03579     | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 13177601         | 6       |
| Caelo                      | Emulsifying hydrophobic base... | 11016804         | 1       |
| Caesar & Loretz            | Emulsifying hydrophobic base... | 17032303         | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 14276401         | 2       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 16226002         | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 17113702         | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 18228301         | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 19021301         | 2       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 19244301         | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 20000850001      | 1       |
| Caesar & Loretz GmbH       | Emulsifying hydrophobic base... | 20000848001      | 2       |
| Caesar & Loretz GmbH/Je... | Emulsifying hydrophobic base... | 18315801         | 1       |
| Caesar & Loretz GmbH/Kehr  | Emulsifying hydrophobic base... | 19194801         | 1       |
| Caleo                      | Emulsifying hydrophobic base... | 20000848001      | 1       |
| Caleo/Phönix               | Emulsifying hydrophobic base... | 15064201         | 1       |
| cealo                      | Emulsifying hydrophobic base... | 16054201         | 2       |
| Cealo / Noweda             | Emulsifying hydrophobic base... | 13361004         | 4       |
| Cealo/Sanacorp             | Emulsifying hydrophobic base... | 18075803         | 1       |
| Euro OTC                   | Emulsifying hydrophobic base... | 16172301         | 1       |
| Euro OTC                   | Emulsifying hydrophobic base... | 17113703         | 1       |
| Euro OTC                   | Emulsifying hydrophobic base... | 16172201         | 3       |
| Fagron                     | Emulsifying hydrophobic base... | 11I08-T01        | 2       |
| Fagron                     | Emulsifying hydrophobic base... | 1108-T01         | 1       |
| Fagron                     | Emulsifying hydrophobic base... | 12B20-T05        | 1       |
| Fagron                     | Emulsifying hydrophobic base... | 10L14-T54-111713 | 1       |
| Fagron                     | Emulsifying hydrophobic base... | 10L14-T54-003418 | 1       |
| Fagron                     | Emulsifying hydrophobic base... | 11G25-T01        | 1       |
| Fagron                     | Emulsifying hydrophobic base... | 12F29-T01        | 1       |
| Gehe                       | Emulsifying hydrophobic base... | 17032303         | 1       |
| Noweda                     | Emulsifying hydrophobic base... | 12160201         | 1       |
| Noweda                     | Emulsifying hydrophobic base... | 13361004         | 1       |
| Noweda                     | Emulsifying hydrophobic base... | 17113703         | 1       |
| Noweda                     | Emulsifying hydrophobic base... | 17032303         | 1       |
| Noweda                     | Emulsifying hydrophobic base... | 19101801         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 12303402         | 6       |
| Th. Geyer                  | Emulsifying hydrophobic base... | 16172301         | 1       |
| noweda/anzag               | Emulsifying hydrophobic base... | 19101801         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 17133703         | 1       |
| Phoenix                    | Emulsifying hydrophobic base... | 14087502         | 1       |
| Phoenix                    | Emulsifying hydrophobic base... | 19244203         | 2       |
| Phoenix 02.05.2014         | Emulsifying hydrophobic base... | 282094           | 1       |
| Phönix                     | Emulsifying hydrophobic base... | 17113703         | 1       |
| Phönix Gotha               | Emulsifying hydrophobic base... | 15064101         | 1       |
| Sanacorp                   | Emulsifying hydrophobic base... | 13177601         | 1       |
| Sanacorp                   | Emulsifying hydrophobic base... | 17032303         | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 11209302         | 1       |
| Taoasis                    | Emulsifying hydrophobic base... | 17113703         | 1       |
| Aallianc. Healthc. / Ap... | Eye ointment, emulsifying DAC   | 10C050919        | 1       |
| AHD                        | Eye ointment, emulsifying DAC   | 18A021115        | 1       |
| AHD / apomix               | Eye ointment, emulsifying DAC   | 7B010616         | 1       |
| AHD /apomix                | Eye ointment, emulsifying DAC   | 3B060217         | 1       |
| All. Healthc. /Apomix      | Eye ointment, emulsifying DAC   | 10A010615        | 2       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| Allianc. Health. / Apomix  | Eye ointment, emulsifying DAC | 10C041016 | 2       |
| Allianc. Health. /Apomix   | Eye ointment, emulsifying DAC | 18A021115 | 1       |
| Allianc. Health. /Apomix   | Eye ointment, emulsifying DAC | 5D110416  | 1       |
| Alliance / Apomix          | Eye ointment, emulsifying DAC | 4D010419  | 1       |
| Alliance Healthcare/Apo... | Eye ointment, emulsifying DAC | 17A111113 | 1       |
| Alliance Healthcare/Apo... | Eye ointment, emulsifying DAC | 14A011013 | 1       |
| Alliance Healthcare/Apo... | Eye ointment, emulsifying DAC | 9C190514  | 1       |
| Alliance HealthcareApomix  | Eye ointment, emulsifying DAC | 18B021214 | 1       |
| AMH                        | Eye ointment, emulsifying DAC | 16B011015 | 1       |
| AMH Niemann/E              | Eye ointment, emulsifying DAC | 1C080114  | 1       |
| AMH Niemannn GmbH          | Eye ointment, emulsifying DAC | 5B110416  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 13D101011 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 14c081112 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 17B111113 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 14b011013 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 12C010814 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 10A010615 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 15D030815 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 6C090516  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 3b060217  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 10B100717 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 14A091017 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 16B011117 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 5C260418  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 6A070618  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 6B260418  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 13B130918 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 16B031218 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 2A050219  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 2a050219  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 9A050719  | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 12C011019 | 1       |
| apomix                     | Eye ointment, emulsifying DAC | 15B051119 | 2       |
| Apomix                     | Eye ointment, emulsifying DAC | 7C040612  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 11B030912 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 3A180213  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 5B220413  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 15A241013 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 17A111113 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 5A030314  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 14A011013 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 14C170914 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 18B021214 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 2C040116  | 2       |
| Apomix                     | Eye ointment, emulsifying DAC | 1D040116  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 9C050916  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 2B020117  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 3V060217  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 7D180417  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 6B150317  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 9B150517  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 7C180417  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 13B070817 | 2       |
| Apomix                     | Eye ointment, emulsifying DAC | 12A070817 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 12B070817 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 17C011117 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 2A070318  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 9C070618  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 6C260418  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 11D030818 | 1       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| Apomix                     | Eye ointment, emulsifying DAC | 16A031218 | 2       |
| Apomix                     | Eye ointment, emulsifying DAC | 16C031218 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 16B031218 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 9D050719  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 9A050719  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 11C110919 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 10D050919 | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 7A130720  | 1       |
| Apomix                     | Eye ointment, emulsifying DAC | 11C221020 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 14A101018 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 4C010419  | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 12A011019 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 15A051119 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 15D051119 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 3A020320  | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 12C221020 | 1       |
| Apomix (AMH)               | Eye ointment, emulsifying DAC | 14B241120 | 1       |
| Apomix /                   | Eye ointment, emulsifying DAC | 17B111113 | 1       |
| Apomix / AHD               | Eye ointment, emulsifying DAC | 11B170713 | 1       |
| Apomix / Alliance Healt... | Eye ointment, emulsifying DAC | 2A070318  | 1       |
| Apomix / Alliance Healt... | Eye ointment, emulsifying DAC | 16A031218 | 1       |
| Apomix / Gehe              | Eye ointment, emulsifying DAC | 1A100120  | 1       |
| Apomix / Gehe              | Eye ointment, emulsifying DAC | 12C011019 | 1       |
| Apomix / Gehe              | Eye ointment, emulsifying DAC | 3A020320  | 1       |
| Apomix / Kehr              | Eye ointment, emulsifying DAC | 48200114  | 1       |
| Apomix / Kehr              | Eye ointment, emulsifying DAC | 14A011013 | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 9A080415  | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 15A030815 | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 6A090516  | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 13D070817 | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 5B260418  | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 2D050219  | 1       |
| Apomix / Noweda            | Eye ointment, emulsifying DAC | 12D011019 | 1       |
| Apomix / Phönix            | Eye ointment, emulsifying DAC | 17C061212 | 2       |
| Apomix / Phönix            | Eye ointment, emulsifying DAC | 7A210513  | 1       |
| Apomix / Phönix            | Eye ointment, emulsifying DAC | 7B030314  | 1       |
| Apomix / Phönix            | Eye ointment, emulsifying DAC | 15A170914 | 1       |
| Apomix / Phönix            | Eye ointment, emulsifying DAC | 13B071216 | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 12C011012 | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 4B200114  | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 16A231014 | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 18C021214 | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 6D090516  | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 13A071216 | 1       |
| Apomix / Sanacorp          | Eye ointment, emulsifying DAC | 6D150317  | 1       |
| Apomix /AHD                | Eye ointment, emulsifying DAC | 4C010419  | 1       |
| Apomix /Noweda             | Eye ointment, emulsifying DAC | 9B050916  | 1       |
| Apomix /Noweda             | Eye ointment, emulsifying DAC | 10C041016 | 1       |
| Apomix /Noweda             | Eye ointment, emulsifying DAC | 2D020117  | 1       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 5B110416  | 4       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 20B011215 | 1       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 1D040116  | 1       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 6B090516  | 2       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 2D020117  | 2       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 9B050916  | 1       |
| Apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 6B150317  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 1B040116  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 7A010616  | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 12C011116 | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 13B071216 | 2       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 4B060217  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 9C150517  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 9B150517  | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 12C070817 | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 17C11117  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 15B091017 | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 17B011117 | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 4A260418  | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 8C070618  | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 7B070618  | 2       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 10A030818 | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 12B130918 | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 1B090119  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 3B070319  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 5A010419  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 5C010419  | 1       |
| apomix AMH Niemann GmbH... | Eye ointment, emulsifying DAC | 7B140519  | 1       |
| Apomix Gehe                | Eye ointment, emulsifying DAC | 5B040520  | 1       |
| Apomix Gehe                | Eye ointment, emulsifying DAC | 5A040520  | 1       |
| Apomix Noweda              | Eye ointment, emulsifying DAC | 8B150517  | 1       |
| Apomix PKH GmbH            | Eye ointment, emulsifying DAC | 3B010316  | 1       |
| Apomix/ AEP                | Eye ointment, emulsifying DAC | 6C260418  | 1       |
| Apomix/ AHD                | Eye ointment, emulsifying DAC | 2C050219  | 1       |
| apomix/ Gehe               | Eye ointment, emulsifying DAC | 5B040520  | 1       |
| Apomix/ Gehe               | Eye ointment, emulsifying DAC | 15A031218 | 1       |
| Apomix/ Gehe               | Eye ointment, emulsifying DAC | 4C020320  | 2       |
| Apomix/ GEHE               | Eye ointment, emulsifying DAC | 2B050219  | 1       |
| Apomix/ Noweda             | Eye ointment, emulsifying DAC | 13B130918 | 1       |
| Apomix/ Noweda             | Eye ointment, emulsifying DAC | 3A020320  | 1       |
| Apomix/ Noweda             | Eye ointment, emulsifying DAC | 1D100120  | 1       |
| Apomix/ Phönix             | Eye ointment, emulsifying DAC | 3C200114  | 2       |
| Apomix/ Phönix             | Eye ointment, emulsifying DAC | 19A021214 | 1       |
| Apomix/ Phönix             | Eye ointment, emulsifying DAC | 13A010715 | 1       |
| Apomix/ Phönix             | Eye ointment, emulsifying DAC | 7A010616  | 1       |
| apomix/ Sanacorp           | Eye ointment, emulsifying DAC | 12C300813 | 1       |
| Apomix/ Sanacorp           | Eye ointment, emulsifying DAC | 16C011117 | 1       |
| apomix/4                   | Eye ointment, emulsifying DAC | 10C100717 | 1       |
| apomix/4                   | Eye ointment, emulsifying DAC | 6D140519  | 1       |
| Apomix/AHD                 | Eye ointment, emulsifying DAC | 9D070618  | 1       |
| Apomix/AHD                 | Eye ointment, emulsifying DAC | 9A070618  | 1       |
| Apomix/Alliance            | Eye ointment, emulsifying DAC | 15A051119 | 1       |
| Apomix/Alliance Healthc... | Eye ointment, emulsifying DAC | 6A260418  | 1       |
| apomix/AllianceH.          | Eye ointment, emulsifying DAC | 14A091017 | 1       |
| apomix/AllianceH.          | Eye ointment, emulsifying DAC | 16A031218 | 1       |
| Apomix/Anzag               | Eye ointment, emulsifying DAC | 16B061212 | 1       |
| Apomix/Anzag               | Eye ointment, emulsifying DAC | 9A080415  | 1       |
| apomix/Gehe                | Eye ointment, emulsifying DAC | 9B050719  | 1       |
| apomix/Gehe                | Eye ointment, emulsifying DAC | 1A100120  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 5B260418  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 13C130918 | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 11A030818 | 2       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 2A050219  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 3B070319  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 9A050719  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 9B050719  | 2       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 7B140519  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 4C020320  | 1       |
| Apomix/Gehe                | Eye ointment, emulsifying DAC | 10A210920 | 1       |
| Apomix/GEHE                | Eye ointment, emulsifying DAC | 9A070618  | 1       |
| apomix/Holdermann          | Eye ointment, emulsifying DAC | 7A180417  | 1       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| apomix/Kehr                | Eye ointment, emulsifying DAC | 6C140519  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 7A160315  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 15B030815 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 20D011215 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 19B021115 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 2D040116  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 10B041016 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 10A041016 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 11B011116 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 1B020117  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 7D180417  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 7A140519  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 8B050719  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 14A161019 | 2       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 2A100120  | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 15A241120 | 1       |
| Apomix/Kehr                | Eye ointment, emulsifying DAC | 8B140820  | 1       |
| apomix/Noweda              | Eye ointment, emulsifying DAC | 20D011215 | 1       |
| apomix/Noweda              | Eye ointment, emulsifying DAC | 18C021115 | 1       |
| apomix/NOWEDA              | Eye ointment, emulsifying DAC | 13D070817 | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 7D210513  | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 8D020414  | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 17A231014 | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 15C030815 | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 10A100717 | 1       |
| Apomix/Noweda              | Eye ointment, emulsifying DAC | 5B040520  | 1       |
| apomix/Phönix              | Eye ointment, emulsifying DAC | 11A170713 | 1       |
| apomix/Phönix              | Eye ointment, emulsifying DAC | 9B25061   | 1       |
| apomix/Phönix              | Eye ointment, emulsifying DAC | 4C060217  | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 11A011116 | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 3C060217  | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 13D070817 | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 14A101018 | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 13A130918 | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 4C010419  | 1       |
| Apomix/Phönix              | Eye ointment, emulsifying DAC | 12A011019 | 1       |
| Apomix/PKH Halle/Phönix    | Eye ointment, emulsifying DAC | 13D07017  | 1       |
| apomix/Sanacorp            | Eye ointment, emulsifying DAC | 9A190514  | 1       |
| apomix/Sanacorp            | Eye ointment, emulsifying DAC | 11D030818 | 1       |
| apomix/Sanacorp            | Eye ointment, emulsifying DAC | 11B030818 | 1       |
| Apomix/Sanacorp 13.05.2... | Eye ointment, emulsifying DAC | 3270115   | 1       |
| Bombastus                  | Eye ointment, emulsifying DAC | 3B070318  | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 4A270212  | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 6B260418  | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 3A180213  | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 14C030815 | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 5D110416  | 1       |
| Caelo                      | Eye ointment, emulsifying DAC | 14B101018 | 1       |
| Caesar & Loretz GmbH       | Eye ointment, emulsifying DAC | 14A101018 | 1       |
| Euro OTC                   | Eye ointment, emulsifying DAC | 10B030818 | 1       |
| Euro OTC                   | Eye ointment, emulsifying DAC | 18A021115 | 1       |
| Gehe                       | Eye ointment, emulsifying DAC | 10A010615 | 1       |
| Gehe                       | Eye ointment, emulsifying DAC | 13B070817 | 1       |
| Gehe                       | Eye ointment, emulsifying DAC | 16C11117  | 1       |
| Gehe                       | Eye ointment, emulsifying DAC | 4B260418  | 1       |
| Gehe / Apomix              | Eye ointment, emulsifying DAC | 10B210920 | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 1C080114  | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 10B041016 | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 11A011116 | 3       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 13B071216 | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 7C180417    | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 13C071216   | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 9B150517    | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 12B070817   | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 15C091017   | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 1C180118    | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 4B260418    | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 10B030818   | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 15A031218   | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 5B010419    | 1       |
| Gehe/Apomix                | Eye ointment, emulsifying DAC | 11C110919   | 1       |
| Kehr / Apomix              | Eye ointment, emulsifying DAC | 5A040520    | 1       |
| L12                        | Eye ointment, emulsifying DAC | 14A091017   | 1       |
| L12/Apomix                 | Eye ointment, emulsifying DAC | 16C011117   | 1       |
| Noweda/ PKH Halle          | Eye ointment, emulsifying DAC | 16A061212   | 1       |
| Noweda/apomix              | Eye ointment, emulsifying DAC | 1B070113    | 1       |
| Noweda/apomix              | Eye ointment, emulsifying DAC | 4B200114    | 1       |
| Noweda/apomix              | Eye ointment, emulsifying DAC | 18C021214   | 1       |
| Noweda/Apomix              | Eye ointment, emulsifying DAC | 3A070318    | 1       |
| PHOENIX 03.03.2014         | Eye ointment, emulsifying DAC | 16B111113   | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 16B061212   | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 5B220413    | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 3B070319    | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 10C030818   | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 15C031218   | 1       |
| Phönix Gotha               | Eye ointment, emulsifying DAC | 7C140519    | 1       |
| Phönix/apomix PKH Halle    | Eye ointment, emulsifying DAC | 2A050219    | 1       |
| PhR Neidhardt              | Eye ointment, emulsifying DAC | 20A011215   | 1       |
| PKH                        | Eye ointment, emulsifying DAC | 11B011116   | 2       |
| PKH                        | Eye ointment, emulsifying DAC | 18B231117   | 1       |
| PKH GmbH Halle             | Eye ointment, emulsifying DAC | 1C080114    | 1       |
| PKH GmbH/ Phönix           | Eye ointment, emulsifying DAC | 12C300813   | 1       |
| PKH GmbH/AHD               | Eye ointment, emulsifying DAC | 11B030818   | 1       |
| PKH GmbH/Phönix            | Eye ointment, emulsifying DAC | 7B210513    | 1       |
| PKH Halle                  | Eye ointment, emulsifying DAC | 4D010419    | 1       |
| PKH Halle (Apomix)         | Eye ointment, emulsifying DAC | 5C260418    | 1       |
| PKH Halle (Apomix)         | Eye ointment, emulsifying DAC | 9A070618    | 1       |
| PKH Halle (Apomix)         | Eye ointment, emulsifying DAC | 11A030818   | 1       |
| PKH Halle / Noweda         | Eye ointment, emulsifying DAC | 9C250612    | 1       |
| PKH Halle / Noweda         | Eye ointment, emulsifying DAC | 7D210513    | 1       |
| PKH Halle / Phönix         | Eye ointment, emulsifying DAC | 3B020320    | 1       |
| PKH Halle apomix/Phönix    | Eye ointment, emulsifying DAC | 6B260418    | 1       |
| PKH Halle/ Phoenix         | Eye ointment, emulsifying DAC | 3A180213    | 1       |
| PKH Halle/ Phoenix         | Eye ointment, emulsifying DAC | 11D170713   | 1       |
| PKH Halle/Kehr             | Eye ointment, emulsifying DAC | 6B040520    | 1       |
| PKH/ Noweda                | Eye ointment, emulsifying DAC | 12E010814   | 1       |
| PKH/Gehe                   | Eye ointment, emulsifying DAC | 3B180213    | 1       |
| PKH/Gehe                   | Eye ointment, emulsifying DAC | 10C170613   | 1       |
| AEP/04.05.2021             | Eye paraffin                  | 20000627005 | 1       |
| AHD                        | Eye paraffin                  | 15441514    | 3       |
| AHD                        | Eye paraffin                  | 17342001    | 3       |
| AHD                        | Eye paraffin                  | 17342008    | 1       |
| AMH Niemann/Sanacorp       | Eye paraffin                  | 17052003    | 1       |
| Apotheker Bauer & Cie. ... | Eye paraffin                  | 17052010    | 1       |
| Beiersdorf AG              | Eye paraffin                  | 15441502    | 1       |
| Bombastus                  | Eye paraffin                  | 1800348     | 1       |
| Bombastus                  | Eye paraffin                  | 15441501    | 1       |
| Bombastus                  | Eye paraffin                  | 16271810    | 1       |
| Bombastus                  | Eye paraffin                  | 17052001    | 1       |
| C17342007aelo/Noweda       | Eye paraffin                  | 17342007    | 1       |

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| Supplier | Substance    | Batch               | Spectra |
|----------|--------------|---------------------|---------|
| Caele    | Eye paraffin | 15050002            | 1       |
| Caelo    | Eye paraffin | 20101401            | 1       |
| Caelo    | Eye paraffin | 15441508            | 1       |
| Caelo    | Eye paraffin | 29101401            | 1       |
| Caelo    | Eye paraffin | 1412703             | 1       |
| Caelo    | Eye paraffin | 5011507             | 1       |
| Caelo    | Eye paraffin | 6021505             | 1       |
| Caelo    | Eye paraffin | 24031503            | 1       |
| Caelo    | Eye paraffin | 19051504            | 1       |
| Caelo    | Eye paraffin | 31071502            | 1       |
| Caelo    | Eye paraffin | 1505003             | 1       |
| Caelo    | Eye paraffin | 2752                | 1       |
| Caelo    | Eye paraffin | 15050007            | 4       |
| Caelo    | Eye paraffin | 152788              | 2       |
| Caelo    | Eye paraffin | 152778809           | 1       |
| Caelo    | Eye paraffin | 2791                | 1       |
| Caelo    | Eye paraffin | 154415              | 2       |
| Caelo    | Eye paraffin | 160427VA0           | 1       |
| Caelo    | Eye paraffin | 1578809             | 1       |
| Caelo    | Eye paraffin | 151509              | 1       |
| Caelo    | Eye paraffin | 14551510            | 1       |
| Caelo    | Eye paraffin | 15278803/170314VA   | 1       |
| Caelo    | Eye paraffin | 15441414            | 1       |
| Caelo    | Eye paraffin | 16121502            | 1       |
| Caelo    | Eye paraffin | 15278802            | 2       |
| Caelo    | Eye paraffin | 17061704            | 1       |
| Caelo    | Eye paraffin | 6271810             | 1       |
| Caelo    | Eye paraffin | 18121707            | 1       |
| Caelo    | Eye paraffin | 170520              | 1       |
| Caelo    | Eye paraffin | 10271807            | 1       |
| Caelo    | Eye paraffin | 170552003           | 1       |
| Caelo    | Eye paraffin | 1702009             | 1       |
| Caelo    | Eye paraffin | 3051809             | 1       |
| Caelo    | Eye paraffin | 17050212            | 1       |
| Caelo    | Eye paraffin | 23051817            | 1       |
| Caelo    | Eye paraffin | 23061813            | 1       |
| Caelo    | Eye paraffin | 17342009            | 1       |
| Caelo    | Eye paraffin | 17111804            | 1       |
| Caelo    | Eye paraffin | 17342014            | 24      |
| Caelo    | Eye paraffin | 17342007            | 20      |
| Caelo    | Eye paraffin | 1879716             | 1       |
| Caelo    | Eye paraffin | 20000627005         | 15      |
| Caelo    | Eye paraffin | 18179797002         | 1       |
| Caelo    | Eye paraffin | 20000627022         | 1       |
| Caelo    | Eye paraffin | CHB18179716         | 1       |
| Caelo    | Eye paraffin | 2015A-02550         | 1       |
| Caelo    | Eye paraffin | 17342013            | 3       |
| Caelo    | Eye paraffin | 1817976             | 1       |
| Caelo    | Eye paraffin | 1732008             | 2       |
| Caelo    | Eye paraffin | 19/AKD13            | 1       |
| Caelo    | Eye paraffin | 1505002             | 2       |
| Caelo    | Eye paraffin | 1627810             | 1       |
| Caelo    | Eye paraffin | 15278801/20160309/5 | 1       |
| Caelo    | Eye paraffin | 17052010P-190409-1  | 1       |
| Caelo    | Eye paraffin | 17342016P-190718-4  | 1       |
| Caelo    | Eye paraffin | 1544514             | 2       |
| Caelo    | Eye paraffin | 171123VPA/16271808  | 1       |
| Caelo    | Eye paraffin | 3294                | 1       |
| Caelo    | Eye paraffin | 15278803            | 2       |
| Caelo    | Eye paraffin | 17342001            | 9       |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------------------|------------------|-------------------|----------------|
| Caelo                       | Eye paraffin     | 20000627010       | 7              |
| Caelo                       | Eye paraffin     | 2918E-02550       | 1              |
| Caelo                       | Eye paraffin     | 1424704           | 1              |
| Caelo                       | Eye paraffin     | 1544111           | 1              |
| Caelo                       | Eye paraffin     | 16271808          | 4              |
| Caelo                       | Eye paraffin     | 17052007          | 4              |
| Caelo                       | Eye paraffin     | 17432008          | 1              |
| Caelo                       | Eye paraffin     | 17352016          | 1              |
| Caelo                       | Eye paraffin     | 18179704          | 16             |
| Caelo                       | Eye paraffin     | 1922008002        | 1              |
| Caelo                       | Eye paraffin     | 18179702          | 2              |
| Caelo                       | Eye paraffin     | 192008002         | 4              |
| Caelo                       | Eye paraffin     | 15441513          | 1              |
| Caelo                       | Eye paraffin     | 17052005          | 1              |
| Caelo                       | Eye paraffin     | 180206AV/17052002 | 1              |
| Caelo                       | Eye paraffin     | 10752008          | 1              |
| Caelo                       | Eye paraffin     | 17345005          | 1              |
| Caelo                       | Eye paraffin     | 3443              | 1              |
| Caelo                       | Eye paraffin     | 1819717           | 1              |
| Caelo                       | Eye paraffin     | 14301806          | 1              |
| Caelo                       | Eye paraffin     | 3210-16271807     | 1              |
| Caelo                       | Eye paraffin     | 1705210           | 1              |
| Caelo                       | Eye paraffin     | 1817916           | 2              |
| Caelo                       | Eye paraffin     | 18179718          | 3              |
| Caelo                       | Eye paraffin     | 173420055675      | 1              |
| Caelo                       | Eye paraffin     | 19/AKD7           | 1              |
| Caelo                       | Eye paraffin     | 1527880           | 1              |
| Caeol/Noweda                | Eye paraffin     | 15441511          | 1              |
| Caeolo                      | Eye paraffin     | 15441514          | 1              |
| Caeolo/Noweda               | Eye paraffin     | 15441504          | 1              |
| Caesar & Loretz             | Eye paraffin     | 16271807          | 1              |
| Caesar & Loretz             | Eye paraffin     | 17052010          | 1              |
| Caesar & Loretz             | Eye paraffin     | 181797002         | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17052007          | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17342006          | 3              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17342008          | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17342015          | 9              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17342013          | 6              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17342007          | 5              |
| Caesar & Loretz GmbH        | Eye paraffin     | 18179703          | 4              |
| Caesar & Loretz GmbH        | Eye paraffin     | 16271810          | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 18179704          | 4              |
| Caesar & Loretz GmbH        | Eye paraffin     | 18179702          | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 18179718          | 7              |
| Caesar & Loretz GmbH        | Eye paraffin     | 18312102          | 2              |
| Caesar & Loretz GmbH        | Eye paraffin     | 17052012          | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 192008003         | 10             |
| Caesar & Loretz GmbH        | Eye paraffin     | 192008002         | 3              |
| Caesar & Loretz GmbH        | Eye paraffin     | 181797003         | 1              |
| Caesar & Loretz GmbH        | Eye paraffin     | 20000627005       | 3              |
| Caesar & Loretz GmbH        | Eye paraffin     | 20000627010       | 2              |
| Caesar & Loretz GmbH / ...  | Eye paraffin     | 14301804          | 1              |
| Caesar & Loretz GmbH / ...  | Eye paraffin     | 17342016          | 1              |
| Caesar & Loretz GmbH / ...  | Eye paraffin     | 18179716          | 3              |
| Caesar & Loretz GmbH / ...  | Eye paraffin     | 18179716          | 1              |
| Caesar & Loretz GmbH / J... | Eye paraffin     | 20000627010       | 1              |
| Caesar & Loretz GmbH/AEP    | Eye paraffin     | 18179704          | 1              |
| Caesar & Loretz GmbH/AEP    | Eye paraffin     | 18179716          | 1              |
| Caesar & Loretz GmbH/AEP    | Eye paraffin     | 181797002         | 1              |
| Caesar & Loretz GmbH/Gehe   | Eye paraffin     | 17342016          | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|------------------|---------------|----------------|
| Caesar & Loretz GmbH/Gehe  | Eye paraffin     | 181797002     | 1              |
| Caesar & Loretz GmbH/Gehe  | Eye paraffin     | 20000627010   | 2              |
| Caesar & Loretz GmbH/Ge... | Eye paraffin     | 20000627005   | 3              |
| Caesar & Loretz GmbH/Je... | Eye paraffin     | 192008003     | 1              |
| Caesar & Loretz GmbH/Je... | Eye paraffin     | 20000627010   | 1              |
| Caesar & Loretz GmbH/Kr... | Eye paraffin     | 18179718      | 1              |
| Caesar & Loretz GmbH/No... | Eye paraffin     | 18179717      | 3              |
| Caesar & Loretz GmbH/Ph... | Eye paraffin     | 17342015      | 1              |
| Caesar & Loretz GmbH/Ph... | Eye paraffin     | 18179717      | 1              |
| Caesar & Loretz/Noweda     | Eye paraffin     | 150500004     | 1              |
| Caeser und Loretz GmbH     | Eye paraffin     | 18179716      | 1              |
| Cealo                      | Eye paraffin     | 15441509      | 1              |
| Cealo                      | Eye paraffin     | 17052010      | 2              |
| Cealo/ Alliance            | Eye paraffin     | 17342005      | 1              |
| Cealo/ Noweda              | Eye paraffin     | 14301804      | 1              |
| Cealo/Gehe                 | Eye paraffin     | 17052012      | 1              |
| Ceasar & Lorentz GmbH      | Eye paraffin     | 18179716      | 1              |
| Ebert & Jacobi             | Eye paraffin     | 192008003     | 1              |
| Ebert & Jacobi 31.05...    | Eye paraffin     | 15278809      | 1              |
| Ebert u. Jacobi 20.07...   | Eye paraffin     | 15441505      | 1              |
| Engel-Apotheke             | Eye paraffin     | 2119I-07033   | 1              |
| Euro OTC                   | Eye paraffin     | 15441514      | 2              |
| Euro OTC                   | Eye paraffin     | 17342007      | 1              |
| Euro OTC                   | Eye paraffin     | 17342005      | 1              |
| Fagron                     | Eye paraffin     | 790619-021159 | 2              |
| Fagron                     | Eye paraffin     | 15441514      | 2              |
| Fagron                     | Eye paraffin     | 17052010      | 1              |
| Fagron                     | Eye paraffin     | 760619-021159 | 1              |
| Fiebig                     | Eye paraffin     | 17052001      | 2              |
| Fiebig                     | Eye paraffin     | 17052008      | 1              |
| Fiebig                     | Eye paraffin     | 17052012      | 3              |
| Fiebig                     | Eye paraffin     | 17342016      | 1              |
| Fiebig                     | Eye paraffin     | 17342015      | 1              |
| Fiebig                     | Eye paraffin     | 192008003     | 2              |
| Finteler Apotheke          | Eye paraffin     | 16271807      | 2              |
| Gehe                       | Eye paraffin     | 14124706      | 2              |
| Gehe                       | Eye paraffin     | 15050003      | 1              |
| Gehe                       | Eye paraffin     | 15050004      | 3              |
| Gehe                       | Eye paraffin     | 15278808      | 1              |
| Gehe                       | Eye paraffin     | 15441501      | 3              |
| Gehe                       | Eye paraffin     | 15441509      | 1              |
| Gehe                       | Eye paraffin     | 15441510      | 1              |
| Gehe                       | Eye paraffin     | 15441514      | 4              |
| Gehe                       | Eye paraffin     | 15441511      | 1              |
| Gehe                       | Eye paraffin     | 17052008      | 1              |
| Gehe                       | Eye paraffin     | 17052012      | 2              |
| Gehe                       | Eye paraffin     | 17052010      | 1              |
| Gehe                       | Eye paraffin     | 17342007      | 1              |
| Gehe                       | Eye paraffin     | 17342015      | 1              |
| Gehe                       | Eye paraffin     | 20000627005   | 1              |
| GEHE                       | Eye paraffin     | 17052010      | 1              |
| Gehe GmbH                  | Eye paraffin     | 17342015      | 1              |
| Caelo                      | Eye paraffin     | 1817917       | 1              |
| gepepharm GmbH             | Eye paraffin     | 15441504      | 1              |
| Henry Lamotte              | Eye paraffin     | 17052008      | 1              |
| Henry Lamotte              | Eye paraffin     | 17052012      | 1              |
| Ichthyol-Gesellschaft      | Eye paraffin     | 17052010      | 1              |
| Kehr                       | Eye paraffin     | 17052010      | 2              |
| Klenk                      | Eye paraffin     | 15441514      | 2              |
| Krieger am 20.07.2018      | Eye paraffin     | 17052010      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>         | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|--------------------------|--------------|----------------|
| Noweda                     | Eye paraffin             | 15441510     | 2              |
| Noweda                     | Eye paraffin             | 16271807     | 1              |
| Noweda                     | Eye paraffin             | 17052012     | 3              |
| Noweda                     | Eye paraffin             | 17342016     | 2              |
| Noweda                     | Eye paraffin             | 17342006     | 1              |
| Noweda                     | Eye paraffin             | 192008003    | 1              |
| Caelo                      | Eye paraffin             | 173402016    | 1              |
| Pala                       | Eye paraffin             | 15441511     | 1              |
| Pala                       | Eye paraffin             | 18179717     | 1              |
| Phoenix                    | Eye paraffin             | 13338713     | 2              |
| Phoenix                    | Eye paraffin             | 17342008     | 3              |
| Phoenix                    | Eye paraffin             | 18179703     | 1              |
| Phoenix                    | Eye paraffin             | 18179716     | 2              |
| Phoenix                    | Eye paraffin             | 18179717     | 1              |
| Phoenix Goettin            | Eye paraffin             | 14124704     | 1              |
| Phoenix/ Caesar & Loret... | Eye paraffin             | 18179717     | 3              |
| Phoenix/Cealo              | Eye paraffin             | 15441504     | 1              |
| phönix                     | Eye paraffin             | 15441514     | 1              |
| Phönix                     | Eye paraffin             | 16271810     | 2              |
| Phönix                     | Eye paraffin             | 17052010     | 4              |
| Phönix                     | Eye paraffin             | 17342014     | 1              |
| Phönix                     | Eye paraffin             | 17342001     | 1              |
| Phönix                     | Eye paraffin             | 181797002    | 1              |
| Phönix                     | Eye paraffin             | 20000627005  | 1              |
| Sanacorp                   | Eye paraffin             | 14124704     | 1              |
| Sanacorp                   | Eye paraffin             | 14124707     | 1              |
| Sanacorp                   | Eye paraffin             | 14124705     | 1              |
| Sanacorp                   | Eye paraffin             | 19/AKD4      | 1              |
| Sanacorp                   | Eye paraffin             | 16271807     | 3              |
| Sanacorp                   | Eye paraffin             | 16271810     | 1              |
| Sanacorp                   | Eye paraffin             | 17052001     | 1              |
| Sanacorp                   | Eye paraffin             | 17052010     | 2              |
| Sanacorp                   | Eye paraffin             | 17052003     | 2              |
| Sanacorp                   | Eye paraffin             | 17342005     | 1              |
| Sanacorp                   | Eye paraffin             | 18179717     | 1              |
| Caelo                      | Eye paraffin             | 19/AKD2      | 1              |
| AEP                        | Hydrophilic ointment DAB | 18207602     | 1              |
| AEP                        | Hydrophilic ointment DAB | 19025801     | 2              |
| AHC/Lamotte                | Hydrophilic ointment DAB | 8002320009   | 1              |
| AHD                        | Hydrophilic ointment DAB | 14024803     | 1              |
| AHD                        | Hydrophilic ointment DAB | 16009301     | 1              |
| AHD                        | Hydrophilic ointment DAB | 17330402     | 1              |
| Caelo                      | Hydrophilic ointment DAB | 16166802     | 2              |
| Caelo                      | Hydrophilic ointment DAB | 19025801     | 23             |
| Alliance                   | Hydrophilic ointment DAB | 303216009101 | 1              |
| Alliance Health 09.05.2... | Hydrophilic ointment DAB | 14024701     | 1              |
| Alliance Healthcare        | Hydrophilic ointment DAB | 12311102     | 1              |
| Alliance Healthcare        | Hydrophilic ointment DAB | 13117501     | 1              |
| Alliance Healthcare / H... | Hydrophilic ointment DAB | 8004399001   | 1              |
| Bombastus                  | Hydrophilic ointment DAB | 19006221     | 1              |
| Allianz Healthcare         | Hydrophilic ointment DAB | 17040301     | 1              |
| Anza                       | Hydrophilic ointment DAB | 305393       | 1              |
| Anzag                      | Hydrophilic ointment DAB | 271047       | 1              |
| Anzag                      | Hydrophilic ointment DAB | 293264       | 1              |
| Anzag                      | Hydrophilic ointment DAB | 17290703     | 1              |
| Anzag                      | Hydrophilic ointment DAB | 18004577     | 1              |
| Anzag 17.03.2014 EK 13...  | Hydrophilic ointment DAB | 5448000      | 1              |
| Bombastus                  | Hydrophilic ointment DAB | 274002       | 1              |
| Anzag/Ichtyol-Gesellsch... | Hydrophilic ointment DAB | 16009201     | 1              |
| Apomix/Phönix              | Hydrophilic ointment DAB | 19190601     | 1              |

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| Supplier        | Substance                | Batch           | Spectra |
|-----------------|--------------------------|-----------------|---------|
| Aponorm/Wepa    | Hydrophilic ointment DAB | 17185501        | 1       |
| bomb/phönix     | Hydrophilic ointment DAB | 307092          | 1       |
| Bomb/Phönix     | Hydrophilic ointment DAB | 18004573        | 1       |
| Bombast/Gehe    | Hydrophilic ointment DAB | 1900429         | 1       |
| Bombast/Spangro | Hydrophilic ointment DAB | 311063          | 1       |
| Bombast/Spangro | Hydrophilic ointment DAB | 311065          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 269539          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 274003          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 269537          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 269532          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 274004          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 279002          | 8       |
| Bombastus       | Hydrophilic ointment DAB | 284748          | 6       |
| Bombastus       | Hydrophilic ointment DAB | 14025001        | 2       |
| Bombastus       | Hydrophilic ointment DAB | 293261          | 4       |
| Bombastus       | Hydrophilic ointment DAB | 296866          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 299391          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 299390          | 4       |
| Bombastus       | Hydrophilic ointment DAB | 301094          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 303000          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 288366          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 290600          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 294449          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 299392          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 301096          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 301095          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 303001          | 4       |
| Bombastus       | Hydrophilic ointment DAB | 16166801        | 1       |
| Bombastus       | Hydrophilic ointment DAB | 302998          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 17083301        | 1       |
| Bombastus       | Hydrophilic ointment DAB | 311067          | 9       |
| Bombastus       | Hydrophilic ointment DAB | 18001504        | 1       |
| Bombastus       | Hydrophilic ointment DAB | 17/11-T04-48192 | 1       |
| Bombastus       | Hydrophilic ointment DAB | 18004578        | 3       |
| Bombastus       | Hydrophilic ointment DAB | 19004430        | 4       |
| Bombastus       | Hydrophilic ointment DAB | 19006223        | 3       |
| Bombastus       | Hydrophilic ointment DAB | 20005190        | 1       |
| Bombastus       | Hydrophilic ointment DAB | 294448          | 4       |
| Bombastus       | Hydrophilic ointment DAB | 281351          | 6       |
| Bombastus       | Hydrophilic ointment DAB | 18001505        | 2       |
| Bombastus       | Hydrophilic ointment DAB | 305394          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 16167001        | 3       |
| Bombastus       | Hydrophilic ointment DAB | 269536          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 305395          | 7       |
| Bombastus       | Hydrophilic ointment DAB | 290597          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 15221801        | 2       |
| Bombastus       | Hydrophilic ointment DAB | 308899          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 307093          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 18001506        | 6       |
| Bombastus       | Hydrophilic ointment DAB | 281347          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 60080501        | 2       |
| Bombastus       | Hydrophilic ointment DAB | 305397          | 3       |
| Bombastus       | Hydrophilic ointment DAB | 311066          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 18004576        | 3       |
| Bombastus       | Hydrophilic ointment DAB | 18004574        | 7       |
| Bombastus       | Hydrophilic ointment DAB | 18004581        | 6       |
| Bombastus       | Hydrophilic ointment DAB | 290599          | 4       |
| Bombastus       | Hydrophilic ointment DAB | 281350          | 1       |
| Bombastus       | Hydrophilic ointment DAB | 269534          | 2       |
| Bombastus       | Hydrophilic ointment DAB | 286544          | 6       |

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| Supplier  | Substance                | Batch       | Spectra |
|-----------|--------------------------|-------------|---------|
| Bombastus | Hydrophilic ointment DAB | 18001503    | 1       |
| Bombastus | Hydrophilic ointment DAB | 279000      | 2       |
| Bombastus | Hydrophilic ointment DAB | 288368      | 1       |
| Bombastus | Hydrophilic ointment DAB | 19006224    | 1       |
| Bombastus | Hydrophilic ointment DAB | 286545      | 9       |
| Bombastus | Hydrophilic ointment DAB | 290601      | 9       |
| Bombastus | Hydrophilic ointment DAB | 293264      | 7       |
| Bombastus | Hydrophilic ointment DAB | 294451      | 4       |
| Bombastus | Hydrophilic ointment DAB | 301097      | 7       |
| Bombastus | Hydrophilic ointment DAB | 302999      | 1       |
| Bombastus | Hydrophilic ointment DAB | 18004579    | 7       |
| Bombastus | Hydrophilic ointment DAB | 18004580    | 10      |
| Bombastus | Hydrophilic ointment DAB | 18004577    | 4       |
| Bombastus | Hydrophilic ointment DAB | 281346      | 2       |
| Bombastus | Hydrophilic ointment DAB | 311063      | 2       |
| Bombastus | Hydrophilic ointment DAB | 281248      | 1       |
| Bombastus | Hydrophilic ointment DAB | 281348      | 3       |
| Bombastus | Hydrophilic ointment DAB | 284746      | 2       |
| Bombastus | Hydrophilic ointment DAB | 308900      | 3       |
| Bombastus | Hydrophilic ointment DAB | 305396      | 3       |
| Bombastus | Hydrophilic ointment DAB | 307092      | 2       |
| Bombastus | Hydrophilic ointment DAB | 18004575    | 5       |
| Bombastus | Hydrophilic ointment DAB | 276670      | 1       |
| Bombastus | Hydrophilic ointment DAB | 279001      | 2       |
| Bombastus | Hydrophilic ointment DAB | 281349      | 1       |
| Bombastus | Hydrophilic ointment DAB | 284747      | 1       |
| Bombastus | Hydrophilic ointment DAB | 311064      | 1       |
| Bombastus | Hydrophilic ointment DAB | 18004573    | 2       |
| Bombastus | Hydrophilic ointment DAB | 19004429    | 2       |
| Bombastus | Hydrophilic ointment DAB | 19004428    | 2       |
| Bombastus | Hydrophilic ointment DAB | 311065      | 4       |
| Bombastus | Hydrophilic ointment DAB | 286543      | 1       |
| Bombastus | Hydrophilic ointment DAB | 293262      | 4       |
| Bombastus | Hydrophilic ointment DAB | 18002963    | 11      |
| Bombastus | Hydrophilic ointment DAB | 307094      | 5       |
| Bombastus | Hydrophilic ointment DAB | 307095      | 10      |
| Bombastus | Hydrophilic ointment DAB | 4717Q-02539 | 1       |
| Bombastus | Hydrophilic ointment DAB | 17185501    | 1       |
| Bombastus | Hydrophilic ointment DAB | 296865      | 3       |
| Bombastus | Hydrophilic ointment DAB | 18004579    | 2       |
| caedo     | Hydrophilic ointment DAB | 17185501    | 1       |
| Caelo     | Hydrophilic ointment DAB | 14024803    | 3       |
| Caelo     | Hydrophilic ointment DAB | 11212101    | 2       |
| Caelo     | Hydrophilic ointment DAB | 11133701    | 1       |
| Caelo     | Hydrophilic ointment DAB | 2803212539  | 1       |
| Caelo     | Hydrophilic ointment DAB | 11212201    | 2       |
| Caelo     | Hydrophilic ointment DAB | 12014701    | 2       |
| Caelo     | Hydrophilic ointment DAB | 12014602    | 1       |
| Caelo     | Hydrophilic ointment DAB | 2109212539  | 1       |
| Caelo     | Hydrophilic ointment DAB | 12086702    | 3       |
| Caelo     | Hydrophilic ointment DAB | 11133601    | 3       |
| Caelo     | Hydrophilic ointment DAB | 12205201    | 7       |
| Caelo     | Hydrophilic ointment DAB | 11212001    | 1       |
| Caelo     | Hydrophilic ointment DAB | 10025601    | 1       |
| Caelo     | Hydrophilic ointment DAB | 12205101    | 4       |
| Caelo     | Hydrophilic ointment DAB | 12204802    | 6       |
| Caelo     | Hydrophilic ointment DAB | 20221110-1  | 1       |
| Caelo     | Hydrophilic ointment DAB | 12204803    | 1       |
| Caelo     | Hydrophilic ointment DAB | 24011315    | 1       |
| Caelo     | Hydrophilic ointment DAB | 80127028    | 1       |

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| Supplier | Substance                | Batch            | Spectra |
|----------|--------------------------|------------------|---------|
| Caelo    | Hydrophilic ointment DAB | 12311401         | 11      |
| Caelo    | Hydrophilic ointment DAB | 12311502         | 2       |
| Caelo    | Hydrophilic ointment DAB | 12311501         | 14      |
| Caelo    | Hydrophilic ointment DAB | 12311102         | 5       |
| Caelo    | Hydrophilic ointment DAB | 103312539        | 1       |
| Caelo    | Hydrophilic ointment DAB | 5099200          | 1       |
| Caelo    | Hydrophilic ointment DAB | 12311301         | 8       |
| Caelo    | Hydrophilic ointment DAB | 13014002         | 7       |
| Caelo    | Hydrophilic ointment DAB | 12311701         | 6       |
| Caelo    | Hydrophilic ointment DAB | 25051307         | 1       |
| Caelo    | Hydrophilic ointment DAB | U-020413-1       | 1       |
| Caelo    | Hydrophilic ointment DAB | 11211601         | 1       |
| Caelo    | Hydrophilic ointment DAB | 15056002         | 1       |
| Caelo    | Hydrophilic ointment DAB | 13117103         | 3       |
| Caelo    | Hydrophilic ointment DAB | 13117501         | 13      |
| Caelo    | Hydrophilic ointment DAB | 70913UngEm       | 1       |
| Caelo    | Hydrophilic ointment DAB | 13117601         | 6       |
| Caelo    | Hydrophilic ointment DAB | 13245801         | 4       |
| Caelo    | Hydrophilic ointment DAB | 13245401         | 12      |
| Caelo    | Hydrophilic ointment DAB | 27121301         | 1       |
| Caelo    | Hydrophilic ointment DAB | 13245301         | 7       |
| Caelo    | Hydrophilic ointment DAB | 13245501         | 6       |
| Caelo    | Hydrophilic ointment DAB | 15042014B        | 1       |
| Caelo    | Hydrophilic ointment DAB | 12051401         | 1       |
| Caelo    | Hydrophilic ointment DAB | 1423101          | 1       |
| Caelo    | Hydrophilic ointment DAB | 13H13-T03-006141 | 1       |
| Caelo    | Hydrophilic ointment DAB | 14123101         | 16      |
| Caelo    | Hydrophilic ointment DAB | 14123401         | 12      |
| Caelo    | Hydrophilic ointment DAB | 14123502         | 3       |
| Caelo    | Hydrophilic ointment DAB | 15016503         | 4       |
| Caelo    | Hydrophilic ointment DAB | 15016701         | 8       |
| Caelo    | Hydrophilic ointment DAB | 16009001         | 8       |
| Caelo    | Hydrophilic ointment DAB | 14225001         | 9       |
| Caelo    | Hydrophilic ointment DAB | 14224701         | 4       |
| Caelo    | Hydrophilic ointment DAB | 14277801         | 7       |
| Caelo    | Hydrophilic ointment DAB | 14278003         | 5       |
| Caelo    | Hydrophilic ointment DAB | 15016502         | 10      |
| Caelo    | Hydrophilic ointment DAB | 8703             | 1       |
| Caelo    | Hydrophilic ointment DAB | 15416401         | 17      |
| Caelo    | Hydrophilic ointment DAB | 4715M-02539      | 1       |
| Caelo    | Hydrophilic ointment DAB | 16008701         | 24      |
| Caelo    | Hydrophilic ointment DAB | 16009301         | 19      |
| Caelo    | Hydrophilic ointment DAB | 2810             | 1       |
| Caelo    | Hydrophilic ointment DAB | 16003101         | 1       |
| Caelo    | Hydrophilic ointment DAB | 16166701         | 25      |
| Caelo    | Hydrophilic ointment DAB | 16166801         | 50      |
| Caelo    | Hydrophilic ointment DAB | 160408UE         | 1       |
| Caelo    | Hydrophilic ointment DAB | 16166901         | 16      |
| Caelo    | Hydrophilic ointment DAB | 1616801          | 1       |
| Caelo    | Hydrophilic ointment DAB | 16282401         | 21      |
| Caelo    | Hydrophilic ointment DAB | 16282402         | 27      |
| Caelo    | Hydrophilic ointment DAB | 16282501         | 7       |
| Caelo    | Hydrophilic ointment DAB | 16282403         | 1       |
| Caelo    | Hydrophilic ointment DAB | 17040201         | 30      |
| Caelo    | Hydrophilic ointment DAB | 17040501         | 14      |
| Caelo    | Hydrophilic ointment DAB | 17040601         | 10      |
| Caelo    | Hydrophilic ointment DAB | 17040315375      | 1       |
| Caelo    | Hydrophilic ointment DAB | 17083102         | 4       |
| Caelo    | Hydrophilic ointment DAB | 17083103         | 6       |
| Caelo    | Hydrophilic ointment DAB | 17083002         | 48      |

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| Supplier | Substance                | Batch                | Spectra |
|----------|--------------------------|----------------------|---------|
| Caelo    | Hydrophilic ointment DAB | 170683301            | 1       |
| Caelo    | Hydrophilic ointment DAB | 17E04-T08-044042     | 2       |
| Caelo    | Hydrophilic ointment DAB | 308900               | 3       |
| Caelo    | Hydrophilic ointment DAB | 17156401             | 15      |
| Caelo    | Hydrophilic ointment DAB | 17186601             | 1       |
| Caelo    | Hydrophilic ointment DAB | 17290703             | 21      |
| Caelo    | Hydrophilic ointment DAB | 17290801             | 33      |
| Caelo    | Hydrophilic ointment DAB | 17330601             | 22      |
| Caelo    | Hydrophilic ointment DAB | 18207601             | 1       |
| Caelo    | Hydrophilic ointment DAB | 8004399001           | 3       |
| Caelo    | Hydrophilic ointment DAB | 8003325012           | 1       |
| Caelo    | Hydrophilic ointment DAB | 18004580             | 1       |
| Caelo    | Hydrophilic ointment DAB | 1830301              | 1       |
| Caelo    | Hydrophilic ointment DAB | 18001503             | 1       |
| Caelo    | Hydrophilic ointment DAB | 19190801             | 12      |
| Caelo    | Hydrophilic ointment DAB | 19190701             | 19      |
| Caelo    | Hydrophilic ointment DAB | 19025701             | 6       |
| Caelo    | Hydrophilic ointment DAB | 19190901             | 18      |
| Caelo    | Hydrophilic ointment DAB | 19000412001          | 15      |
| Caelo    | Hydrophilic ointment DAB | 19288801             | 13      |
| Caelo    | Hydrophilic ointment DAB | 190004080001         | 1       |
| Caelo    | Hydrophilic ointment DAB | 19000412002          | 9       |
| Caelo    | Hydrophilic ointment DAB | 20002928001          | 4       |
| Caelo    | Hydrophilic ointment DAB | 13014001             | 4       |
| Caelo    | Hydrophilic ointment DAB | CHB18207501          | 1       |
| Caelo    | Hydrophilic ointment DAB | 19000413001          | 30      |
| Caelo    | Hydrophilic ointment DAB | 15016801             | 11      |
| Caelo    | Hydrophilic ointment DAB | 15221902             | 6       |
| Caelo    | Hydrophilic ointment DAB | 16009101-20160615Ma3 | 1       |
| Caelo    | Hydrophilic ointment DAB | 16009101-20160615Ma2 | 1       |
| Caelo    | Hydrophilic ointment DAB | 16009401             | 9       |
| Caelo    | Hydrophilic ointment DAB | 17330202             | 6       |
| Caelo    | Hydrophilic ointment DAB | 15221801             | 7       |
| Caelo    | Hydrophilic ointment DAB | 17290603             | 10      |
| Caelo    | Hydrophilic ointment DAB | 281349               | 2       |
| Caelo    | Hydrophilic ointment DAB | 14123301             | 10      |
| Caelo    | Hydrophilic ointment DAB | 17185501             | 32      |
| Caelo    | Hydrophilic ointment DAB | 14231901             | 8       |
| Caelo    | Hydrophilic ointment DAB | 3962/V04/16          | 1       |
| Caelo    | Hydrophilic ointment DAB | 13117201             | 2       |
| Caelo    | Hydrophilic ointment DAB | 13013901             | 2       |
| Caelo    | Hydrophilic ointment DAB | Test                 | 1       |
| Caelo    | Hydrophilic ointment DAB | 9(18207501)          | 1       |
| Caelo    | Hydrophilic ointment DAB | 105/AKD16            | 1       |
| Caelo    | Hydrophilic ointment DAB | CH-B17290701         | 1       |
| Caelo    | Hydrophilic ointment DAB | 15016601             | 19      |
| Caelo    | Hydrophilic ointment DAB | 15221701             | 28      |
| Caelo    | Hydrophilic ointment DAB | 19288602             | 9       |
| Caelo    | Hydrophilic ointment DAB | 13014101             | 6       |
| Caelo    | Hydrophilic ointment DAB | 13117301             | 21      |
| Caelo    | Hydrophilic ointment DAB | 17330301-H20190115Ma | 1       |
| Caelo    | Hydrophilic ointment DAB | 13014003             | 5       |
| Caelo    | Hydrophilic ointment DAB | 20001982001          | 1       |
| Caelo    | Hydrophilic ointment DAB | 16K09-T03-03854      | 1       |
| Caelo    | Hydrophilic ointment DAB | 6001368013           | 1       |
| Caelo    | Hydrophilic ointment DAB | 17290701             | 43      |
| Caelo    | Hydrophilic ointment DAB | 301097               | 1       |
| Caelo    | Hydrophilic ointment DAB | 19190601             | 50      |
| Caelo    | Hydrophilic ointment DAB | 19025401             | 33      |
| Caelo    | Hydrophilic ointment DAB | 19191001             | 7       |

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| Supplier | Substance                | Batch             | Spectra |
|----------|--------------------------|-------------------|---------|
| Caelo    | Hydrophilic ointment DAB | 12055901          | 7       |
| Caelo    | Hydrophilic ointment DAB | 17290702          | 33      |
| Caelo    | Hydrophilic ointment DAB | 19025402          | 46      |
| Caelo    | Hydrophilic ointment DAB | 17330302          | 14      |
| Caelo    | Hydrophilic ointment DAB | 180207502         | 1       |
| Caelo    | Hydrophilic ointment DAB | 281347            | 2       |
| Caelo    | Hydrophilic ointment DAB | 15221602          | 8       |
| Caelo    | Hydrophilic ointment DAB | 16008702          | 10      |
| Caelo    | Hydrophilic ointment DAB | 1708002           | 1       |
| Caelo    | Hydrophilic ointment DAB | 20002047001       | 6       |
| Caelo    | Hydrophilic ointment DAB | 20002930004       | 2       |
| Caelo    | Hydrophilic ointment DAB | 17093002          | 1       |
| Caelo    | Hydrophilic ointment DAB | 12311801          | 3       |
| Caelo    | Hydrophilic ointment DAB | 916I-02539        | 1       |
| Caelo    | Hydrophilic ointment DAB | 296865            | 1       |
| Caelo    | Hydrophilic ointment DAB | 171855001         | 1       |
| Caelo    | Hydrophilic ointment DAB | 14024601          | 4       |
| Caelo    | Hydrophilic ointment DAB | 14025001          | 7       |
| Caelo    | Hydrophilic ointment DAB | 14085901          | 1       |
| Caelo    | Hydrophilic ointment DAB | 14024901          | 10      |
| Caelo    | Hydrophilic ointment DAB | 15416502          | 13      |
| Caelo    | Hydrophilic ointment DAB | 10082901          | 1       |
| Caelo    | Hydrophilic ointment DAB | 13123101          | 1       |
| Caelo    | Hydrophilic ointment DAB | 14277601          | 9       |
| Caelo    | Hydrophilic ointment DAB | 14277901          | 14      |
| Caelo    | Hydrophilic ointment DAB | 16008901          | 8       |
| Caelo    | Hydrophilic ointment DAB | 307095            | 2       |
| Caelo    | Hydrophilic ointment DAB | 17330401          | 13      |
| Caelo    | Hydrophilic ointment DAB | 17330402          | 23      |
| Caelo    | Hydrophilic ointment DAB | 18207602          | 15      |
| Caelo    | Hydrophilic ointment DAB | 12015001          | 3       |
| Caelo    | Hydrophilic ointment DAB | 13246002          | 3       |
| Caelo    | Hydrophilic ointment DAB | 13245701          | 6       |
| Caelo    | Hydrophilic ointment DAB | 17083004          | 5       |
| Caelo    | Hydrophilic ointment DAB | 17040301          | 37      |
| Caelo    | Hydrophilic ointment DAB | 18303302          | 6       |
| Caelo    | Hydrophilic ointment DAB | 16009101          | 28      |
| Caelo    | Hydrophilic ointment DAB | 13117102          | 5       |
| Caelo    | Hydrophilic ointment DAB | 15016501          | 1       |
| Caelo    | Hydrophilic ointment DAB | 15221601          | 16      |
| Caelo    | Hydrophilic ointment DAB | 15221501          | 5       |
| Caelo    | Hydrophilic ointment DAB | 294449            | 2       |
| Caelo    | Hydrophilic ointment DAB | 16009201          | 16      |
| Caelo    | Hydrophilic ointment DAB | 1617102           | 2       |
| Caelo    | Hydrophilic ointment DAB | 16167001          | 25      |
| Caelo    | Hydrophilic ointment DAB | 1617001           | 1       |
| Caelo    | Hydrophilic ointment DAB | 170614183         | 1       |
| Caelo    | Hydrophilic ointment DAB | 170905UE/16167001 | 1       |
| Caelo    | Hydrophilic ointment DAB | 305396            | 1       |
| Caelo    | Hydrophilic ointment DAB | 17083201          | 13      |
| Caelo    | Hydrophilic ointment DAB | 17083202          | 7       |
| Caelo    | Hydrophilic ointment DAB | 311067            | 1       |
| Caelo    | Hydrophilic ointment DAB | 17156302          | 4       |
| Caelo    | Hydrophilic ointment DAB | 180808183         | 1       |
| Caelo    | Hydrophilic ointment DAB | 299392            | 1       |
| Caelo    | Hydrophilic ointment DAB | 17I11-T03-048188  | 3       |
| Caelo    | Hydrophilic ointment DAB | 1733501           | 1       |
| Caelo    | Hydrophilic ointment DAB | 1733031           | 1       |
| Caelo    | Hydrophilic ointment DAB | 19014801          | 1       |
| Caelo    | Hydrophilic ointment DAB | 2100361001        | 1       |

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| Supplier             | Substance                | Batch            | Spectra |
|----------------------|--------------------------|------------------|---------|
| Caelo                | Hydrophilic ointment DAB | 12205001         | 7       |
| Caelo                | Hydrophilic ointment DAB | 13245601         | 9       |
| Caelo                | Hydrophilic ointment DAB | 3613Q2539        | 1       |
| Caelo                | Hydrophilic ointment DAB | 1614U2539        | 1       |
| Caelo                | Hydrophilic ointment DAB | 16166902         | 25      |
| Caelo                | Hydrophilic ointment DAB | 17040202         | 7       |
| Caelo                | Hydrophilic ointment DAB | 17083301         | 15      |
| Caelo                | Hydrophilic ointment DAB | 17330303         | 7       |
| Caelo                | Hydrophilic ointment DAB | 18004578         | 1       |
| Caelo                | Hydrophilic ointment DAB | 1900413001       | 1       |
| Caelo                | Hydrophilic ointment DAB | 12014601         | 1       |
| Caelo                | Hydrophilic ointment DAB | 12056001         | 1       |
| Caelo                | Hydrophilic ointment DAB | 13117401         | 7       |
| Caelo                | Hydrophilic ointment DAB | 281351           | 1       |
| Caelo                | Hydrophilic ointment DAB | 286545           | 1       |
| Caelo                | Hydrophilic ointment DAB | 15016602         | 3       |
| Caelo                | Hydrophilic ointment DAB | 14277701         | 4       |
| Caelo                | Hydrophilic ointment DAB | 16009202         | 1       |
| Caelo                | Hydrophilic ointment DAB | 16282702         | 8       |
| Caelo                | Hydrophilic ointment DAB | 17262701         | 1       |
| Caelo                | Hydrophilic ointment DAB | 17290601         | 4       |
| Caelo                | Hydrophilic ointment DAB | 18207502         | 32      |
| Caelo                | Hydrophilic ointment DAB | 18207503         | 8       |
| Caelo                | Hydrophilic ointment DAB | 18303301         | 7       |
| Caelo                | Hydrophilic ointment DAB | 1919081          | 1       |
| Caelo                | Hydrophilic ointment DAB | 190000413001     | 1       |
| Caelo                | Hydrophilic ointment DAB | 15016901         | 11      |
| Caelo                | Hydrophilic ointment DAB | 17185502         | 9       |
| Caelo                | Hydrophilic ointment DAB | 182107602        | 1       |
| Caelo                | Hydrophilic ointment DAB | 11015402         | 1       |
| Caelo                | Hydrophilic ointment DAB | 13B04-T18-001061 | 2       |
| Caelo                | Hydrophilic ointment DAB | 13245303         | 1       |
| Caelo                | Hydrophilic ointment DAB | 14123201         | 4       |
| Caelo                | Hydrophilic ointment DAB | 4225001          | 1       |
| Caelo                | Hydrophilic ointment DAB | 14224901         | 5       |
| Caelo                | Hydrophilic ointment DAB | 15400701         | 1       |
| Caelo                | Hydrophilic ointment DAB | 103/AKD15        | 1       |
| Caelo                | Hydrophilic ointment DAB | 17254501         | 1       |
| Caelo                | Hydrophilic ointment DAB | 17330501         | 32      |
| Caelo                | Hydrophilic ointment DAB | 1733051          | 1       |
| Caelo                | Hydrophilic ointment DAB | 19190703         | 7       |
| Caelo                | Hydrophilic ointment DAB | 91190601         | 1       |
| Caelo                | Hydrophilic ointment DAB | 19000408001      | 10      |
| Caelo                | Hydrophilic ointment DAB | 1900041301       | 1       |
| Caelo                | Hydrophilic ointment DAB | 9000413001       | 1       |
| Caelo                | Hydrophilic ointment DAB | 4912E-02539      | 1       |
| Caelo                | Hydrophilic ointment DAB | 20002047002      | 5       |
| Caeol/Noweda         | Hydrophilic ointment DAB | 17330302         | 1       |
| Caeolo/Noweda        | Hydrophilic ointment DAB | 6/2019           | 1       |
| Caeolo/Noweda        | Hydrophilic ointment DAB | 16167102         | 1       |
| Caesar & Loretz      | Hydrophilic ointment DAB | 16166701         | 1       |
| Caesar & Loretz      | Hydrophilic ointment DAB | 17330501         | 1       |
| Caesar & Loretz      | Hydrophilic ointment DAB | 17330302         | 1       |
| Caesar & Loretz      | Hydrophilic ointment DAB | 19025702         | 1       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 13014002         | 1       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 13245401         | 1       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 14024901         | 2       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 14277801         | 1       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 14277901         | 1       |
| Caesar & Loretz GmbH | Hydrophilic ointment DAB | 15221701         | 2       |

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| Supplier                   | Substance                | Batch            | Spectra |
|----------------------------|--------------------------|------------------|---------|
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 18004579         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 17330301         | 3       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 18207502         | 4       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 17330501         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 18207501         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 17330601         | 3       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 17290601         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19025402         | 18      |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19025702         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19025401         | 5       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19025801         | 6       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19190601         | 11      |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19D25-T11-066650 | 2       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19190701         | 7       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19190801         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19190901         | 4       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 18207601         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19000413001      | 8       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19191001         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 17290701         | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19000408001      | 8       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19000412001      | 3       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19D25-T1-066650  | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | T10-0726202      | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19288602         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19D25-T12-066644 | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 19288801         | 2       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 20002047002      | 2       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 20002047001      | 1       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 20002929001      | 2       |
| Caesar & Loretz GmbH       | Hydrophilic ointment DAB | 2QE03-T03-079927 | 1       |
| Caesar & Loretz GmbH / ... | Hydrophilic ointment DAB | 19190601         | 1       |
| Caesar & Loretz GmbH Hi... | Hydrophilic ointment DAB | 16008701         | 2       |
| Caesar & Loretz GmbH, 4... | Hydrophilic ointment DAB | 12056002         | 1       |
| Caesar & Loretz GmbH, 4... | Hydrophilic ointment DAB | 13117501         | 1       |
| Caesar & Loretz GmbH/ F... | Hydrophilic ointment DAB | 19025402         | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic ointment DAB | 18207501         | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophilic ointment DAB | 19000413001      | 1       |
| Caesar & Loretz GmbH/Go... | Hydrophilic ointment DAB | 19025402         | 1       |
| Caesar & Loretz GmbH/Gö... | Hydrophilic ointment DAB | 19190601         | 1       |
| Caesar & Loretz GmbH/Je... | Hydrophilic ointment DAB | 19025402         | 1       |
| Caesar & Loretz GmbH/Je... | Hydrophilic ointment DAB | 19000413001      | 1       |
| Caesar & Loretz GmbH/Kehr  | Hydrophilic ointment DAB | 19190701         | 1       |
| Caesar & Loretz GmbH/Kr... | Hydrophilic ointment DAB | 19025402         | 1       |
| Caesar & Loretz GmbH/NO... | Hydrophilic ointment DAB | 20002047002      | 1       |
| Caesar & Loretz GmbH/Ph... | Hydrophilic ointment DAB | 1819M-02539      | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic ointment DAB | 19025801         | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic ointment DAB | 19190801         | 1       |
| Caesar & Loretz GmbH/Sa... | Hydrophilic ointment DAB | 19000413001      | 3       |
| Caesar Sanacorp            | Hydrophilic ointment DAB | 19000413001      | 2       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic ointment DAB | 13245401         | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic ointment DAB | 13245301         | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic ointment DAB | 14277901         | 1       |
| Caesar&Loretz GmbH/Anzag   | Hydrophilic ointment DAB | 16009101         | 1       |
| Caesar&lorenz,Phoenix      | Hydrophilic ointment DAB | 12311501         | 1       |
| Caesar&lorenz,Phoenix      | Hydrophilic ointment DAB | 13245401         | 1       |
| Caeser und Loretz GmbH     | Hydrophilic ointment DAB | 19025801         | 2       |
| Caleo/ Noweda              | Hydrophilic ointment DAB | 17290701         | 1       |
| Caleo/ Noweda              | Hydrophilic ointment DAB | 17330302         | 1       |
| Caleo/Noweda               | Hydrophilic ointment DAB | 17040201         | 1       |

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| Supplier                   | Substance                | Batch            | Spectra |
|----------------------------|--------------------------|------------------|---------|
| Cealo / Phönix             | Hydrophilic ointment DAB | 17330301         | 1       |
| Cealo/ Anzag               | Hydrophilic ointment DAB | 17040301         | 1       |
| Cealo/Noweda               | Hydrophilic ointment DAB | 15221601         | 1       |
| Cealo/Noweda               | Hydrophilic ointment DAB | 19025701         | 1       |
| Celo                       | Hydrophilic ointment DAB | 16009101         | 1       |
| Chaelo                     | Hydrophilic ointment DAB | 17083102         | 1       |
| Chiesi/Krieger             | Hydrophilic ointment DAB | 17330302         | 1       |
| DAB 2008 Henry Lamotte ... | Hydrophilic ointment DAB | 5243000          | 1       |
| Defektur / Wolf-Apotheke   | Hydrophilic ointment DAB | 299390           | 3       |
| Defektur                   | Hydrophilic ointment DAB | 3216M-02539      | 1       |
| Doroderm GmbH/ Noweda      | Hydrophilic ointment DAB | 12311501         | 1       |
| Ebert & Jacobi             | Hydrophilic ointment DAB | 17083004         | 1       |
| Ebert & Jacobi 03.08.16    | Hydrophilic ointment DAB | 160091001        | 1       |
| Eigen Defektur             | Hydrophilic ointment DAB | 316M-02539       | 1       |
| Eigen Defektur             | Hydrophilic ointment DAB | 1716E-02539      | 1       |
| Eigen/Defektur             | Hydrophilic ointment DAB | 3415I-02539      | 1       |
| Eigen/Defektur             | Hydrophilic ointment DAB | 4215E-02539      | 1       |
| Eigen/Defektur             | Hydrophilic ointment DAB | 5015E-02539      | 1       |
| Eigen/Defektur             | Hydrophilic ointment DAB | 2516A-02539      | 1       |
| eigene                     | Hydrophilic ointment DAB | 1919I-02539      | 1       |
| EuRho/ Noweda              | Hydrophilic ointment DAB | 14277601         | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 13117102         | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 17040202         | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 11211601         | 2       |
| Euro OTC                   | Hydrophilic ointment DAB | 17083202         | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 17330301         | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 14A06-T10-009049 | 1       |
| Euro OTC                   | Hydrophilic ointment DAB | 288369           | 1       |
| Fagron                     | Hydrophilic ointment DAB | 12A12-T03        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 13B04-T18-001057 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 14A06-T10-009049 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14G08-T06-013947 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 14G08-To8-013954 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 15F23-T12-023864 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 17040501         | 3       |
| Fagron                     | Hydrophilic ointment DAB | 16K09-T02-038560 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 16K09-T09-038560 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17E04-T07-044038 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17I11-T03-048188 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 18001506         | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17111-T03-048188 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17330202         | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17I11-T05        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 80719A           | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19D25-T13        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19D25-T12-06664  | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14G08-T07-013951 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 14A06-T11-009054 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 15F09-T02-023370 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 15B19-T01-019409 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 13H13T04006144   | 1       |
| Fagron                     | Hydrophilic ointment DAB | 18F27-T05-057539 | 4       |
| Fagron                     | Hydrophilic ointment DAB | 18K16-T03-062155 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19j10t110003     | 1       |
| Fagron                     | Hydrophilic ointment DAB | 13H13-T04-006144 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17330301         | 2       |
| Fagron                     | Hydrophilic ointment DAB | 19B28-T05-064717 | 7       |
| Fagron                     | Hydrophilic ointment DAB | 20c19-T02-077382 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14A06T11009054   | 1       |
| Fagron                     | Hydrophilic ointment DAB | 16K09-T03-038564 | 1       |

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| Supplier                   | Substance                | Batch            | Spectra |
|----------------------------|--------------------------|------------------|---------|
| Fagron                     | Hydrophilic ointment DAB | 20E03-T02-079923 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 12C09-T01        | 2       |
| Fagron                     | Hydrophilic ointment DAB | 13E10-T06-003563 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14A06-T11        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14G08-T06-013948 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 14G08-T06        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 15B19-T01        | 1       |
| Fagron                     | Hydrophilic ointment DAB | 15B19-T01-019411 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 15K24-T01-027590 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19/10-T11-072625 | 1       |
| Fagron                     | Hydrophilic ointment DAB | T11-0003         | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19J10-T10-072622 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 16G18-T04-035261 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 15F24-T05-023887 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17E04-T08-044042 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 1F27-T0-07539    | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19J10-T11-072625 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 12J31-T04        | 3       |
| Fagron                     | Hydrophilic ointment DAB | 17E04-T07-044039 | 1       |
| Fagron                     | Hydrophilic ointment DAB | 18K16-T02-062150 | 2       |
| Fagron                     | Hydrophilic ointment DAB | 19J10-T11        | 1       |
| Fagron                     | Hydrophilic ointment DAB | T11-0726205      | 1       |
| Fagron                     | Hydrophilic ointment DAB | 17/11-T03-048188 | 3       |
| Fagron                     | Hydrophilic ointment DAB | 19D2-T11-066650  | 1       |
| Fagron                     | Hydrophilic ointment DAB | 19D25-T12-066644 | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 14225002         | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 16166801         | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 17290703         | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 17185501         | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 18207602         | 1       |
| Fiebig                     | Hydrophilic ointment DAB | 19025402         | 1       |
| Fiebig 08.10.12 ek: 10,... | Hydrophilic ointment DAB | 12055901         | 1       |
| Fiebig/ Lamotte            | Hydrophilic ointment DAB | 5860400          | 2       |
| Caelo                      | Hydrophilic ointment DAB | 16282801         | 10      |
| Gehe                       | Hydrophilic ointment DAB | 12205201         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 276671           | 2       |
| Gehe                       | Hydrophilic ointment DAB | 13117301         | 2       |
| Gehe                       | Hydrophilic ointment DAB | 14123101         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 14G08-T08-013954 | 1       |
| Gehe                       | Hydrophilic ointment DAB | 15016601         | 2       |
| Gehe                       | Hydrophilic ointment DAB | 15221701         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 16009101         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 16166801         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 16167001         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 17330301         | 1       |
| Gehe                       | Hydrophilic ointment DAB | 19190601         | 1       |
| Gehe/Henry Lamotte         | Hydrophilic ointment DAB | 6001368013       | 2       |
| Caelo                      | Hydrophilic ointment DAB | 14278002         | 2       |
| H.Lamotte/Anzag 04.07.17   | Hydrophilic ointment DAB | 8002320009       | 6       |
| H.Lamotte/Anzag 06.11.18   | Hydrophilic ointment DAB | 8004399001       | 4       |
| H.Lamotte/Anzag 12.05.20   | Hydrophilic ointment DAB | 8005713006       | 3       |
| Henry                      | Hydrophilic ointment DAB | 8002320009       | 1       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 5860400          | 1       |
| Henry Lamotte              | Hydrophilic ointment DAB | 5860500          | 3       |
| Henry Lamotte              | Hydrophilic ointment DAB | 6001368014       | 2       |
| Henry Lamotte              | Hydrophilic ointment DAB | 8002320009       | 2       |
| Henry Lamotte              | Hydrophilic ointment DAB | 17330301         | 1       |
| Henry Lamotte              | Hydrophilic ointment DAB | 8005713007       | 1       |
| Henry Lamotte / Gehe       | Hydrophilic ointment DAB | 8002320009       | 1       |
| Henry Lamotte /Noweda      | Hydrophilic ointment DAB | 5860400          | 1       |

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| Supplier                   | Substance                | Batch            | Spectra |
|----------------------------|--------------------------|------------------|---------|
| Henry Lamotte Oils         | Hydrophilic ointment DAB | 5860400          | 2       |
| Henry Lamotte oils GmbH    | Hydrophilic ointment DAB | 8002320009       | 5       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 5862400          | 1       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 5860400          | 1       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 6001368013       | 2       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 8003325012       | 1       |
| Henry Lamotte Oils GmbH    | Hydrophilic ointment DAB | 8004399001       | 1       |
| Henry Lamotte Oils GmbH... | Hydrophilic ointment DAB | 8003325012       | 1       |
| Henry Lamotte Oils GmbH... | Hydrophilic ointment DAB | 6001368013       | 1       |
| Henry Lamotte Oils GmbH... | Hydrophilic ointment DAB | 8004399001       | 2       |
| Henry Lamotte/ Noweda      | Hydrophilic ointment DAB | 6001368013       | 1       |
| Henry Lamotte/Anzag        | Hydrophilic ointment DAB | 5321400          | 1       |
| Henry Lamotte/Anzag        | Hydrophilic ointment DAB | 2215M-02539      | 1       |
| Henry Lamotte/Gehe         | Hydrophilic ointment DAB | 20004177         | 1       |
| Henry Lamotte/Gehe         | Hydrophilic ointment DAB | 20005190         | 1       |
| Henry Lamotte/Noweda       | Hydrophilic ointment DAB | 6001368014       | 2       |
| Henry Lamotte/Noweda       | Hydrophilic ointment DAB | 8002320009       | 1       |
| Henry LamotteAlliance H... | Hydrophilic ointment DAB | 8005713007       | 3       |
| Infectopharm / Noweda      | Hydrophilic ointment DAB | 17040201         | 1       |
| Klenk                      | Hydrophilic ointment DAB | 1783002          | 1       |
| krieger                    | Hydrophilic ointment DAB | 19190701         | 1       |
| Krieger                    | Hydrophilic ointment DAB | 12311401         | 1       |
| Krieger                    | Hydrophilic ointment DAB | 16282801         | 1       |
| Caelo                      | Hydrophilic ointment DAB | 1622801          | 1       |
| L12                        | Hydrophilic ointment DAB | 16167001         | 1       |
| Lamotta/Anzag              | Hydrophilic ointment DAB | 6001368014       | 1       |
| lamotte                    | Hydrophilic ointment DAB | 5517900          | 1       |
| lamotte                    | Hydrophilic ointment DAB | 5448000          | 1       |
| lamotte                    | Hydrophilic ointment DAB | 8002320009       | 4       |
| Lamotte                    | Hydrophilic ointment DAB | 518400           | 1       |
| Lamotte                    | Hydrophilic ointment DAB | 5321400          | 1       |
| Lamotte                    | Hydrophilic ointment DAB | 5651600          | 2       |
| Lamotte / Anzag            | Hydrophilic ointment DAB | 1017Q-02539      | 1       |
| Lamotte / Noweda           | Hydrophilic ointment DAB | 8004399001       | 3       |
| Lamotte, Noweda 26.08.19   | Hydrophilic ointment DAB | 8003325012       | 2       |
| Lamotte//AHD               | Hydrophilic ointment DAB | 5860500          | 1       |
| Lamotte/AHC                | Hydrophilic ointment DAB | 6001368014       | 1       |
| Lamotte/AHD                | Hydrophilic ointment DAB | 8002320009       | 1       |
| Lamotte/Alliance           | Hydrophilic ointment DAB | 5517900          | 1       |
| Lamotte/Alliance           | Hydrophilic ointment DAB | 5651600          | 1       |
| Lamotte/Alliance           | Hydrophilic ointment DAB | 6001368014       | 1       |
| Lamotte/Anzag              | Hydrophilic ointment DAB | 5112A-02539      | 1       |
| Lamotte/Anzag              | Hydrophilic ointment DAB | 1616Q-02539      | 1       |
| Lamotte/Anzag              | Hydrophilic ointment DAB | 3018E-02539      | 1       |
| Lamotte/Anzag              | Hydrophilic ointment DAB | 2019U-02539      | 1       |
| Lamotte/ANZAG              | Hydrophilic ointment DAB | 5860400          | 1       |
| Noweda                     | Hydrophilic ointment DAB | 12311801         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 12205201         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 11133501         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 17290702         | 2       |
| Noweda                     | Hydrophilic ointment DAB | 17290703         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 17330303         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 17330402         | 3       |
| Noweda                     | Hydrophilic ointment DAB | 19025402         | 2       |
| Noweda                     | Hydrophilic ointment DAB | 18F27-T05-057539 | 1       |
| Noweda                     | Hydrophilic ointment DAB | 19025801         | 1       |
| Noweda                     | Hydrophilic ointment DAB | 20002047002      | 1       |
| Noweda 06.04.2016          | Hydrophilic ointment DAB | 15221601         | 1       |
| Caelo                      | Hydrophilic ointment DAB | 12J31-T04        | 1       |
| Caelo                      | Hydrophilic ointment DAB | 16k09-T02-038560 | 1       |

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| Supplier                 | Substance                | Batch            | Spectra |
|--------------------------|--------------------------|------------------|---------|
| Bombastus                | Hydrophilic ointment DAB | 288369           | 6       |
| Bombastus                | Hydrophilic ointment DAB | 288367           | 4       |
| Bombastus                | Hydrophilic ointment DAB | 293263           | 2       |
| Bombastus                | Hydrophilic ointment DAB | 296867           | 1       |
| Bombastus                | Hydrophilic ointment DAB | 20001927         | 2       |
| Caelo                    | Hydrophilic ointment DAB | 13245901         | 10      |
| Caelo                    | Hydrophilic ointment DAB | 14225002         | 12      |
| Caelo                    | Hydrophilic ointment DAB | 1120462          | 3       |
| Caelo                    | Hydrophilic ointment DAB | 1628401          | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 307091           | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 308898           | 3       |
| Phoenix                  | Hydrophilic ointment DAB | 17083103         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 18001504         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 18004573         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 18004578         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 19190703         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 19190601         | 1       |
| Phoenix                  | Hydrophilic ointment DAB | 19000413001      | 1       |
| Caelo                    | Hydrophilic ointment DAB | 15113602         | 1       |
| Phoenix 18.09.2017       | Hydrophilic ointment DAB | 16K09-T02-038560 | 1       |
| Caelo                    | Hydrophilic ointment DAB | 190004122002     | 1       |
| phönix                   | Hydrophilic ointment DAB | 16166801         | 1       |
| phönix                   | Hydrophilic ointment DAB | 16008701         | 1       |
| phönix                   | Hydrophilic ointment DAB | 16282401         | 1       |
| phönix                   | Hydrophilic ointment DAB | 17040301         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 12311301         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 5321400          | 1       |
| Phönix                   | Hydrophilic ointment DAB | 14024701         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 16166901         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 16282702         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 16166801         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 16009301         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 17290801         | 2       |
| Phönix                   | Hydrophilic ointment DAB | 17/11-T03-048188 | 2       |
| Phönix                   | Hydrophilic ointment DAB | 17330601         | 2       |
| Phönix                   | Hydrophilic ointment DAB | 18207501         | 1       |
| Phönix                   | Hydrophilic ointment DAB | 19025402         | 1       |
| Caelo                    | Hydrophilic ointment DAB | 19025702         | 8       |
| Phönix Gotha             | Hydrophilic ointment DAB | 12G18-T10        | 1       |
| phönix Pharmochem        | Hydrophilic ointment DAB | 17040301         | 2       |
| Caelo                    | Hydrophilic ointment DAB | 191900601        | 1       |
| Phönix/Bionorica         | Hydrophilic ointment DAB | 17083002         | 3       |
| Caelo                    | Hydrophilic ointment DAB | 12204901         | 2       |
| Caelo                    | Hydrophilic ointment DAB | 15221901         | 2       |
| Caelo                    | Hydrophilic ointment DAB | 1682401          | 2       |
| Caelo                    | Hydrophilic ointment DAB | 17330301         | 80      |
| PhönixWE:2.02.2017 EK... | Hydrophilic ointment DAB | 16166801         | 1       |
| sanacorb                 | Hydrophilic ointment DAB | 17330302         | 2       |
| sanacorb                 | Hydrophilic ointment DAB | 17040201         | 1       |
| sanacorp                 | Hydrophilic ointment DAB | 15F09-T02023370  | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 12205001         | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 13117102         | 3       |
| Sanacorp                 | Hydrophilic ointment DAB | AKD32            | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 6/AKD7           | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 16008701         | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 17040301         | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 17290702         | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 17290801         | 1       |
| Sanacorp                 | Hydrophilic ointment DAB | 17330301         | 4       |
| Sanacorp                 | Hydrophilic ointment DAB | 18207502         | 1       |

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| <b>Supplier</b>            | <b>Substance</b>         | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|--------------------------|------------------|----------------|
| Sanacorp                   | Hydrophilic ointment DAB | 19025402         | 1              |
| Caelo                      | Hydrophilic ointment DAB | 12J31T04         | 1              |
| Caelo                      | Hydrophilic ointment DAB | 20002930002      | 1              |
| Sanacorp 18.03.17 Ek:11... | Hydrophilic ointment DAB | 16167001         | 1              |
| Caelo                      | Hydrophilic ointment DAB | 12056002         | 4              |
| Caelo                      | Hydrophilic ointment DAB | 18207501         | 18             |
| Caelo                      | Hydrophilic ointment DAB | 15097714         | 1              |
| Stumpf                     | Hydrophilic ointment DAB | 269539           | 1              |
| Stumpf                     | Hydrophilic ointment DAB | 274004           | 1              |
| Bombastus                  | Hydrophilic ointment DAB | 296868           | 6              |
| Bombastus                  | Hydrophilic ointment DAB | 276671           | 5              |
| THC Rezeptur-Set           | Hydrophilic ointment DAB | 307095           | 1              |
| Caelo                      | Hydrophilic ointment DAB | 12055801         | 2              |
| Wepa/ Phoenix              | Hydrophilic ointment DAB | 17040301         | 1              |
| Fagron                     | Hydrophobic base gel DAC | 15L10-T04-028696 | 2              |
| Euro OTC                   | Hydrophobic base gel DAC | 16240105         | 1              |
| alliance                   | Hydrophobic base gel DAC | 18004043         | 1              |
| Alliance Healthcare        | Hydrophobic base gel DAC | 18004043         | 1              |
| Allianz                    | Hydrophobic base gel DAC | 18075803         | 1              |
| Anzag                      | Hydrophobic base gel DAC | 294418           | 1              |
| Anzag                      | Hydrophobic base gel DAC | 16172301         | 1              |
| Bomb/Alliance              | Hydrophobic base gel DAC | 19003315         | 1              |
| bomb/phönix                | Hydrophobic base gel DAC | 304036           | 1              |
| bomb/phönix                | Hydrophobic base gel DAC | 306483           | 2              |
| Bombastus                  | Hydrophobic base gel DAC | 295729           | 6              |
| Bombastus                  | Hydrophobic base gel DAC | 4082880          | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 277443           | 3              |
| Bombastus                  | Hydrophobic base gel DAC | 283998           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 10071402         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 286013           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 28111403         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 289214           | 6              |
| Bombastus                  | Hydrophobic base gel DAC | 24031504         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 289213           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 294417           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 294418           | 4              |
| Bombastus                  | Hydrophobic base gel DAC | 300896           | 4              |
| Bombastus                  | Hydrophobic base gel DAC | 297392           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 16054302         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 4082897          | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 304045           | 3              |
| Bombastus                  | Hydrophobic base gel DAC | 9031704          | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 26081706         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 23121704         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 12051806         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 15081828         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 5121804          | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 19011905         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 19004796         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 268013           | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 308440           | 7              |
| Bombastus                  | Hydrophobic base gel DAC | 160607HB         | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 2(18001099)      | 1              |
| Bombastus                  | Hydrophobic base gel DAC | 18004043         | 6              |
| Bombastus                  | Hydrophobic base gel DAC | 304036           | 8              |
| Bombastus                  | Hydrophobic base gel DAC | 271904           | 2              |
| Bombastus                  | Hydrophobic base gel DAC | 279074           | 5              |
| Bombastus                  | Hydrophobic base gel DAC | 18001099         | 8              |
| Bombastus                  | Hydrophobic base gel DAC | 292717           | 2              |
| Bombastus                  | Hydrophobic base gel DAC | 308439           | 2              |

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| Supplier  | Substance                | Batch            | Spectra |
|-----------|--------------------------|------------------|---------|
| Bombastus | Hydrophobic base gel DAC | 180005370        | 1       |
| Bombastus | Hydrophobic base gel DAC | 302I45           | 1       |
| Bombastus | Hydrophobic base gel DAC | 302145           | 2       |
| Bombastus | Hydrophobic base gel DAC | 302142           | 1       |
| Bombastus | Hydrophobic base gel DAC | 310631           | 8       |
| Bombastus | Hydrophobic base gel DAC | 18003236         | 10      |
| Bombastus | Hydrophobic base gel DAC | 60092501         | 1       |
| Bombastus | Hydrophobic base gel DAC | 20000051         | 4       |
| Bombastus | Hydrophobic base gel DAC | 20004214         | 2       |
| Bombastus | Hydrophobic base gel DAC | 299263           | 3       |
| Bombastus | Hydrophobic base gel DAC | 300895           | 1       |
| Bombastus | Hydrophobic base gel DAC | 304035           | 4       |
| Bombastus | Hydrophobic base gel DAC | 306482           | 3       |
| Bombastus | Hydrophobic base gel DAC | 17001132         | 2       |
| Bombastus | Hydrophobic base gel DAC | 17001133         | 8       |
| Bombastus | Hydrophobic base gel DAC | 18005369         | 6       |
| Bombastus | Hydrophobic base gel DAC | 18005370         | 7       |
| Bombastus | Hydrophobic base gel DAC | 19001130         | 13      |
| Bombastus | Hydrophobic base gel DAC | 19001129         | 1       |
| Bombastus | Hydrophobic base gel DAC | 19003314         | 1       |
| Bombastus | Hydrophobic base gel DAC | 19002600         | 1       |
| Bombastus | Hydrophobic base gel DAC | 19004797         | 1       |
| Bombastus | Hydrophobic base gel DAC | 20001105         | 7       |
| Bombastus | Hydrophobic base gel DAC | 282094           | 6       |
| Bombastus | Hydrophobic base gel DAC | 19003315         | 11      |
| Bombastus | Hydrophobic base gel DAC | 295369           | 1       |
| Bombastus | Hydrophobic base gel DAC | 297433           | 1       |
| Bombastus | Hydrophobic base gel DAC | 20000052         | 2       |
| Caelo     | Hydrophobic base gel DAC | 15149605         | 3       |
| Caelo     | Hydrophobic base gel DAC | 19001130         | 1       |
| Caelo     | Hydrophobic base gel DAC | 12229001         | 6       |
| Caelo     | Hydrophobic base gel DAC | 12362503         | 5       |
| Caelo     | Hydrophobic base gel DAC | 12229005         | 1       |
| Caelo     | Hydrophobic base gel DAC | 123662505        | 1       |
| Caelo     | Hydrophobic base gel DAC | 9082013C         | 1       |
| Caelo     | Hydrophobic base gel DAC | 14102505         | 2       |
| Caelo     | Hydrophobic base gel DAC | 14161501         | 14      |
| Caelo     | Hydrophobic base gel DAC | 13341701         | 2       |
| Caelo     | Hydrophobic base gel DAC | 286013           | 3       |
| Caelo     | Hydrophobic base gel DAC | 14158002         | 4       |
| Caelo     | Hydrophobic base gel DAC | 14158003         | 10      |
| Caelo     | Hydrophobic base gel DAC | 10L14-T54-009128 | 1       |
| Caelo     | Hydrophobic base gel DAC | 15149602         | 1       |
| Caelo     | Hydrophobic base gel DAC | 15240801         | 7       |
| Caelo     | Hydrophobic base gel DAC | 15064001         | 4       |
| Caelo     | Hydrophobic base gel DAC | 15240805         | 12      |
| Caelo     | Hydrophobic base gel DAC | 15240807         | 3       |
| Caelo     | Hydrophobic base gel DAC | 15436105         | 3       |
| Caelo     | Hydrophobic base gel DAC | 15436102         | 8       |
| Caelo     | Hydrophobic base gel DAC | 15240806         | 1       |
| Caelo     | Hydrophobic base gel DAC | 16070505         | 6       |
| Caelo     | Hydrophobic base gel DAC | 15436106         | 1       |
| Caelo     | Hydrophobic base gel DAC | 15436103         | 6       |
| Caelo     | Hydrophobic base gel DAC | 16070501         | 1       |
| Caelo     | Hydrophobic base gel DAC | 2825             | 1       |
| Caelo     | Hydrophobic base gel DAC | 16054302         | 8       |
| Caelo     | Hydrophobic base gel DAC | 1607050          | 1       |
| Caelo     | Hydrophobic base gel DAC | 160705           | 1       |
| Caelo     | Hydrophobic base gel DAC | 16151101         | 6       |
| Caelo     | Hydrophobic base gel DAC | 16070502         | 5       |

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| <b>Supplier</b> | <b>Substance</b>         | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|--------------------------|---------------------|----------------|
| Caelo           | Hydrophobic base gel DAC | 16151105            | 12             |
| Caelo           | Hydrophobic base gel DAC | 16172401            | 18             |
| Caelo           | Hydrophobic base gel DAC | 16240105            | 11             |
| Caelo           | Hydrophobic base gel DAC | 16240104            | 4              |
| Caelo           | Hydrophobic base gel DAC | 17032201            | 9              |
| Caelo           | Hydrophobic base gel DAC | 16151107            | 1              |
| Caelo           | Hydrophobic base gel DAC | 16240114            | 10             |
| Caelo           | Hydrophobic base gel DAC | 16240110            | 1              |
| Caelo           | Hydrophobic base gel DAC | 16240112            | 10             |
| Caelo           | Hydrophobic base gel DAC | 17043604            | 5              |
| Caelo           | Hydrophobic base gel DAC | 17043605            | 11             |
| Caelo           | Hydrophobic base gel DAC | 1716707             | 1              |
| Caelo           | Hydrophobic base gel DAC | 17196706            | 2              |
| Caelo           | Hydrophobic base gel DAC | 17196712            | 26             |
| Caelo           | Hydrophobic base gel DAC | 17196707            | 4              |
| Caelo           | Hydrophobic base gel DAC | 17196703            | 2              |
| Caelo           | Hydrophobic base gel DAC | 18075803            | 52             |
| Caelo           | Hydrophobic base gel DAC | 18075802            | 24             |
| Caelo           | Hydrophobic base gel DAC | 17320409            | 20             |
| Caelo           | Hydrophobic base gel DAC | 17196714            | 2              |
| Caelo           | Hydrophobic base gel DAC | 18228301            | 20             |
| Caelo           | Hydrophobic base gel DAC | 18140606            | 24             |
| Caelo           | Hydrophobic base gel DAC | 18140607            | 10             |
| Caelo           | Hydrophobic base gel DAC | 18001099            | 1              |
| Caelo           | Hydrophobic base gel DAC | 18004043            | 1              |
| Caelo           | Hydrophobic base gel DAC | 17L22-T02-054697    | 1              |
| Caelo           | Hydrophobic base gel DAC | 18K01-T05-062018    | 1              |
| Caelo           | Hydrophobic base gel DAC | 184240307           | 1              |
| Caelo           | Hydrophobic base gel DAC | 19123607            | 13             |
| Caelo           | Hydrophobic base gel DAC | 19194801            | 10             |
| Caelo           | Hydrophobic base gel DAC | 19253904            | 14             |
| Caelo           | Hydrophobic base gel DAC | 19253902            | 4              |
| Caelo           | Hydrophobic base gel DAC | 192539005           | 7              |
| Caelo           | Hydrophobic base gel DAC | 20001559008         | 2              |
| Caelo           | Hydrophobic base gel DAC | 17001133            | 1              |
| Caelo           | Hydrophobic base gel DAC | 16172301            | 17             |
| Caelo           | Hydrophobic base gel DAC | 20001588002         | 1              |
| Caelo           | Hydrophobic base gel DAC | 19253903            | 5              |
| Caelo           | Hydrophobic base gel DAC | 20003953002         | 2              |
| Caelo           | Hydrophobic base gel DAC | 181400604           | 1              |
| Caelo           | Hydrophobic base gel DAC | 17043606            | 4              |
| Caelo           | Hydrophobic base gel DAC | 12362504            | 3              |
| Caelo           | Hydrophobic base gel DAC | 18140604            | 9              |
| Caelo           | Hydrophobic base gel DAC | 18240302            | 13             |
| Caelo           | Hydrophobic base gel DAC | 13085004            | 2              |
| Caelo           | Hydrophobic base gel DAC | 14304604            | 1              |
| Caelo           | Hydrophobic base gel DAC | 192539004P-200709-8 | 1              |
| Caelo           | Hydrophobic base gel DAC | 192539004P-200514-1 | 1              |
| Caelo           | Hydrophobic base gel DAC | 192539004P200622-1  | 1              |
| Caelo           | Hydrophobic base gel DAC | 19123607P-191115-3  | 1              |
| Caelo           | Hydrophobic base gel DAC | 192539004P-200602-5 | 1              |
| Caelo           | Hydrophobic base gel DAC | 18240305P-190909-4  | 1              |
| Caelo           | Hydrophobic base gel DAC | 182280301           | 1              |
| Caelo           | Hydrophobic base gel DAC | 18140605            | 11             |
| Caelo           | Hydrophobic base gel DAC | 19031301            | 1              |
| Caelo           | Hydrophobic base gel DAC | 19253004            | 1              |
| Caelo           | Hydrophobic base gel DAC | 20001559003         | 3              |
| Caelo           | Hydrophobic base gel DAC | 2000559012          | 1              |
| Caelo           | Hydrophobic base gel DAC | 20003953001         | 1              |
| Caelo           | Hydrophobic base gel DAC | 15064101            | 23             |

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| Supplier | Substance                | Batch       | Spectra |
|----------|--------------------------|-------------|---------|
| Caelo    | Hydrophobic base gel DAC | 15149604    | 8       |
| Caelo    | Hydrophobic base gel DAC | 16226002    | 10      |
| Caelo    | Hydrophobic base gel DAC | 17113702    | 22      |
| Caelo    | Hydrophobic base gel DAC | 17196709    | 5       |
| Caelo    | Hydrophobic base gel DAC | 13052002    | 1       |
| Caelo    | Hydrophobic base gel DAC | 20003042003 | 1       |
| Caelo    | Hydrophobic base gel DAC | 64/2014     | 1       |
| Caelo    | Hydrophobic base gel DAC | 3289        | 1       |
| Caelo    | Hydrophobic base gel DAC | 19044903    | 25      |
| Caelo    | Hydrophobic base gel DAC | 20000220002 | 12      |
| Caelo    | Hydrophobic base gel DAC | 14304603    | 3       |
| Caelo    | Hydrophobic base gel DAC | 15055705    | 6       |
| Caelo    | Hydrophobic base gel DAC | 15149603    | 3       |
| Caelo    | Hydrophobic base gel DAC | 17320408    | 3       |
| Caelo    | Hydrophobic base gel DAC | 19044904    | 2       |
| Caelo    | Hydrophobic base gel DAC | 15205002    | 16      |
| Caelo    | Hydrophobic base gel DAC | 17032303    | 30      |
| Caelo    | Hydrophobic base gel DAC | 17196713    | 3       |
| Caelo    | Hydrophobic base gel DAC | 20001559006 | 2       |
| Caelo    | Hydrophobic base gel DAC | 13165201    | 4       |
| Caelo    | Hydrophobic base gel DAC | 16070503    | 14      |
| Caelo    | Hydrophobic base gel DAC | 16240107    | 8       |
| Caelo    | Hydrophobic base gel DAC | 19101802    | 11      |
| Caelo    | Hydrophobic base gel DAC | 19194701    | 6       |
| Caelo    | Hydrophobic base gel DAC | 1921539004  | 1       |
| Caelo    | Hydrophobic base gel DAC | 192539003   | 1       |
| Caelo    | Hydrophobic base gel DAC | 15240802    | 2       |
| Caelo    | Hydrophobic base gel DAC | 13341703    | 3       |
| Caelo    | Hydrophobic base gel DAC | 14102502    | 5       |
| Caelo    | Hydrophobic base gel DAC | 15055702    | 2       |
| Caelo    | Hydrophobic base gel DAC | 18240307    | 13      |
| Caelo    | Hydrophobic base gel DAC | 17196704    | 22      |
| Caelo    | Hydrophobic base gel DAC | 19101801    | 28      |
| Caelo    | Hydrophobic base gel DAC | 13295701    | 11      |
| Caelo    | Hydrophobic base gel DAC | 15383005    | 1       |
| Caelo    | Hydrophobic base gel DAC | 15269201    | 15      |
| Caelo    | Hydrophobic base gel DAC | 16172201    | 7       |
| Caelo    | Hydrophobic base gel DAC | 16151102    | 6       |
| Caelo    | Hydrophobic base gel DAC | 17032102    | 2       |
| Caelo    | Hydrophobic base gel DAC | 17196708    | 1       |
| Caelo    | Hydrophobic base gel DAC | 18242501    | 1       |
| Caelo    | Hydrophobic base gel DAC | 18240304    | 3       |
| Caelo    | Hydrophobic base gel DAC | 192539004   | 20      |
| Caelo    | Hydrophobic base gel DAC | 20003511002 | 1       |
| Caelo    | Hydrophobic base gel DAC | 15055701    | 1       |
| Caelo    | Hydrophobic base gel DAC | 16054201    | 27      |
| Caelo    | Hydrophobic base gel DAC | 16240111    | 6       |
| Caelo    | Hydrophobic base gel DAC | 17113703    | 58      |
| Caelo    | Hydrophobic base gel DAC | 16140606    | 1       |
| Caelo    | Hydrophobic base gel DAC | 18315801    | 21      |
| Caelo    | Hydrophobic base gel DAC | 18250301    | 9       |
| Caelo    | Hydrophobic base gel DAC | 18240308    | 7       |
| Caelo    | Hydrophobic base gel DAC | 19044902    | 10      |
| Caelo    | Hydrophobic base gel DAC | 302145      | 1       |
| Caelo    | Hydrophobic base gel DAC | 12362505    | 5       |
| Caelo    | Hydrophobic base gel DAC | 13295801    | 4       |
| Caelo    | Hydrophobic base gel DAC | 14158006    | 1       |
| Caelo    | Hydrophobic base gel DAC | 310630      | 3       |
| Caelo    | Hydrophobic base gel DAC | 302142      | 1       |
| Caelo    | Hydrophobic base gel DAC | 18003235    | 1       |

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| Supplier                   | Substance                | Batch        | Spectra |
|----------------------------|--------------------------|--------------|---------|
| Caelo                      | Hydrophobic base gel DAC | 17196715     | 2       |
| Caelo                      | Hydrophobic base gel DAC | 18140603     | 3       |
| Caelo                      | Hydrophobic base gel DAC | 18004042     | 1       |
| Caelo                      | Hydrophobic base gel DAC | 19244301     | 13      |
| Caelo                      | Hydrophobic base gel DAC | 200002200002 | 1       |
| Caelo                      | Hydrophobic base gel DAC | 13165205     | 2       |
| Caelo                      | Hydrophobic base gel DAC | 282094       | 2       |
| Caelo                      | Hydrophobic base gel DAC | 15331102     | 5       |
| Caelo                      | Hydrophobic base gel DAC | 304036       | 1       |
| Caelo                      | Hydrophobic base gel DAC | 18240305     | 2       |
| Caelo                      | Hydrophobic base gel DAC | 20001559015  | 6       |
| Caelo                      | Hydrophobic base gel DAC | 14304624     | 1       |
| Caesar & Loretz            | Hydrophobic base gel DAC | 17196706     | 1       |
| Caesar & Loretz            | Hydrophobic base gel DAC | 17113703     | 1       |
| Caesar & Loretz            | Hydrophobic base gel DAC | 17320408     | 1       |
| Caesar & Loretz            | Hydrophobic base gel DAC | 18140604     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 17196707     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18140604     | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18240305     | 3       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18240302     | 4       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18250301     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18240307     | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18140606     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18315801     | 4       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19044904     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19044903     | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19044902     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19101801     | 6       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19101802     | 3       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 18240308     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19123606     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19123607     | 4       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19194801     | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19253902     | 5       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19194701     | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 19253903     | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 192539005    | 4       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 192539004    | 4       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 200002200002 | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559003  | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559006  | 3       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559002  | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559004  | 1       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559008  | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20003042005  | 3       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20003511001  | 2       |
| Caesar & Loretz GmbH       | Hydrophobic base gel DAC | 20001559014  | 1       |
| Caesar & Loretz GmbH / ... | Hydrophobic base gel DAC | 18240305     | 1       |
| Caesar & Loretz GmbH Hi... | Hydrophobic base gel DAC | 16070503     | 2       |
| Caesar & Loretz GmbH, 4... | Hydrophobic base gel DAC | 13165201     | 1       |
| Caesar & Loretz GmbH/ F... | Hydrophobic base gel DAC | 192539004    | 2       |
| Caesar & Loretz GmbH/AHD   | Hydrophobic base gel DAC | 19044903     | 1       |
| Caesar & Loretz GmbH/AHD   | Hydrophobic base gel DAC | 19253903     | 1       |
| Caesar & Loretz GmbH/Gehe  | Hydrophobic base gel DAC | 19101801     | 1       |
| Caesar & Loretz GmbH/Je... | Hydrophobic base gel DAC | 19123607     | 1       |
| Caesar & Loretz GmbH/No... | Hydrophobic base gel DAC | 19123609     | 2       |
| Caesar & Loretz GmbH/No... | Hydrophobic base gel DAC | 20000848001  | 1       |
| Caesar & Loretz GmbH/Ph... | Hydrophobic base gel DAC | 18240305     | 1       |
| Caesar & Loretz GmbH/Ph... | Hydrophobic base gel DAC | 19253904     | 1       |
| Caesar & Loretz GmbH/AHD   | Hydrophobic base gel DAC | 18140606     | 1       |

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| Supplier                   | Substance                | Batch            | Spectra |
|----------------------------|--------------------------|------------------|---------|
| Caesar & Loretz Hilden/... | Hydrophobic base gel DAC | 20001559012      | 1       |
| Caesar & Loretz/Phönix     | Hydrophobic base gel DAC | 18140606         | 1       |
| Caesar&Loretz GmbH         | Hydrophobic base gel DAC | 17043605         | 1       |
| Caesar&Loretz GmbH/Gehe    | Hydrophobic base gel DAC | 19044903         | 1       |
| Caesar/Noweda              | Hydrophobic base gel DAC | 15436103         | 1       |
| Celo                       | Hydrophobic base gel DAC | 16172301         | 1       |
| E Plus                     | Hydrophobic base gel DAC | 17043605         | 1       |
| E Plus                     | Hydrophobic base gel DAC | 17196705         | 2       |
| E Plus                     | Hydrophobic base gel DAC | 17196704         | 1       |
| Euro OTC                   | Hydrophobic base gel DAC | 15436102         | 1       |
| Euro/Noweda                | Hydrophobic base gel DAC | 16151105         | 1       |
| Euro OTC                   | Hydrophobic base gel DAC | 12362505         | 1       |
| Europ Ots Pharma           | Hydrophobic base gel DAC | 13299604         | 1       |
| Fagro                      | Hydrophobic base gel DAC | 15240805         | 1       |
| Fagron                     | Hydrophobic base gel DAC | 10L14-T54        | 3       |
| Fagron                     | Hydrophobic base gel DAC | 10L14-T54-009128 | 2       |
| Fagron                     | Hydrophobic base gel DAC | 15J02-T09-023890 | 1       |
| Fagron                     | Hydrophobic base gel DAC | 15436101         | 3       |
| Fagron                     | Hydrophobic base gel DAC | 15240805         | 1       |
| Fagron                     | Hydrophobic base gel DAC | 17032201         | 1       |
| Fagron                     | Hydrophobic base gel DAC | 17E29-T03-051638 | 1       |
| Fagron                     | Hydrophobic base gel DAC | 18140603         | 1       |
| Fagron                     | Hydrophobic base gel DAC | 18K01-T05062018  | 1       |
| Fagron                     | Hydrophobic base gel DAC | 17J06-T19-044327 | 2       |
| Fagron                     | Hydrophobic base gel DAC | 19D01-T04-064713 | 2       |
| Fagron                     | Hydrophobic base gel DAC | 8K01-T05-064712  | 1       |
| Fagron                     | Hydrophobic base gel DAC | V00230           | 7       |
| Fagron                     | Hydrophobic base gel DAC | 16H24-T02-034643 | 4       |
| Fagron                     | Hydrophobic base gel DAC | 1207907          | 4       |
| Fagron                     | Hydrophobic base gel DAC | 11K23-T01        | 1       |
| Fagron                     | Hydrophobic base gel DAC | 19H05-T02-070214 | 1       |
| Fagron                     | Hydrophobic base gel DAC | 1313160          | 1       |
| Fagron                     | Hydrophobic base gel DAC | 1261203          | 2       |
| Fagron                     | Hydrophobic base gel DAC | 19L06-T04-072588 | 1       |
| Fagron                     | Hydrophobic base gel DAC | 17001133         | 1       |
| Fagron                     | Hydrophobic base gel DAC | 10L14-T54-000713 | 1       |
| Fagron                     | Hydrophobic base gel DAC | 10L14-T54-006109 | 5       |
| Gehe                       | Hydrophobic base gel DAC | 15149603         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 16151105         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 16240104         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 17113702         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 17043605         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 119219           | 1       |
| Gehe                       | Hydrophobic base gel DAC | 18140606         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 18315801         | 1       |
| Gehe                       | Hydrophobic base gel DAC | 192539004        | 1       |
| Gehe                       | Hydrophobic base gel DAC | 21000169         | 1       |
| GEHE                       | Hydrophobic base gel DAC | 19123606         | 2       |
| Gehe 23.05.2014            | Hydrophobic base gel DAC | 14044601         | 1       |
| Gehe amax                  | Hydrophobic base gel DAC | 192539004        | 1       |
| Gehe Kassel                | Hydrophobic base gel DAC | 271904           | 1       |
| GEHE Kassel                | Hydrophobic base gel DAC | 289214           | 1       |
| Bombastus                  | Hydrophobic base gel DAC | 3000896          | 1       |
| Caelo                      | Hydrophobic base gel DAC | 19021301         | 11      |
| Geilenkirchen              | Hydrophobic base gel DAC | 15064201         | 1       |
| Hansen & Rosenthal         | Hydrophobic base gel DAC | 1298590          | 1       |
| Hansen & Rosenthal         | Hydrophobic base gel DAC | 1371621          | 1       |
| HansenRosenthalKG/Hansen   | Hydrophobic base gel DAC | 1078667          | 1       |
| Hedinger/ Gehe             | Hydrophobic base gel DAC | 17043604         | 1       |
| Heins                      | Hydrophobic base gel DAC | 19253903         | 3       |

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| Supplier                   | Substance                | Batch       | Spectra |
|----------------------------|--------------------------|-------------|---------|
| Infectopharm / Noweda      | Hydrophobic base gel DAC | 17320409    | 1       |
| JENNE                      | Hydrophobic base gel DAC | 18140607    | 1       |
| Kehr                       | Hydrophobic base gel DAC | 17196704    | 1       |
| L12                        | Hydrophobic base gel DAC | 16151105    | 1       |
| L12                        | Hydrophobic base gel DAC | 17320409    | 1       |
| Noweda                     | Hydrophobic base gel DAC | 15055705    | 1       |
| Noweda                     | Hydrophobic base gel DAC | 15240805    | 2       |
| Noweda                     | Hydrophobic base gel DAC | 15149604    | 1       |
| Noweda                     | Hydrophobic base gel DAC | 15331102    | 1       |
| Noweda                     | Hydrophobic base gel DAC | 18003235    | 5       |
| Noweda                     | Hydrophobic base gel DAC | 18075803    | 1       |
| Noweda                     | Hydrophobic base gel DAC | 18228301    | 2       |
| Noweda                     | Hydrophobic base gel DAC | 18240307    | 3       |
| Noweda                     | Hydrophobic base gel DAC | 19003315    | 2       |
| Noweda                     | Hydrophobic base gel DAC | 20000051    | 1       |
| Caelo                      | Hydrophobic base gel DAC | 15064201    | 5       |
| Pharmchem                  | Hydrophobic base gel DAC | 18140606    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 17043605    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 17196703    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 17196705    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 17001132    | 3       |
| Phoenix                    | Hydrophobic base gel DAC | 17320409    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 19001129    | 7       |
| Phoenix                    | Hydrophobic base gel DAC | 18240307    | 1       |
| Phoenix                    | Hydrophobic base gel DAC | 19002599    | 3       |
| PHOENIX                    | Hydrophobic base gel DAC | 18005370    | 1       |
| Phoenix/ Bombatus-Werke... | Hydrophobic base gel DAC | 302145      | 1       |
| Caelo                      | Hydrophobic base gel DAC | 19123606    | 8       |
| Caelo                      | Hydrophobic base gel DAC | 19244203    | 10      |
| Phoenix/Cealo              | Hydrophobic base gel DAC | 17196704    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 16240105    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 16240113    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 17043606    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 17001133    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 3174        | 1       |
| Phönix                     | Hydrophobic base gel DAC | 18004042    | 1       |
| Phönix                     | Hydrophobic base gel DAC | 18005369    | 2       |
| Phönix                     | Hydrophobic base gel DAC | 18240307    | 1       |
| Caelo                      | Hydrophobic base gel DAC | 17196705    | 8       |
| Caelo                      | Hydrophobic base gel DAC | 200832508   | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | 13165201    | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | AKD18       | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | 308440      | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | 18240302    | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | 18140606    | 1       |
| Sanacorp                   | Hydrophobic base gel DAC | 19253903    | 1       |
| Caelo                      | Hydrophobic base gel DAC | 14102504    | 3       |
| Caelo                      | Hydrophobic base gel DAC | 20000848001 | 15      |
| Caelo                      | Hydrophobic base gel DAC | 14087501    | 10      |
| Caelo                      | Paraffin, liquid         | 192559003   | 22      |
| Anzag                      | Paraffin, liquid         | 192559008   | 1       |
| Apomix/AHD                 | Paraffin, liquid         | 11A170719   | 1       |
| Bombastus                  | Paraffin, liquid         | 19001235    | 1       |
| Bombastus                  | Paraffin, liquid         | 19004134    | 8       |
| Bombastus                  | Paraffin, liquid         | 19006616    | 5       |
| Bombastus                  | Paraffin, liquid         | 20005329    | 2       |
| Caelo                      | Paraffin, liquid         | 19010303    | 18      |
| Caelo                      | Paraffin, liquid         | 18177007    | 3       |
| Caelo                      | Paraffin, liquid         | 19010304    | 15      |
| Caelo                      | Paraffin, liquid         | 19271402    | 11      |

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| Supplier             | Substance        | Batch       | Spectra |
|----------------------|------------------|-------------|---------|
| Caelo                | Paraffin, liquid | 17321506    | 1       |
| Caelo                | Paraffin, liquid | 19010305    | 1       |
| Caelo                | Paraffin, liquid | 192559004   | 30      |
| Caelo                | Paraffin, liquid | 1925590036  | 1       |
| Caelo                | Paraffin, liquid | 192559007   | 19      |
| Caelo                | Paraffin, liquid | 192559012   | 7       |
| Caelo                | Paraffin, liquid | 75001925597 | 1       |
| Caelo                | Paraffin, liquid | CHB19010307 | 1       |
| Caelo                | Paraffin, liquid | 19010307    | 25      |
| Caelo                | Paraffin, liquid | 102559003   | 1       |
| Caelo                | Paraffin, liquid | 9271401     | 1       |
| Caelo                | Paraffin, liquid | 19010302    | 5       |
| Caelo                | Paraffin, liquid | 16238803    | 1       |
| Caelo                | Paraffin, liquid | 18177008    | 5       |
| Caelo                | Paraffin, liquid | 19271401    | 32      |
| Caelo                | Paraffin, liquid | 13052001    | 1       |
| Caelo                | Paraffin, liquid | 20004108008 | 2       |
| Caelo                | Paraffin, liquid | 19010313    | 20      |
| Caelo                | Paraffin, liquid | 2000999003  | 1       |
| Caelo                | Paraffin, liquid | 1904026-01  | 1       |
| Caelo                | Paraffin, liquid | 1909010-01  | 2       |
| Caelo                | Paraffin, liquid | 19241401    | 1       |
| Caelo                | Paraffin, liquid | 19010316    | 18      |
| Caelo                | Paraffin, liquid | 181777004   | 1       |
| Caelo                | Paraffin, liquid | 19010308    | 1       |
| Caelo                | Paraffin, liquid | 19010315    | 25      |
| Caelo                | Paraffin, liquid | 2002999004  | 1       |
| Caelo                | Paraffin, liquid | 19259007    | 1       |
| Caelo                | Paraffin, liquid | 19010310    | 1       |
| Caelo                | Paraffin, liquid | 19271403    | 1       |
| Caelo                | Paraffin, liquid | 2000299904  | 1       |
| Caelo                | Paraffin, liquid | 1901034     | 1       |
| Caelo                | Paraffin, liquid | 20002999003 | 16      |
| Caelo                | Paraffin, liquid | 1901011-01  | 1       |
| Caelo                | Paraffin, liquid | 192771402   | 1       |
| Caelo                | Paraffin, liquid | 192559033   | 1       |
| Caelo                | Paraffin, liquid | 192559008   | 14      |
| Caelo                | Paraffin, liquid | 192559011   | 16      |
| Caelo                | Paraffin, liquid | 20002999004 | 4       |
| Caelo                | Paraffin, liquid | 2000299004  | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010304    | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010303    | 2       |
| Caesar & Loretz GmbH | Paraffin, liquid | 18177008    | 4       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010313    | 4       |
| Caesar & Loretz GmbH | Paraffin, liquid | 18177005    | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010307    | 2       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19271401    | 6       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010316    | 2       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010317    | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19010315    | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559003   | 5       |
| Caesar & Loretz GmbH | Paraffin, liquid | 19271402    | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559004   | 8       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559008   | 4       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559007   | 4       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559002   | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559012   | 3       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559010   | 1       |
| Caesar & Loretz GmbH | Paraffin, liquid | 20002999003 | 2       |
| Caesar & Loretz GmbH | Paraffin, liquid | 192559011   | 1       |

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| Supplier                   | Substance        | Batch            | Spectra |
|----------------------------|------------------|------------------|---------|
| Caesar & Loretz GmbH       | Paraffin, liquid | 20004108001      | 4       |
| Caesar & Loretz GmbH       | Paraffin, liquid | 20002999004      | 2       |
| Caesar & Loretz GmbH       | Paraffin, liquid | 2007019-02       | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, liquid | 19271401         | 2       |
| Caesar & Loretz GmbH / ... | Paraffin, liquid | 19010307         | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, liquid | 19010313         | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, liquid | 19010316         | 1       |
| Caesar & Loretz GmbH Sa... | Paraffin, liquid | 192559007        | 2       |
| Caesar & Loretz GmbH/AHD   | Paraffin, liquid | 19010303         | 1       |
| Caesar & Loretz GmbH/Gehe  | Paraffin, liquid | 192559007        | 1       |
| Caesar & Loretz GmbH/GEHE  | Paraffin, liquid | 19271402         | 2       |
| Caesar & Loretz GmbH/Je... | Paraffin, liquid | 19010313         | 1       |
| Caesar & Loretz GmbH/Je... | Paraffin, liquid | 19271402         | 1       |
| Caesar & Loretz GmbH/Kehr  | Paraffin, liquid | 19010315         | 1       |
| Caesar & Loretz GmbH/Kr... | Paraffin, liquid | 19010313         | 1       |
| Caesar & Loretz GmbH/Kr... | Paraffin, liquid | 19010316         | 1       |
| Caesar & Loretz GmbH/No... | Paraffin, liquid | 19271402         | 2       |
| Caesar & Loretz GmbH/No... | Paraffin, liquid | 20004108001      | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, liquid | 19010304         | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, liquid | 19010315         | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, liquid | 10910313         | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, liquid | 192559011        | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, liquid | 20004108002      | 1       |
| Caesar & Loretz Hilden     | Paraffin, liquid | 19010307         | 1       |
| Caesar&Loretz              | Paraffin, liquid | 19010303         | 1       |
| Caleo/no                   | Paraffin, liquid | 19271402         | 1       |
| EuRho / 2                  | Paraffin, liquid | 2002013-01       | 1       |
| EuRho/Noweda               | Paraffin, liquid | 1904026-01       | 4       |
| Euro OTC                   | Paraffin, liquid | 1264597          | 1       |
| Euro OTC                   | Paraffin, liquid | 2007019-01       | 4       |
| Euro OTC                   | Paraffin, liquid | 1904026-01       | 8       |
| Euro OTC                   | Paraffin, liquid | 19099016_01      | 1       |
| Euro OTC                   | Paraffin, liquid | 190101101        | 1       |
| Euro OTC                   | Paraffin, liquid | 2002013-01       | 6       |
| Euro OTC                   | Paraffin, liquid | 200201301        | 2       |
| Euro OTC                   | Paraffin, liquid | 190910-01        | 1       |
| Euro OTC                   | Paraffin, liquid | 1901011-01       | 4       |
| Euro OTC                   | Paraffin, liquid | 1704023-01       | 1       |
| Euro OTC                   | Paraffin, liquid | 2006036-01       | 1       |
| Euro OTC                   | Paraffin, liquid | 1283254          | 1       |
| Euro OTC                   | Paraffin, liquid | 1909016-01       | 1       |
| Euro OTC                   | Paraffin, liquid | 1909010-01       | 18      |
| Euro OTC                   | Paraffin, liquid | 1350840          | 1       |
| Fagron                     | Paraffin, liquid | 2618I-02050      | 1       |
| Fagron                     | Paraffin, liquid | 19H09-T01-070898 | 4       |
| Fagron                     | Paraffin, liquid | 20B10-T34-079916 | 1       |
| Fagron                     | Paraffin, liquid | 19H09T01-070898  | 1       |
| Fagron                     | Paraffin, liquid | 20B10-T34-078149 | 3       |
| Fagron                     | Paraffin, liquid | 18I13-B01-355278 | 1       |
| Fagron                     | Paraffin, liquid | 19H09-T01-070898 | 1       |
| Fagron                     | Paraffin, liquid | 20B10-T34-079916 | 5       |
| Fagron                     | Paraffin, liquid | 19H09-T01-070897 | 2       |
| Fagron                     | Paraffin, liquid | 20B10-T34-081549 | 2       |
| Fiebig                     | Paraffin, liquid | 192559004        | 1       |
| Gehe                       | Paraffin, liquid | 19010315         | 1       |
| Gehe                       | Paraffin, liquid | 3A060420         | 1       |
| Gehe                       | Paraffin, liquid | 192559012        | 1       |
| GEHE                       | Paraffin, liquid | 1904026-1        | 1       |
| H.Lamotte/Jenne            | Paraffin, liquid | 19004134         | 1       |
| H.Lamotte/Jenne            | Paraffin, liquid | 20005329         | 2       |

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| Supplier                   | Substance        | Batch        | Spectra |
|----------------------------|------------------|--------------|---------|
| Henry Lamotte              | Paraffin, liquid | 8003083001   | 3       |
| Henry Lamotte Oil GmbH     | Paraffin, liquid | 1000010844   | 1       |
| Henry Lamotte Oils/GEHE    | Paraffin, liquid | 1000010844   | 2       |
| Henry Lamotte Oils/Sana... | Paraffin, liquid | 1000010844   | 1       |
| Henry Lamotte/Gehe         | Paraffin, liquid | 1000010844   | 2       |
| Henry Lamotte/Phönix       | Paraffin, liquid | 1000010844   | 1       |
| Lamotte                    | Paraffin, liquid | 1000010844   | 1       |
| Lamotte Oils/AHD           | Paraffin, liquid | 1000010844   | 1       |
| Lamotte/Fiebig             | Paraffin, liquid | 1000010844   | 1       |
| Noweda                     | Paraffin, liquid | 19010307     | 1       |
| Noweda                     | Paraffin, liquid | 19271401     | 2       |
| Noweda                     | Paraffin, liquid | 1909010-01   | 1       |
| Noweda                     | Paraffin, liquid | 1000010844   | 1       |
| Noweda                     | Paraffin, liquid | 192559004    | 1       |
| Noweda                     | Paraffin, liquid | 192559012    | 1       |
| Noweda                     | Paraffin, liquid | 20004108001  | 1       |
| Caelo                      | Paraffin, liquid | 200002999003 | 1       |
| Caelo                      | Paraffin, liquid | 20004108001  | 11      |
| Noweda/Lamotte EK 5,40 ... | Paraffin, liquid | 10000014411  | 1       |
| Euro OTC                   | Paraffin, liquid | 1904026-01   | 1       |
| Phönix                     | Paraffin, liquid | 190901001    | 1       |
| Caelo                      | Paraffin, liquid | 18177001     | 1       |
| PKH GmbH                   | Paraffin, liquid | 7A260219     | 1       |
| Sanacopr                   | Paraffin, liquid | 19271401     | 1       |
| Sanacorp                   | Paraffin, liquid | 8003083001   | 1       |
| Sanacorp/ Henry Lamotte    | Paraffin, liquid | 1000010844   | 1       |
| Sanacorp/ Henry Lamotte    | Paraffin, liquid | 100010844    | 1       |
| Sanacorp/ Henry Lamotte    | Paraffin, liquid | 1000014411   | 2       |
| Euro OTC                   | Paraffin, white  | 1612007-01   | 3       |
| ACM                        | Paraffin, white  | KNC1628J15   | 1       |
| Bombastus                  | Paraffin, white  | 17038204     | 1       |
| AHC 08.07.13 EK5,61        | Paraffin, white  | 12374502     | 1       |
| AHD                        | Paraffin, white  | 5489700      | 1       |
| AHD                        | Paraffin, white  | 13268410     | 2       |
| AHD                        | Paraffin, white  | 123test      | 1       |
| AHD                        | Paraffin, white  | 14355806     | 1       |
| AHD                        | Paraffin, white  | 16181901     | 3       |
| AHD                        | Paraffin, white  | 16241105     | 4       |
| AHD                        | Paraffin, white  | 16326707     | 1       |
| AHD                        | Paraffin, white  | 16326706     | 1       |
| AHD                        | Paraffin, white  | 17106004     | 3       |
| AHD                        | Paraffin, white  | 17106005     | 2       |
| AHD                        | Paraffin, white  | 17347803     | 2       |
| AHD                        | Paraffin, white  | 18005001     | 3       |
| AHD                        | Paraffin, white  | 19006208     | 2       |
| AHD                        | Paraffin, white  | 192008002    | 1       |
| AHD, 30.09.2013            | Paraffin, white  | 279970       | 1       |
| Caelo                      | Paraffin, white  | 15441501     | 25      |
| Caelo                      | Paraffin, white  | 6002062001   | 1       |
| Caelo                      | Paraffin, white  | 6000083007   | 2       |
| AHD/Henry Lamotte          | Paraffin, white  | 8002875007   | 3       |
| Euro OTC                   | Paraffin, white  | 1509019-01   | 7       |
| Alliance                   | Paraffin, white  | 13380720     | 1       |
| Alliance Healthcare        | Paraffin, white  | 12306302     | 1       |
| Alliance Healthcare        | Paraffin, white  | 276088       | 1       |
| Alliance Healthcare        | Paraffin, white  | 277444       | 1       |
| Alliance Healthcare        | Paraffin, white  | 192540004    | 1       |
| Euro OTC                   | Paraffin, white  | 1302022-01   | 7       |
| Euro OTC                   | Paraffin, white  | 1409009-01   | 3       |
| Euro OTC                   | Paraffin, white  | 1501037-01   | 7       |

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| Supplier                   | Substance       | Batch            | Spectra |
|----------------------------|-----------------|------------------|---------|
| Allianz Healthcare         | Paraffin, white | 16181904         | 1       |
| Alte Apotheke              | Paraffin, white | 16181902         | 1       |
| Anza                       | Paraffin, white | 15162519         | 1       |
| Anza                       | Paraffin, white | 16181901         | 1       |
| Anzag                      | Paraffin, white | 1105029-01       | 1       |
| Anzag                      | Paraffin, white | 271435           | 1       |
| Anzag                      | Paraffin, white | 12209204         | 1       |
| Anzag                      | Paraffin, white | 1402501          | 1       |
| Anzag                      | Paraffin, white | 13163701         | 1       |
| Anzag                      | Paraffin, white | 285231           | 1       |
| Anzag                      | Paraffin, white | 15349706         | 1       |
| Anzag                      | Paraffin, white | 17106005         | 1       |
| Anzag                      | Paraffin, white | 18005023         | 1       |
| ANZAG                      | Paraffin, white | 12032413         | 1       |
| Anzag 08.10.12             | Paraffin, white | 270491           | 1       |
| Anzag 15.03.13 ek: 5,61EUR | Paraffin, white | 12209210         | 1       |
| Anzag 27.03.13 ek: 3,66EUR | Paraffin, white | 12115101         | 1       |
| Anzag 27.12.12 ek:5.45     | Paraffin, white | 12209204         | 1       |
| Anzag/                     | Paraffin, white | 12182505         | 2       |
| Caelo                      | Paraffin, white | 13130909         | 16      |
| Caelo                      | Paraffin, white | 11315412         | 1       |
| Caelo                      | Paraffin, white | 12311010         | 12      |
| Caelo                      | Paraffin, white | 11374903         | 4       |
| Caelo                      | Paraffin, white | 11060212         | 2       |
| Anzag/Henry Lamotte        | Paraffin, white | 15060014         | 1       |
| apo ident                  | Paraffin, white | 1804011-01       | 1       |
| Apo Ident/ Noweda          | Paraffin, white | 16326707         | 1       |
| apomix/Noweda              | Paraffin, white | 306020           | 1       |
| Audor Pharma               | Paraffin, white | 18174302         | 1       |
| Bambustus/Noweda           | Paraffin, white | 296854           | 4       |
| Bambustus/Noweda           | Paraffin, white | 295265           | 1       |
| Bambynek/Gehe              | Paraffin, white | 303786           | 1       |
| Basiscreme                 | Paraffin, white | 16L27-T01-042281 | 2       |
| Beiersdorf                 | Paraffin, white | 30841410         | 3       |
| Beiersdorf/Gehe            | Paraffin, white | 1401017-01       | 1       |
| Berkel AHK                 | Paraffin, white | 13338710         | 1       |
| Berkel AHK                 | Paraffin, white | 14087403         | 1       |
| Bionorica Ethics           | Paraffin, white | 311259           | 1       |
| Bobastus                   | Paraffin, white | 302037           | 1       |
| Bomastus/Anzag             | Paraffin, white | 18003484         | 1       |
| Bomastus/Phönix            | Paraffin, white | 307661           | 1       |
| Bomastus-Werke AG          | Paraffin, white | 18002117         | 1       |
| Bomb./Gehe                 | Paraffin, white | 17000584         | 1       |
| Bomb./Gehe                 | Paraffin, white | 18003484         | 1       |
| Bomb/Gehe                  | Paraffin, white | 304124           | 1       |
| Bombast./phönix            | Paraffin, white | 19004887         | 1       |
| BOMBASTU Gehe 20.04.18     | Paraffin, white | 17000584         | 1       |
| Bombastus                  | Paraffin, white | 291319           | 3       |
| Bombastus                  | Paraffin, white | 268099           | 2       |
| Bombastus                  | Paraffin, white | 267671           | 2       |
| Bombastus                  | Paraffin, white | 267010           | 2       |
| Bombastus                  | Paraffin, white | 268390           | 1       |
| Bombastus                  | Paraffin, white | 2704212549       | 1       |
| Bombastus                  | Paraffin, white | 270492           | 1       |
| Bombastus                  | Paraffin, white | 268016           | 1       |
| Bombastus                  | Paraffin, white | 1406212549       | 1       |
| Bombastus                  | Paraffin, white | 30061201         | 1       |
| Bombastus                  | Paraffin, white | 270831           | 1       |
| Bombastus                  | Paraffin, white | 270165           | 1       |
| Bombastus                  | Paraffin, white | 270163           | 2       |

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| Supplier  | Substance       | Batch               | Spectra |
|-----------|-----------------|---------------------|---------|
| Bombastus | Paraffin, white | 270490              | 1       |
| Bombastus | Paraffin, white | 270834              | 4       |
| Bombastus | Paraffin, white | 270635              | 4       |
| Bombastus | Paraffin, white | 2909212549          | 1       |
| Bombastus | Paraffin, white | 270491              | 1       |
| Bombastus | Paraffin, white | 270984              | 1       |
| Bombastus | Paraffin, white | 271261              | 2       |
| Bombastus | Paraffin, white | 265508              | 1       |
| Bombastus | Paraffin, white | 1001312549          | 1       |
| Bombastus | Paraffin, white | 271437              | 4       |
| Bombastus | Paraffin, white | 270983              | 1       |
| Bombastus | Paraffin, white | 270980              | 2       |
| Bombastus | Paraffin, white | 269733              | 1       |
| Bombastus | Paraffin, white | 271213              | 3       |
| Bombastus | Paraffin, white | 271435              | 1       |
| Bombastus | Paraffin, white | 270977              | 2       |
| Bombastus | Paraffin, white | 2002312549          | 1       |
| Bombastus | Paraffin, white | 270979              | 5       |
| Bombastus | Paraffin, white | 271260              | 1       |
| Bombastus | Paraffin, white | 277060              | 5       |
| Bombastus | Paraffin, white | 276968              | 1       |
| Bombastus | Paraffin, white | 277987              | 5       |
| Bombastus | Paraffin, white | 3013M2549           | 1       |
| Bombastus | Paraffin, white | 279970              | 4       |
| Bombastus | Paraffin, white | 3113Q02549          | 1       |
| Bombastus | Paraffin, white | 278595              | 1       |
| Bombastus | Paraffin, white | 280702              | 3       |
| Bombastus | Paraffin, white | 279161              | 6       |
| Bombastus | Paraffin, white | 281291              | 6       |
| Bombastus | Paraffin, white | 4013E-02549         | 1       |
| Bombastus | Paraffin, white | 258551              | 1       |
| Bombastus | Paraffin, white | 279805              | 1       |
| Bombastus | Paraffin, white | 282964              | 3       |
| Bombastus | Paraffin, white | 281539              | 1       |
| Bombastus | Paraffin, white | 283948              | 1       |
| Bombastus | Paraffin, white | 287147              | 1       |
| Bombastus | Paraffin, white | 285310              | 13      |
| Bombastus | Paraffin, white | 288715              | 5       |
| Bombastus | Paraffin, white | 288717              | 3       |
| Bombastus | Paraffin, white | 292219              | 2       |
| Bombastus | Paraffin, white | 293553              | 3       |
| Bombastus | Paraffin, white | 297282              | 5       |
| Bombastus | Paraffin, white | 297283              | 12      |
| Bombastus | Paraffin, white | 302037              | 26      |
| Bombastus | Paraffin, white | 306020              | 25      |
| Bombastus | Paraffin, white | 6861102             | 1       |
| Bombastus | Paraffin, white | 308197              | 23      |
| Bombastus | Paraffin, white | 60081102            | 4       |
| Bombastus | Paraffin, white | 311259              | 15      |
| Bombastus | Paraffin, white | 31259               | 1       |
| Bombastus | Paraffin, white | 18000101            | 29      |
| Bombastus | Paraffin, white | 180002116P-180827-5 | 1       |
| Bombastus | Paraffin, white | 18005698            | 34      |
| Bombastus | Paraffin, white | 17L22-T05-054145    | 1       |
| Bombastus | Paraffin, white | 267009              | 1       |
| Bombastus | Paraffin, white | 19004888            | 32      |
| Bombastus | Paraffin, white | 190617112651        | 3       |
| Bombastus | Paraffin, white | 19004887            | 2       |
| Bombastus | Paraffin, white | 190030174           | 1       |
| Bombastus | Paraffin, white | 20001819            | 9       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Bombastus       | Paraffin, white  | 20001305           | 1              |
| Bombastus       | Paraffin, white  | 20003114           | 1              |
| Bombastus       | Paraffin, white  | 309122             | 7              |
| Bombastus       | Paraffin, white  | 21000545           | 3              |
| Bombastus       | Paraffin, white  | 90016751           | 1              |
| Bombastus       | Paraffin, white  | 190006208          | 1              |
| Bombastus       | Paraffin, white  | 20004954           | 9              |
| Bombastus       | Paraffin, white  | 276127             | 1              |
| Bombastus       | Paraffin, white  | 278620             | 1              |
| Bombastus       | Paraffin, white  | 282700             | 5              |
| Bombastus       | Paraffin, white  | 304125             | 1              |
| Bombastus       | Paraffin, white  | 18002117           | 28             |
| Bombastus       | Paraffin, white  | 18000670           | 22             |
| Bombastus       | Paraffin, white  | 111967             | 1              |
| Bombastus       | Paraffin, white  | 289344             | 6              |
| Bombastus       | Paraffin, white  | 305197             | 1              |
| Bombastus       | Paraffin, white  | 19006208           | 21             |
| Bombastus       | Paraffin, white  | 20003115           | 7              |
| Bombastus       | Paraffin, white  | 19001674P-190718-6 | 1              |
| Bombastus       | Paraffin, white  | 19006207P-200326-6 | 1              |
| Bombastus       | Paraffin, white  | 18003513P-190312-6 | 1              |
| Bombastus       | Paraffin, white  | 269732             | 1              |
| Bombastus       | Paraffin, white  | 290441             | 8              |
| Bombastus       | Paraffin, white  | 14087402           | 1              |
| Bombastus       | Paraffin, white  | 298427             | 3              |
| Bombastus       | Paraffin, white  | 303786             | 1              |
| Bombastus       | Paraffin, white  | 306019             | 1              |
| Bombastus       | Paraffin, white  | 18000100           | 3              |
| Bombastus       | Paraffin, white  | 309564             | 22             |
| Bombastus       | Paraffin, white  | 288714             | 5              |
| Bombastus       | Paraffin, white  | 292220             | 6              |
| Bombastus       | Paraffin, white  | 5215200            | 1              |
| Bombastus       | Paraffin, white  | 270978             | 3              |
| Bombastus       | Paraffin, white  | 286095             | 3              |
| Bombastus       | Paraffin, white  | 269731             | 1              |
| Bombastus       | Paraffin, white  | 270553             | 1              |
| Bombastus       | Paraffin, white  | 270981             | 1              |
| Bombastus       | Paraffin, white  | 5213A2549          | 1              |
| Bombastus       | Paraffin, white  | 2014Q2549          | 1              |
| Bombastus       | Paraffin, white  | 17000584           | 19             |
| Bombastus       | Paraffin, white  | 276088             | 1              |
| Bombastus       | Paraffin, white  | 285231             | 3              |
| Bombastus       | Paraffin, white  | 277059             | 2              |
| Bombastus       | Paraffin, white  | 19003074           | 31             |
| Bombastus       | Paraffin, white  | 277988             | 2              |
| Bombastus       | Paraffin, white  | 285309             | 2              |
| Bombastus       | Paraffin, white  | 280452             | 8              |
| Bombastus       | Paraffin, white  | 290714             | 5              |
| Bombastus       | Paraffin, white  | 2999469            | 1              |
| Bombastus       | Paraffin, white  | 6861393            | 2              |
| Bombastus       | Paraffin, white  | 283949             | 6              |
| Bombastus       | Paraffin, white  | 283951             | 1              |
| Bombastus       | Paraffin, white  | 295300             | 1              |
| Bombastus       | Paraffin, white  | 294851             | 1              |
| Bombastus       | Paraffin, white  | 299468             | 2              |
| Bombastus       | Paraffin, white  | 304126             | 1              |
| Bombastus       | Paraffin, white  | 282699             | 1              |
| Bombastus       | Paraffin, white  | 298600             | 1              |
| Bombastus       | Paraffin, white  | 295265             | 2              |
| Bombastus       | Paraffin, white  | 200001819          | 1              |

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| Supplier                | Substance       | Batch         | Spectra |
|-------------------------|-----------------|---------------|---------|
| Bombastus               | Paraffin, white | 294852        | 5       |
| Bombastus               | Paraffin, white | 18006514      | 23      |
| Bombastus               | Paraffin, white | 18174312      | 1       |
| Bombastus               | Paraffin, white | 2761127       | 1       |
| Bombastus               | Paraffin, white | 277986        | 2       |
| Bombastus               | Paraffin, white | 283873        | 1       |
| Bombastus               | Paraffin, white | 291318        | 14      |
| Bombastus               | Paraffin, white | 299469        | 13      |
| Bombastus               | Paraffin, white | 18002116      | 1       |
| Bombastus               | Paraffin, white | 18003483      | 1       |
| Bombastus               | Paraffin, white | 200003115     | 1       |
| Bombastus               | Paraffin, white | 282336        | 2       |
| Bombastus               | Paraffin, white | 295344        | 5       |
| Bombastus               | Paraffin, white | 305140        | 1       |
| Bombastus               | Paraffin, white | 17148702      | 1       |
| Bombastus               | Paraffin, white | 18003484      | 47      |
| Bombastus               | Paraffin, white | 270982        | 3       |
| Bombastus               | Paraffin, white | 269734        | 3       |
| Bombastus               | Paraffin, white | 279969        | 3       |
| Bombastus               | Paraffin, white | 286096        | 5       |
| Bombastus               | Paraffin, white | 288716        | 6       |
| Bombastus               | Paraffin, white | 263683        | 1       |
| Bombastus               | Paraffin, white | 265814        | 2       |
| Bombastus               | Paraffin, white | 270634        | 3       |
| Bombastus               | Paraffin, white | 270976        | 4       |
| Bombastus               | Paraffin, white | 2888717       | 1       |
| Bombastus               | Paraffin, white | 19101701      | 1       |
| Bombastus               | Paraffin, white | 19003073      | 1       |
| Bombastus               | Paraffin, white | 282966        | 8       |
| Bombastus               | Paraffin, white | 295301        | 10      |
| Bombastus               | Paraffin, white | 298599        | 14      |
| Bombastus               | Paraffin, white | 300120        | 14      |
| Bombastus               | Paraffin, white | 287148        | 3       |
| Bombastus-Werke AG/Gehe | Paraffin, white | 282964        | 3       |
| Bombastus/Gehe          | Paraffin, white | 302037        | 2       |
| Bombastus/ Phoenix      | Paraffin, white | 18003484      | 1       |
| Bombastus/ Phönix       | Paraffin, white | 280451        | 1       |
| cae                     | Paraffin, white | 13380706      | 1       |
| Caela                   | Paraffin, white | 15441505      | 1       |
| Caelo                   | Paraffin, white | 20061206      | 1       |
| Caelo                   | Paraffin, white | 12182505      | 9       |
| Caelo                   | Paraffin, white | 13338703      | 13      |
| Caelo                   | Paraffin, white | 17101410      | 1       |
| Caelo                   | Paraffin, white | 790619-021159 | 1       |
| Caelo                   | Paraffin, white | 16272002      | 15      |
| Caelo                   | Paraffin, white | 123456        | 2       |
| Caelo                   | Paraffin, white | 15031806      | 1       |
| Caelo                   | Paraffin, white | 12041801      | 1       |
| Caelo                   | Paraffin, white | 18174604      | 1       |
| Caelo                   | Paraffin, white | 11115501      | 1       |
| Caelo                   | Paraffin, white | 11265703      | 1       |
| Caelo                   | Paraffin, white | 90292119      | 1       |
| Caelo                   | Paraffin, white | 11265708      | 2       |
| Caelo                   | Paraffin, white | 11301301      | 5       |
| Caelo                   | Paraffin, white | 11265711      | 1       |
| Caelo                   | Paraffin, white | 11315401      | 1       |
| Caelo                   | Paraffin, white | 29051201      | 1       |
| Caelo                   | Paraffin, white | 12061201      | 1       |
| Caelo                   | Paraffin, white | 3071202       | 1       |
| Caelo                   | Paraffin, white | 23071202      | 1       |

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| Supplier | Substance       | Batch            | Spectra |
|----------|-----------------|------------------|---------|
| Caelo    | Paraffin, white | 12078105         | 1       |
| Caelo    | Paraffin, white | 11060210         | 1       |
| Caelo    | Paraffin, white | 12012707         | 2       |
| Caelo    | Paraffin, white | 14081205         | 1       |
| Caelo    | Paraffin, white | 17081202         | 1       |
| Caelo    | Paraffin, white | 22081206         | 1       |
| Caelo    | Paraffin, white | 3091209          | 1       |
| Caelo    | Paraffin, white | 11060211         | 1       |
| Caelo    | Paraffin, white | 11315408         | 2       |
| Caelo    | Paraffin, white | 12190401         | 4       |
| Caelo    | Paraffin, white | 27091205         | 1       |
| Caelo    | Paraffin, white | 11374906         | 4       |
| Caelo    | Paraffin, white | 12081601         | 3       |
| Caelo    | Paraffin, white | 26101202         | 1       |
| Caelo    | Paraffin, white | 12111203         | 1       |
| Caelo    | Paraffin, white | 26111203         | 1       |
| Caelo    | Paraffin, white | 12121201         | 1       |
| Caelo    | Paraffin, white | 12121204         | 1       |
| Caelo    | Paraffin, white | 17121206         | 1       |
| Caelo    | Paraffin, white | 12032404         | 1       |
| Caelo    | Paraffin, white | 12012604         | 2       |
| Caelo    | Paraffin, white | 11315402         | 1       |
| Caelo    | Paraffin, white | 20160812-4       | 1       |
| Caelo    | Paraffin, white | 11011309         | 1       |
| Caelo    | Paraffin, white | 17011309         | 1       |
| Caelo    | Paraffin, white | 12311003         | 4       |
| Caelo    | Paraffin, white | 11060213         | 2       |
| Caelo    | Paraffin, white | 1021302          | 1       |
| Caelo    | Paraffin, white | 402312550        | 1       |
| Caelo    | Paraffin, white | 12209210         | 30      |
| Caelo    | Paraffin, white | 613Q-02549       | 1       |
| Caelo    | Paraffin, white | 713I-02549       | 1       |
| Caelo    | Paraffin, white | 813E-02549       | 1       |
| Caelo    | Paraffin, white | 12311004         | 6       |
| Caelo    | Paraffin, white | 12115107         | 10      |
| Caelo    | Paraffin, white | 122092004        | 1       |
| Caelo    | Paraffin, white | 12115113         | 1       |
| Caelo    | Paraffin, white | 5098800          | 1       |
| Caelo    | Paraffin, white | 8031302          | 1       |
| Caelo    | Paraffin, white | 12306401         | 5       |
| Caelo    | Paraffin, white | 13031301         | 1       |
| Caelo    | Paraffin, white | 20031303         | 1       |
| Caelo    | Paraffin, white | 12311011         | 12      |
| Caelo    | Paraffin, white | 12012609         | 6       |
| Caelo    | Paraffin, white | 5041303          | 1       |
| Caelo    | Paraffin, white | 11041302         | 1       |
| Caelo    | Paraffin, white | 15041305         | 1       |
| Caelo    | Paraffin, white | 18041315         | 1       |
| Caelo    | Paraffin, white | 12337704         | 12      |
| Caelo    | Paraffin, white | 12337703         | 16      |
| Caelo    | Paraffin, white | 8051303          | 1       |
| Caelo    | Paraffin, white | 12115108         | 5       |
| Caelo    | Paraffin, white | 13051305         | 1       |
| Caelo    | Paraffin, white | 12374501         | 5       |
| Caelo    | Paraffin, white | 12D19-T54-000715 | 3       |
| Caelo    | Paraffin, white | 1061301          | 1       |
| Caelo    | Paraffin, white | 6061302          | 1       |
| Caelo    | Paraffin, white | 12337707         | 9       |
| Caelo    | Paraffin, white | 13095601         | 10      |
| Caelo    | Paraffin, white | 12012605         | 1       |

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| Supplier | Substance       | Batch     | Spectra |
|----------|-----------------|-----------|---------|
| Caelo    | Paraffin, white | 12306202  | 2       |
| Caelo    | Paraffin, white | 11283902  | 1       |
| Caelo    | Paraffin, white | 26061307  | 1       |
| Caelo    | Paraffin, white | 27061301  | 1       |
| Caelo    | Paraffin, white | 11104903  | 1       |
| Caelo    | Paraffin, white | 10071304  | 1       |
| Caelo    | Paraffin, white | 16071306  | 1       |
| Caelo    | Paraffin, white | 12306303  | 1       |
| Caelo    | Paraffin, white | 13095602  | 1       |
| Caelo    | Paraffin, white | 13050102  | 1       |
| Caelo    | Paraffin, white | 12321906  | 3       |
| Caelo    | Paraffin, white | 20081304  | 1       |
| Caelo    | Paraffin, white | 13028302  | 1       |
| Caelo    | Paraffin, white | 10091301  | 1       |
| Caelo    | Paraffin, white | 13130910  | 8       |
| Caelo    | Paraffin, white | 19091308  | 1       |
| Caelo    | Paraffin, white | 26091303  | 1       |
| Caelo    | Paraffin, white | 13005719  | 9       |
| Caelo    | Paraffin, white | 13130901  | 5       |
| Caelo    | Paraffin, white | 12337708  | 18      |
| Caelo    | Paraffin, white | 13130911  | 7       |
| Caelo    | Paraffin, white | 8101302   | 1       |
| Caelo    | Paraffin, white | 15101308  | 1       |
| Caelo    | Paraffin, white | 21101306  | 1       |
| Caelo    | Paraffin, white | 12111307  | 1       |
| Caelo    | Paraffin, white | 13084906  | 17      |
| Caelo    | Paraffin, white | 22111306  | 1       |
| Caelo    | Paraffin, white | 130510    | 1       |
| Caelo    | Paraffin, white | 13185504  | 4       |
| Caelo    | Paraffin, white | 13185501  | 1       |
| Caelo    | Paraffin, white | 13005708  | 2       |
| Caelo    | Paraffin, white | 13005720  | 2       |
| Caelo    | Paraffin, white | 13163701  | 5       |
| Caelo    | Paraffin, white | 13121303  | 1       |
| Caelo    | Paraffin, white | 27121304  | 1       |
| Caelo    | Paraffin, white | 8012014D  | 1       |
| Caelo    | Paraffin, white | 13011407  | 1       |
| Caelo    | Paraffin, white | 13185506  | 5       |
| Caelo    | Paraffin, white | 12321905  | 4       |
| Caelo    | Paraffin, white | 22011401  | 1       |
| Caelo    | Paraffin, white | 13163702  | 4       |
| Caelo    | Paraffin, white | 8021401   | 1       |
| Caelo    | Paraffin, white | 23051101  | 1       |
| Caelo    | Paraffin, white | 2061201   | 1       |
| Caelo    | Paraffin, white | 25021403  | 1       |
| Caelo    | Paraffin, white | 27021402  | 1       |
| Caelo    | Paraffin, white | 4031406   | 1       |
| Caelo    | Paraffin, white | 11031403  | 1       |
| Caelo    | Paraffin, white | 15031402  | 1       |
| Caelo    | Paraffin, white | 13268410  | 9       |
| Caelo    | Paraffin, white | 14025201  | 11      |
| Caelo    | Paraffin, white | 30012014F | 1       |
| Caelo    | Paraffin, white | 13341606  | 6       |
| Caelo    | Paraffin, white | 13338714  | 7       |
| Caelo    | Paraffin, white | 250414002 | 1       |
| Caelo    | Paraffin, white | 13268411  | 7       |
| Caelo    | Paraffin, white | 10051402  | 1       |
| Caelo    | Paraffin, white | 23051404  | 1       |
| Caelo    | Paraffin, white | 5061412   | 1       |
| Caelo    | Paraffin, white | 16061403  | 1       |

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| Supplier | Substance       | Batch     | Spectra |
|----------|-----------------|-----------|---------|
| Caelo    | Paraffin, white | 27061401  | 1       |
| Caelo    | Paraffin, white | 13333101  | 1       |
| Caelo    | Paraffin, white | 19071401  | 1       |
| Caelo    | Paraffin, white | 1338714   | 1       |
| Caelo    | Paraffin, white | 1081409   | 1       |
| Caelo    | Paraffin, white | 12081404  | 1       |
| Caelo    | Paraffin, white | 15081406  | 1       |
| Caelo    | Paraffin, white | 26081409  | 1       |
| Caelo    | Paraffin, white | 13268422  | 4       |
| Caelo    | Paraffin, white | 13268423  | 5       |
| Caelo    | Paraffin, white | 11091402  | 1       |
| Caelo    | Paraffin, white | 13380703  | 13      |
| Caelo    | Paraffin, white | 14087403  | 2       |
| Caelo    | Paraffin, white | 26091406  | 1       |
| Caelo    | Paraffin, white | 14124703  | 8       |
| Caelo    | Paraffin, white | 13380704  | 5       |
| Caelo    | Paraffin, white | 133380703 | 1       |
| Caelo    | Paraffin, white | 22111401  | 1       |
| Caelo    | Paraffin, white | 14201001  | 2       |
| Caelo    | Paraffin, white | 25112014A | 1       |
| Caelo    | Paraffin, white | 14124704  | 12      |
| Caelo    | Paraffin, white | 14087409  | 3       |
| Caelo    | Paraffin, white | 14124702  | 1       |
| Caelo    | Paraffin, white | 5121403   | 1       |
| Caelo    | Paraffin, white | 13380702  | 4       |
| Caelo    | Paraffin, white | 15121407  | 1       |
| Caelo    | Paraffin, white | 14087410  | 6       |
| Caelo    | Paraffin, white | 30121427  | 1       |
| Caelo    | Paraffin, white | 22011510  | 1       |
| Caelo    | Paraffin, white | 14189005  | 1       |
| Caelo    | Paraffin, white | 14189006  | 7       |
| Caelo    | Paraffin, white | 11021510  | 1       |
| Caelo    | Paraffin, white | 13380708  | 12      |
| Caelo    | Paraffin, white | 13380719  | 8       |
| Caelo    | Paraffin, white | 50115/1   | 1       |
| Caelo    | Paraffin, white | 7031502   | 1       |
| Caelo    | Paraffin, white | 14189007  | 8       |
| Caelo    | Paraffin, white | 14324402  | 2       |
| Caelo    | Paraffin, white | 13380709  | 9       |
| Caelo    | Paraffin, white | 20031518  | 1       |
| Caelo    | Paraffin, white | 15060003  | 13      |
| Caelo    | Paraffin, white | 18041504  | 1       |
| Caelo    | Paraffin, white | 14124706  | 10      |
| Caelo    | Paraffin, white | 28041508  | 1       |
| Caelo    | Paraffin, white | 14248403  | 7       |
| Caelo    | Paraffin, white | 290441    | 2       |
| Caelo    | Paraffin, white | 14301804  | 23      |
| Caelo    | Paraffin, white | 13380721  | 16      |
| Caelo    | Paraffin, white | 21051509  | 1       |
| Caelo    | Paraffin, white | 14189008  | 2       |
| Caelo    | Paraffin, white | 4051502   | 1       |
| Caelo    | Paraffin, white | 20061503  | 1       |
| Caelo    | Paraffin, white | 15060007  | 3       |
| Caelo    | Paraffin, white | 15060014  | 15      |
| Caelo    | Paraffin, white | 20071505  | 1       |
| Caelo    | Paraffin, white | 15060008  | 4       |
| Caelo    | Paraffin, white | 2948852   | 1       |
| Caelo    | Paraffin, white | 12081504  | 1       |
| Caelo    | Paraffin, white | 15060012  | 5       |
| Caelo    | Paraffin, white | 15204303  | 24      |

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| Supplier | Substance       | Batch             | Spectra |
|----------|-----------------|-------------------|---------|
| Caelo    | Paraffin, white | 4091517           | 1       |
| Caelo    | Paraffin, white | 14092015B         | 1       |
| Caelo    | Paraffin, white | 15050003          | 18      |
| Caelo    | Paraffin, white | 15219903          | 15      |
| Caelo    | Paraffin, white | 15204304          | 6       |
| Caelo    | Paraffin, white | 15330502          | 2       |
| Caelo    | Paraffin, white | 15162508          | 7       |
| Caelo    | Paraffin, white | 15278804          | 24      |
| Caelo    | Paraffin, white | 15339806          | 19      |
| Caelo    | Paraffin, white | 15336810          | 4       |
| Caelo    | Paraffin, white | 15278808          | 8       |
| Caelo    | Paraffin, white | 15349701          | 13      |
| Caelo    | Paraffin, white | 15330401          | 11      |
| Caelo    | Paraffin, white | 15278801          | 26      |
| Caelo    | Paraffin, white | 1509019-01        | 1       |
| Caelo    | Paraffin, white | 15339807          | 18      |
| Caelo    | Paraffin, white | 15278809          | 14      |
| Caelo    | Paraffin, white | 15336809          | 7       |
| Caelo    | Paraffin, white | 15349705          | 1       |
| Caelo    | Paraffin, white | 15339801          | 1       |
| Caelo    | Paraffin, white | 15339808          | 16      |
| Caelo    | Paraffin, white | 15339805          | 3       |
| Caelo    | Paraffin, white | 15349708          | 14      |
| Caelo    | Paraffin, white | 323915339805      | 1       |
| Caelo    | Paraffin, white | 15355806          | 1       |
| Caelo    | Paraffin, white | 16138003          | 22      |
| Caelo    | Paraffin, white | 15441502          | 32      |
| Caelo    | Paraffin, white | 16029212          | 4       |
| Caelo    | Paraffin, white | 16029208          | 1       |
| Caelo    | Paraffin, white | 16029213          | 5       |
| Caelo    | Paraffin, white | 1544150           | 1       |
| Caelo    | Paraffin, white | 16227403          | 8       |
| Caelo    | Paraffin, white | 161338003         | 1       |
| Caelo    | Paraffin, white | 15441509          | 36      |
| Caelo    | Paraffin, white | 16227404          | 28      |
| Caelo    | Paraffin, white | 16227401          | 2       |
| Caelo    | Paraffin, white | 16029220          | 9       |
| Caelo    | Paraffin, white | 16181902          | 23      |
| Caelo    | Paraffin, white | 1544159           | 1       |
| Caelo    | Paraffin, white | 16181901          | 6       |
| Caelo    | Paraffin, white | 16224704          | 1       |
| Caelo    | Paraffin, white | 2895              | 1       |
| Caelo    | Paraffin, white | 16181903          | 20      |
| Caelo    | Paraffin, white | 170203VA/16181901 | 1       |
| Caelo    | Paraffin, white | 15441510          | 33      |
| Caelo    | Paraffin, white | 15441511          | 59      |
| Caelo    | Paraffin, white | 11031707          | 1       |
| Caelo    | Paraffin, white | 21031701          | 1       |
| Caelo    | Paraffin, white | 16227411          | 8       |
| Caelo    | Paraffin, white | 8041703           | 1       |
| Caelo    | Paraffin, white | 16161901          | 1       |
| Caelo    | Paraffin, white | 26041702          | 1       |
| Caelo    | Paraffin, white | 11051702          | 1       |
| Caelo    | Paraffin, white | 6326702           | 1       |
| Caelo    | Paraffin, white | 10061715          | 1       |
| Caelo    | Paraffin, white | 16272009          | 9       |
| Caelo    | Paraffin, white | 3071709           | 1       |
| Caelo    | Paraffin, white | 16272017          | 16      |
| Caelo    | Paraffin, white | 16241105          | 5       |
| Caelo    | Paraffin, white | 28071709          | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Paraffin, white  | 26081705     | 1              |
| Caelo           | Paraffin, white  | 3091702      | 1              |
| Caelo           | Paraffin, white  | 30091701     | 1              |
| Caelo           | Paraffin, white  | 17106001     | 22             |
| Caelo           | Paraffin, white  | 23101702     | 1              |
| Caelo           | Paraffin, white  | 11111704     | 1              |
| Caelo           | Paraffin, white  | 170382063    | 1              |
| Caelo           | Paraffin, white  | 170382045420 | 1              |
| Caelo           | Paraffin, white  | 17038206     | 1              |
| Caelo           | Paraffin, white  | 2121704      | 1              |
| Caelo           | Paraffin, white  | 7106001      | 1              |
| Caelo           | Paraffin, white  | 23121701     | 1              |
| Caelo           | Paraffin, white  | 17000584     | 3              |
| Caelo           | Paraffin, white  | 17204204     | 9              |
| Caelo           | Paraffin, white  | 26011805     | 1              |
| Caelo           | Paraffin, white  | 17106008     | 3              |
| Caelo           | Paraffin, white  | 10021803     | 1              |
| Caelo           | Paraffin, white  | 311259       | 2              |
| Caelo           | Paraffin, white  | 17347901     | 11             |
| Caelo           | Paraffin, white  | 15359105     | 9              |
| Caelo           | Paraffin, white  | 17106005     | 41             |
| Caelo           | Paraffin, white  | 18000101     | 2              |
| Caelo           | Paraffin, white  | 3051811      | 1              |
| Caelo           | Paraffin, white  | 17052008     | 25             |
| Caelo           | Paraffin, white  | 17350003     | 2              |
| Caelo           | Paraffin, white  | 25051801     | 1              |
| Caelo           | Paraffin, white  | 1720401      | 1              |
| Caelo           | Paraffin, white  | 6061801      | 1              |
| Caelo           | Paraffin, white  | 7061802      | 1              |
| Caelo           | Paraffin, white  | 18002117     | 4              |
| Caelo           | Paraffin, white  | 17052012     | 54             |
| Caelo           | Paraffin, white  | 29061803     | 1              |
| Caelo           | Paraffin, white  | 17347803     | 1              |
| Caelo           | Paraffin, white  | 17347802     | 23             |
| Caelo           | Paraffin, white  | 1710650      | 1              |
| Caelo           | Paraffin, white  | 30081813     | 1              |
| Caelo           | Paraffin, white  | 22091803     | 1              |
| Caelo           | Paraffin, white  | 19101810     | 1              |
| Caelo           | Paraffin, white  | 17350019     | 1              |
| Caelo           | Paraffin, white  | 17111801     | 1              |
| Caelo           | Paraffin, white  | 18174301     | 16             |
| Caelo           | Paraffin, white  | 1804011-01   | 1              |
| Caelo           | Paraffin, white  | 5121803      | 1              |
| Caelo           | Paraffin, white  | 19121801     | 1              |
| Caelo           | Paraffin, white  | 18006404     | 17             |
| Caelo           | Paraffin, white  | 18005698     | 4              |
| Caelo           | Paraffin, white  | 17342005     | 15             |
| Caelo           | Paraffin, white  | 18005004     | 1              |
| Caelo           | Paraffin, white  | 18003484     | 1              |
| Caelo           | Paraffin, white  | 17347902     | 8              |
| Caelo           | Paraffin, white  | 2021901      | 1              |
| Caelo           | Paraffin, white  | 18174305     | 2              |
| Caelo           | Paraffin, white  | 18174312     | 29             |
| Caelo           | Paraffin, white  | 161819207    | 1              |
| Caelo           | Paraffin, white  | 18174314     | 7              |
| Caelo           | Paraffin, white  | 18174310     | 1              |
| Caelo           | Paraffin, white  | 18174303     | 10             |
| Caelo           | Paraffin, white  | 18314802     | 7              |
| Caelo           | Paraffin, white  | 18005023     | 25             |
| Caelo           | Paraffin, white  | 18314804     | 1              |

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| Supplier | Substance       | Batch       | Spectra |
|----------|-----------------|-------------|---------|
| Caelo    | Paraffin, white | 18296802    | 30      |
| Caelo    | Paraffin, white | 18005033    | 24      |
| Caelo    | Paraffin, white | 18314801    | 5       |
| Caelo    | Paraffin, white | 18092014    | 16      |
| Caelo    | Paraffin, white | 19135402    | 2       |
| Caelo    | Paraffin, white | 192008003   | 22      |
| Caelo    | Paraffin, white | 19060102    | 1       |
| Caelo    | Paraffin, white | 18005025    | 1       |
| Caelo    | Paraffin, white | 192540003   | 1       |
| Caelo    | Paraffin, white | 20000510011 | 1       |
| Caelo    | Paraffin, white | 2002327003  | 1       |
| Caelo    | Paraffin, white | 2000051003  | 1       |
| Caelo    | Paraffin, white | 21000297007 | 1       |
| Caelo    | Paraffin, white | 13005712    | 13      |
| Caelo    | Paraffin, white | 15201303    | 1       |
| Caelo    | Paraffin, white | 18314811    | 11      |
| Caelo    | Paraffin, white | 18005039    | 13      |
| Caelo    | Paraffin, white | 1203413     | 1       |
| Caelo    | Paraffin, white | 11040603    | 1       |
| Caelo    | Paraffin, white | 11108710    | 1       |
| Caelo    | Paraffin, white | 11315413    | 2       |
| Caelo    | Paraffin, white | 191350404   | 1       |
| Caelo    | Paraffin, white | 15060006    | 8       |
| Caelo    | Paraffin, white | 13130912    | 13      |
| Caelo    | Paraffin, white | 17052002    | 1       |
| Caelo    | Paraffin, white | 19254001    | 2       |
| Caelo    | Paraffin, white | 10220214    | 1       |
| Caelo    | Paraffin, white | 16029221    | 7       |
| Caelo    | Paraffin, white | 15441506    | 12      |
| Caelo    | Paraffin, white | 14124707    | 30      |
| Caelo    | Paraffin, white | 16138004    | 27      |
| Caelo    | Paraffin, white | 11265701    | 1       |
| Caelo    | Paraffin, white | 13130907    | 6       |
| Caelo    | Paraffin, white | 283949      | 1       |
| Caelo    | Paraffin, white | 18006401    | 33      |
| Caelo    | Paraffin, white | 20000510009 | 1       |
| Caelo    | Paraffin, white | 16029211    | 13      |
| Caelo    | Paraffin, white | 13084905    | 13      |
| Caelo    | Paraffin, white | 10155402    | 1       |
| Caelo    | Paraffin, white | 13185507    | 7       |
| Caelo    | Paraffin, white | 1111111     | 1       |
| Caelo    | Paraffin, white | 16272990    | 1       |
| Caelo    | Paraffin, white | 51210195    | 1       |
| Caelo    | Paraffin, white | 15162504    | 12      |
| Caelo    | Paraffin, white | 12321902    | 2       |
| Caelo    | Paraffin, white | 276127      | 1       |
| Caelo    | Paraffin, white | 13341604    | 1       |
| Caelo    | Paraffin, white | 17038215    | 5       |
| Caelo    | Paraffin, white | 19135404    | 16      |
| Caelo    | Paraffin, white | 19135406    | 13      |
| Caelo    | Paraffin, white | 295300      | 1       |
| Caelo    | Paraffin, white | 13174901    | 1       |
| Caelo    | Paraffin, white | 13380720    | 25      |
| Caelo    | Paraffin, white | 14347302    | 10      |
| Caelo    | Paraffin, white | 1808001-01  | 1       |
| Caelo    | Paraffin, white | 17052003    | 39      |
| Caelo    | Paraffin, white | 17204203    | 4       |
| Caelo    | Paraffin, white | 15050004    | 15      |
| Caelo    | Paraffin, white | 297283      | 1       |
| Caelo    | Paraffin, white | 12306302    | 7       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Paraffin, white  | 12071805             | 5              |
| Caelo           | Paraffin, white  | 15204302             | 12             |
| Caelo           | Paraffin, white  | 1318504              | 1              |
| Caelo           | Paraffin, white  | 13185512             | 10             |
| Caelo           | Paraffin, white  | 12115105             | 1              |
| Caelo           | Paraffin, white  | 17L22-T05-056478     | 1              |
| Caelo           | Paraffin, white  | jjjjjj               | 1              |
| Caelo           | Paraffin, white  | 14324601             | 7              |
| Caelo           | Paraffin, white  | 1672017              | 1              |
| Caelo           | Paraffin, white  | 12032405             | 1              |
| Caelo           | Paraffin, white  | 12115102             | 16             |
| Caelo           | Paraffin, white  | 13163602             | 2              |
| Caelo           | Paraffin, white  | 17106002             | 28             |
| Caelo           | Paraffin, white  | 12003603             | 1              |
| Caelo           | Paraffin, white  | 12115106             | 7              |
| Caelo           | Paraffin, white  | 14025101             | 4              |
| Caelo           | Paraffin, white  | 17347802-V20181115Ma | 1              |
| Caelo           | Paraffin, white  | 16326702-20170704Ma3 | 1              |
| Caelo           | Paraffin, white  | 13109010             | 1              |
| Caelo           | Paraffin, white  | 12182504             | 1              |
| Caelo           | Paraffin, white  | 154(18174302)        | 1              |
| Caelo           | Paraffin, white  | 156(18174312)        | 1              |
| Caelo           | Paraffin, white  | 2000510003           | 1              |
| Caelo           | Paraffin, white  | 1612007-01           | 3              |
| Caelo           | Paraffin, white  | 13005711             | 14             |
| Caelo           | Paraffin, white  | 292220               | 1              |
| Caelo           | Paraffin, white  | 153(17204201)        | 1              |
| Caelo           | Paraffin, white  | 11108711             | 1              |
| Caelo           | Paraffin, white  | 13341612             | 7              |
| Caelo           | Paraffin, white  | 15060004             | 6              |
| Caelo           | Paraffin, white  | 15162506             | 1              |
| Caelo           | Paraffin, white  | 1712008-01           | 2              |
| Caelo           | Paraffin, white  | 18174311             | 5              |
| Caelo           | Paraffin, white  | 18314810             | 6              |
| Caelo           | Paraffin, white  | 1834809              | 1              |
| Caelo           | Paraffin, white  | 7082010              | 1              |
| Caelo           | Paraffin, white  | 2000112002           | 2              |
| Caelo           | Paraffin, white  | 15204301             | 12             |
| Caelo           | Paraffin, white  | 3260                 | 1              |
| Caelo           | Paraffin, white  | 18005015             | 28             |
| Caelo           | Paraffin, white  | 3348                 | 1              |
| Caelo           | Paraffin, white  | PV43                 | 1              |
| Caelo           | Paraffin, white  | 301424               | 1              |
| Caelo           | Paraffin, white  | 16082701             | 2              |
| Caelo           | Paraffin, white  | 171065005            | 1              |
| Caelo           | Paraffin, white  | 200011               | 1              |
| Caelo           | Paraffin, white  | 15162503             | 8              |
| Caelo           | Paraffin, white  | 15162519             | 1              |
| Caelo           | Paraffin, white  | 1504304              | 1              |
| Caelo           | Paraffin, white  | 16029219             | 5              |
| Caelo           | Paraffin, white  | 12209203             | 3              |
| Caelo           | Paraffin, white  | 14189002             | 8              |
| Caelo           | Paraffin, white  | 12337706             | 13             |
| Caelo           | Paraffin, white  | 1215106              | 1              |
| Caelo           | Paraffin, white  | 286095               | 1              |
| Caelo           | Paraffin, white  | 15327602             | 1              |
| Caelo           | Paraffin, white  | 16181907             | 7              |
| Caelo           | Paraffin, white  | 17303501             | 46             |
| Caelo           | Paraffin, white  | 19260102             | 14             |
| Caelo           | Paraffin, white  | 192540001            | 36             |

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| Supplier | Substance       | Batch         | Spectra |
|----------|-----------------|---------------|---------|
| Caelo    | Paraffin, white | 13341605      | 7       |
| Caelo    | Paraffin, white | 16326702      | 56      |
| Caelo    | Paraffin, white | 17342016      | 44      |
| Caelo    | Paraffin, white | 20002327003   | 3       |
| Caelo    | Paraffin, white | 14087408      | 2       |
| Caelo    | Paraffin, white | 12209204      | 17      |
| Caelo    | Paraffin, white | 10271001      | 1       |
| Caelo    | Paraffin, white | 15349702      | 11      |
| Caelo    | Paraffin, white | 16272010      | 15      |
| Caelo    | Paraffin, white | 16326707      | 4       |
| Caelo    | Paraffin, white | 1204209       | 1       |
| Caelo    | Paraffin, white | 17052010      | 92      |
| Caelo    | Paraffin, white | 17342006      | 15      |
| Caelo    | Paraffin, white | 15349706      | 5       |
| Caelo    | Paraffin, white | 16272001      | 1       |
| Caelo    | Paraffin, white | 18005034      | 3       |
| Caelo    | Paraffin, white | 20001122001   | 10      |
| Caelo    | Paraffin, white | 13268420      | 4       |
| Caelo    | Paraffin, white | 6861393       | 1       |
| Caelo    | Paraffin, white | 15349709      | 4       |
| Caelo    | Paraffin, white | 2016E-07061   | 1       |
| Caelo    | Paraffin, white | 3417E-02549   | 1       |
| Caelo    | Paraffin, white | 16271810      | 47      |
| Caelo    | Paraffin, white | 17350014      | 19      |
| Caelo    | Paraffin, white | 20000510014   | 3       |
| Caelo    | Paraffin, white | 13365103      | 3       |
| Caelo    | Paraffin, white | 12031202      | 1       |
| Caelo    | Paraffin, white | 1310909       | 1       |
| Caelo    | Paraffin, white | 13084903      | 1       |
| Caelo    | Paraffin, white | 13341602      | 4       |
| Caelo    | Paraffin, white | 13341608      | 8       |
| Caelo    | Paraffin, white | 282700        | 1       |
| Caelo    | Paraffin, white | 13365104      | 4       |
| Caelo    | Paraffin, white | 14324301      | 19      |
| Caelo    | Paraffin, white | 14124705      | 9       |
| Caelo    | Paraffin, white | 15050005      | 9       |
| Caelo    | Paraffin, white | 15060013      | 5       |
| Caelo    | Paraffin, white | 15330601      | 16      |
| Caelo    | Paraffin, white | 16227412      | 14      |
| Caelo    | Paraffin, white | 6272009       | 1       |
| Caelo    | Paraffin, white | 1705015-01    | 3       |
| Caelo    | Paraffin, white | 16096913      | 23      |
| Caelo    | Paraffin, white | 17204201      | 58      |
| Caelo    | Paraffin, white | 18174304      | 13      |
| Caelo    | Paraffin, white | 1814301       | 1       |
| Caelo    | Paraffin, white | 17342008      | 39      |
| Caelo    | Paraffin, white | 18005040      | 1       |
| Caelo    | Paraffin, white | 20000627002   | 16      |
| Caelo    | Paraffin, white | 19254002      | 1       |
| Caelo    | Paraffin, white | 18179717      | 66      |
| Caelo    | Paraffin, white | 18002023      | 1       |
| Caelo    | Paraffin, white | 18006406      | 17      |
| Caelo    | Paraffin, white | 13185505      | 1       |
| Caelo    | Paraffin, white | 1231010       | 1       |
| Caelo    | Paraffin, white | 150(17038202) | 1       |
| Caelo    | Paraffin, white | 16271807      | 43      |
| Caelo    | Paraffin, white | 151(17204209) | 1       |
| Caelo    | Paraffin, white | 152(17350004) | 1       |
| Caelo    | Paraffin, white | 18174302      | 12      |
| Caelo    | Paraffin, white | 155(18174304) | 1       |

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| Supplier | Substance       | Batch             | Spectra |
|----------|-----------------|-------------------|---------|
| Caelo    | Paraffin, white | 18314803          | 16      |
| Caelo    | Paraffin, white | 157(18314803)     | 1       |
| Caelo    | Paraffin, white | 12337701          | 5       |
| Caelo    | Paraffin, white | 20000510007       | 9       |
| Caelo    | Paraffin, white | 13084902          | 14      |
| Caelo    | Paraffin, white | 1210006-01        | 1       |
| Caelo    | Paraffin, white | P159/14           | 1       |
| Caelo    | Paraffin, white | 12337709          | 15      |
| Caelo    | Paraffin, white | 13268409          | 13      |
| Caelo    | Paraffin, white | 14124708          | 11      |
| Caelo    | Paraffin, white | 14189004          | 5       |
| Caelo    | Paraffin, white | 14355806          | 11      |
| Caelo    | Paraffin, white | 15162507          | 12      |
| Caelo    | Paraffin, white | 133807212         | 1       |
| Caelo    | Paraffin, white | 16029210          | 3       |
| Caelo    | Paraffin, white | 16029222          | 8       |
| Caelo    | Paraffin, white | 15441514          | 67      |
| Caelo    | Paraffin, white | 14E30-T07-014286  | 1       |
| Caelo    | Paraffin, white | 17038202          | 18      |
| Caelo    | Paraffin, white | 16181804          | 1       |
| Caelo    | Paraffin, white | 171114VA/16241105 | 1       |
| Caelo    | Paraffin, white | 17038201          | 4       |
| Caelo    | Paraffin, white | 17038213          | 4       |
| Caelo    | Paraffin, white | 17204209          | 16      |
| Caelo    | Paraffin, white | 308197            | 2       |
| Caelo    | Paraffin, white | 17038219          | 42      |
| Caelo    | Paraffin, white | 17204207          | 9       |
| Caelo    | Paraffin, white | 17052009          | 13      |
| Caelo    | Paraffin, white | 17350013          | 10      |
| Caelo    | Paraffin, white | 18006402          | 2       |
| Caelo    | Paraffin, white | 18174307          | 3       |
| Caelo    | Paraffin, white | 17347003          | 1       |
| Caelo    | Paraffin, white | 18174317          | 4       |
| Caelo    | Paraffin, white | 18005029          | 2       |
| Caelo    | Paraffin, white | 18005031          | 6       |
| Caelo    | Paraffin, white | 181797002         | 24      |
| Caelo    | Paraffin, white | 191354006         | 1       |
| Caelo    | Paraffin, white | 20001122002       | 1       |
| Caelo    | Paraffin, white | 20000510006       | 1       |
| Fagron   | Paraffin, white | 18005001          | 1       |
| Caelo    | Paraffin, white | 13268408          | 22      |
| Caelo    | Paraffin, white | 15050002          | 44      |
| Caelo    | Paraffin, white | 12081502          | 1       |
| Caelo    | Paraffin, white | 14189019          | 1       |
| Caelo    | Paraffin, white | 14301805          | 16      |
| Caelo    | Paraffin, white | 16032602          | 15      |
| Caelo    | Paraffin, white | 15441504          | 42      |
| Caelo    | Paraffin, white | 16872018          | 1       |
| Caelo    | Paraffin, white | 17038204          | 10      |
| Caelo    | Paraffin, white | 17560004          | 1       |
| Caelo    | Paraffin, white | 1605019-01        | 1       |
| Caelo    | Paraffin, white | 17347801          | 22      |
| Caelo    | Paraffin, white | 17350005          | 10      |
| Caelo    | Paraffin, white | 17350015          | 2       |
| Caelo    | Paraffin, white | 18005001          | 7       |
| Caelo    | Paraffin, white | 18005016          | 17      |
| Caelo    | Paraffin, white | 18179703          | 18      |
| Caelo    | Paraffin, white | 20003237001       | 2       |
| Caelo    | Paraffin, white | 17L22-T05-056479  | 1       |
| Caelo    | Paraffin, white | 14201003          | 1       |

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| Supplier | Substance       | Batch            | Spectra |
|----------|-----------------|------------------|---------|
| Caelo    | Paraffin, white | 13005701         | 8       |
| Caelo    | Paraffin, white | 13005713         | 5       |
| Caelo    | Paraffin, white | 12K01-T52-002659 | 1       |
| Caelo    | Paraffin, white | 13185513         | 3       |
| Caelo    | Paraffin, white | 282964           | 1       |
| Caelo    | Paraffin, white | 14087402         | 5       |
| Caelo    | Paraffin, white | 14087404         | 11      |
| Caelo    | Paraffin, white | 14087406         | 2       |
| Caelo    | Paraffin, white | 14087405         | 4       |
| Caelo    | Paraffin, white | 14189003         | 2       |
| Caelo    | Paraffin, white | 14189018         | 10      |
| Caelo    | Paraffin, white | 15162501         | 3       |
| Caelo    | Paraffin, white | 15278805         | 18      |
| Caelo    | Paraffin, white | 299469           | 1       |
| Caelo    | Paraffin, white | 16138002         | 2       |
| Caelo    | Paraffin, white | 16227406         | 18      |
| Caelo    | Paraffin, white | 303786           | 1       |
| Caelo    | Paraffin, white | 304124           | 1       |
| Caelo    | Paraffin, white | 16272018         | 3       |
| Caelo    | Paraffin, white | 15441515         | 6       |
| Caelo    | Paraffin, white | 17052001         | 71      |
| Caelo    | Paraffin, white | 14J03-Z03-020829 | 1       |
| Caelo    | Paraffin, white | 17106004         | 12      |
| Caelo    | Paraffin, white | 17350018         | 5       |
| Caelo    | Paraffin, white | 17350006         | 2       |
| Caelo    | Paraffin, white | 17347903         | 14      |
| Caelo    | Paraffin, white | 19135403         | 11      |
| Caelo    | Paraffin, white | 19135405         | 22      |
| Caelo    | Paraffin, white | 20000510003      | 2       |
| Caelo    | Paraffin, white | 2101013-01       | 1       |
| Caelo    | Paraffin, white | 13338702         | 6       |
| Caelo    | Paraffin, white | 1704209-1703824  | 1       |
| Caelo    | Paraffin, white | 12115101         | 12      |
| Caelo    | Paraffin, white | 12032412         | 2       |
| Caelo    | Paraffin, white | 13005710         | 6       |
| Caelo    | Paraffin, white | 13185502         | 9       |
| Caelo    | Paraffin, white | 13084907         | 1       |
| Caelo    | Paraffin, white | 15060005         | 10      |
| Caelo    | Paraffin, white | 1506005          | 1       |
| Caelo    | Paraffin, white | 15060011         | 2       |
| Caelo    | Paraffin, white | 15162505         | 14      |
| Caelo    | Paraffin, white | 15336808         | 3       |
| Caelo    | Paraffin, white | 15162512         | 6       |
| Caelo    | Paraffin, white | 295301           | 1       |
| Caelo    | Paraffin, white | 108/AKD12        | 1       |
| Caelo    | Paraffin, white | 16227402         | 8       |
| Caelo    | Paraffin, white | 617Q-02549       | 1       |
| Caelo    | Paraffin, white | 1101559          | 1       |
| Caelo    | Paraffin, white | 16272008         | 2       |
| Caelo    | Paraffin, white | 17038203         | 19      |
| Caelo    | Paraffin, white | 17038212         | 21      |
| Caelo    | Paraffin, white | 17350002         | 3       |
| Caelo    | Paraffin, white | 1720420          | 1       |
| Caelo    | Paraffin, white | 17350007         | 3       |
| Caelo    | Paraffin, white | 17350017         | 14      |
| Caelo    | Paraffin, white | 309564           | 1       |
| Caelo    | Paraffin, white | 170350007        | 1       |
| Caelo    | Paraffin, white | 19314809         | 1       |
| Caelo    | Paraffin, white | 19004888         | 1       |
| Caelo    | Paraffin, white | 10039598         | 1       |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------|------------------|--------------|----------------|
| Caelo                | Paraffin, white  | 19135410     | 9              |
| Caelo                | Paraffin, white  | 19260103     | 1              |
| Caelo                | Paraffin, white  | 192601009    | 13             |
| Caelo                | Paraffin, white  | 19240001     | 1              |
| Caelo                | Paraffin, white  | 20000792001  | 1              |
| Caelo                | Paraffin, white  | 1305031-01   | 1              |
| Caelo                | Paraffin, white  | 307661       | 1              |
| Caelo                | Paraffin, white  | 13338704     | 3              |
| Caelo                | Paraffin, white  | 1310911      | 1              |
| Caelo                | Paraffin, white  | 213E-02549   | 1              |
| Caelo                | Paraffin, white  | 15441505     | 34             |
| Caerol/ Noweda       | Paraffin, white  | 16272002     | 1              |
| Caerol/ Noweda       | Paraffin, white  | 16272003     | 1              |
| Caerol/Phönix        | Paraffin, white  | 17038212     | 1              |
| Caerol/Phornix       | Paraffin, white  | 17038219     | 1              |
| Caerolo              | Paraffin, white  | 15394701     | 1              |
| Caelo                | Paraffin, white  | 20000510013  | 3              |
| Caesar & Loretz      | Paraffin, white  | 15339808     | 1              |
| Caesar & Loretz      | Paraffin, white  | 18005029     | 1              |
| CAESAR & LORETZ      | Paraffin, white  | 18314809     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 17038204     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 17350004     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 17204201     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005015     | 16             |
| Caesar & Loretz GmbH | Paraffin, white  | 18174301     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18174312     | 10             |
| Caesar & Loretz GmbH | Paraffin, white  | 18006406     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 18174302     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 17347903     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005001     | 3              |
| Caesar & Loretz GmbH | Paraffin, white  | 17038213     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 18174304     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 17204207     | 3              |
| Caesar & Loretz GmbH | Paraffin, white  | 18174303     | 3              |
| Caesar & Loretz GmbH | Paraffin, white  | 17347902     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 17052010     | 4              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005016     | 5              |
| Caesar & Loretz GmbH | Paraffin, white  | 17347802     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18314803     | 3              |
| Caesar & Loretz GmbH | Paraffin, white  | 17342016     | 9              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005023     | 12             |
| Caesar & Loretz GmbH | Paraffin, white  | 18314810     | 3              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005025     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 18314809     | 14             |
| Caesar & Loretz GmbH | Paraffin, white  | 18006401     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005029     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18314811     | 2              |
| Caesar & Loretz GmbH | Paraffin, white  | 18179716     | 12             |
| Caesar & Loretz GmbH | Paraffin, white  | 19135404     | 4              |
| Caesar & Loretz GmbH | Paraffin, white  | 19135403     | 5              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005033     | 6              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005031     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005034     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18179717     | 13             |
| Caesar & Loretz GmbH | Paraffin, white  | 19135405     | 7              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005040     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18314801     | 1              |
| Caesar & Loretz GmbH | Paraffin, white  | 18005039     | 4              |
| Caesar & Loretz GmbH | Paraffin, white  | 19135402     | 4              |
| Caesar & Loretz GmbH | Paraffin, white  | 19135408     | 6              |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caesar & Loretz GmbH       | Paraffin, white | 19260102    | 3       |
| Caesar & Loretz GmbH       | Paraffin, white | 19135410    | 2       |
| Caesar & Loretz GmbH       | Paraffin, white | 192540001   | 4       |
| Caesar & Loretz GmbH       | Paraffin, white | 181797002   | 8       |
| Caesar & Loretz GmbH       | Paraffin, white | 19135406    | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 192540004   | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 192601009   | 4       |
| Caesar & Loretz GmbH       | Paraffin, white | 192540002   | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000002001 | 2       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000510009 | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000510003 | 2       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000510014 | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 20001122001 | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000510007 | 3       |
| Caesar & Loretz GmbH       | Paraffin, white | 20002327003 | 3       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000627002 | 5       |
| Caesar & Loretz GmbH       | Paraffin, white | 20000510012 | 1       |
| Caesar & Loretz GmbH       | Paraffin, white | 20003237001 | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 18005015    | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 192540001   | 3       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 1811025-01  | 2       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 18005023    | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 19135408    | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 18006401    | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 18005031    | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, white | 19260102    | 2       |
| Caesar & Loretz GmbH Hi... | Paraffin, white | 13095701    | 1       |
| Caesar & Loretz GmbH Hi... | Paraffin, white | 16227403    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 11301301    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 12071805    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 12209204    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 12209210    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 13130911    | 1       |
| Caesar & Loretz GmbH, 4... | Paraffin, white | 12337706    | 1       |
| Caesar & Loretz GmbH/ M... | Paraffin, white | 18005023    | 1       |
| Caesar & Loretz GmbH/AHD   | Paraffin, white | 18314809    | 1       |
| Caesar & Loretz GmbH/An... | Paraffin, white | 18005015    | 1       |
| Caesar & Loretz GmbH/AN... | Paraffin, white | 17342016    | 1       |
| Caesar & Loretz GmbH/Fi... | Paraffin, white | 18314809    | 2       |
| Caesar & Loretz GmbH/Gehe  | Paraffin, white | 18174312    | 1       |
| Caesar & Loretz GmbH/Gehe  | Paraffin, white | 18314803    | 1       |
| Caesar & Loretz GmbH/Gehe  | Paraffin, white | 192540001   | 4       |
| Caesar & Loretz GmbH/Je... | Paraffin, white | 18314803    | 1       |
| Caesar & Loretz GmbH/Je... | Paraffin, white | 19135405    | 1       |
| Caesar & Loretz GmbH/Je... | Paraffin, white | 19135408    | 1       |
| Caesar & Loretz GmbH/Kehr  | Paraffin, white | 18179718    | 1       |
| Caesar & Loretz GmbH/Kr... | Paraffin, white | 18005023    | 2       |
| Caesar & Loretz GmbH/No... | Paraffin, white | 18314809    | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, white | 18174312    | 1       |
| Caesar & Loretz GmbH/Ph... | Paraffin, white | 19135404    | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | 18005698    | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | 19004888    | 3       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | 192540001   | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | 19135411    | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | AP210622-02 | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, white | 20000627002 | 1       |
| Caesar & Loretz Hilden     | Paraffin, white | 18174304    | 1       |
| Caesar & Loretz Hilden     | Paraffin, white | 18174312    | 1       |
| Caesar & Loretz Hilden     | Paraffin, white | 18314803    | 1       |
| Caesar & Loretz Hilden     | Paraffin, white | 19135406    | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caesar & Loretz/ Noweda    | Paraffin, white | 1710005     | 1       |
| Caesar & Loretz/Noweda     | Paraffin, white | 15339806    | 1       |
| Caesar & Loretz/Noweda     | Paraffin, white | 16326702    | 1       |
| Caesar & Loretz/Phönix     | Paraffin, white | 18005034    | 2       |
| Caesar&Loretz              | Paraffin, white | 17350014    | 1       |
| Caesar&Loretz GmbH         | Paraffin, white | 17038203    | 1       |
| Caesar&Loretz GmbH,27.0... | Paraffin, white | 16227405    | 1       |
| Caesar&Loretz GmbH/Anzag   | Paraffin, white | 12337708    | 1       |
| Caesar&loretz,Anzag        | Paraffin, white | 12003601    | 2       |
| Caesar/Lorenz              | Paraffin, white | 12321906    | 1       |
| Caesar/Lorenz              | Paraffin, white | 12337704    | 1       |
| Caesar/Noweda              | Paraffin, white | 13084905    | 1       |
| Caesar&Loretz GmbH         | Paraffin, white | 192540002   | 2       |
| Caleo/ Noweda              | Paraffin, white | 17204201    | 2       |
| Caleo/ Noweda              | Paraffin, white | 17350017    | 1       |
| Caleo/gehe                 | Paraffin, white | 17052008    | 1       |
| Caleo/Phönix               | Paraffin, white | 18005034    | 1       |
| calo                       | Paraffin, white | 13380703    | 1       |
| canea, gehe                | Paraffin, white | 13095701    | 2       |
| Caolo/Anzag                | Paraffin, white | 13185505    | 1       |
| Cealo                      | Paraffin, white | 12209210    | 1       |
| Cealo                      | Paraffin, white | 14124707    | 1       |
| Cealo                      | Paraffin, white | 17204201    | 1       |
| Cealo/ Anzag               | Paraffin, white | 17052001    | 1       |
| Cealo/AHD                  | Paraffin, white | 16272004    | 1       |
| Cealo/Gehe                 | Paraffin, white | 17038213    | 1       |
| Cealo/Noweda               | Paraffin, white | 16272003    | 2       |
| Celo                       | Paraffin, white | 16181902    | 2       |
| chaelo/gehe                | Paraffin, white | 17106002    | 1       |
| Cordes/Gehe                | Paraffin, white | 18314803    | 1       |
| Defektur Nasensalbe mit... | Paraffin, white | 816E-07061  | 1       |
| Defektur Nasensalbe mit... | Paraffin, white | 1716M-07002 | 1       |
| Defektur Nasensalbe mit... | Paraffin, white | 617Q-07061  | 1       |
| Doroderm GmbH/ Noweda      | Paraffin, white | 12115106    | 1       |
| E Plus                     | Paraffin, white | 309122      | 2       |
| Ebert & Jacobi 19.07...    | Paraffin, white | 1509019-01  | 1       |
| Eigen                      | Paraffin, white | 181120      | 1       |
| Eigen                      | Paraffin, white | 1120E-07061 | 1       |
| Eigene Herstellung         | Paraffin, white | 3218Q-07061 | 1       |
| Eplus                      | Paraffin, white | 307661      | 2       |
| EuRho 08.01.18             | Paraffin, white | 1705015-01  | 1       |
| Euro OTC                   | Paraffin, white | 1605019-01  | 13      |
| EuRho/Noweda               | Paraffin, white | 76940h      | 1       |
| EuRho/Noweda               | Paraffin, white | 1705015-01  | 1       |
| EuRho/Phoenix              | Paraffin, white | 1135232     | 1       |
| Euro OTC                   | Paraffin, white | 1401018-01  | 2       |
| Euro OTC                   | Paraffin, white | 140900901   | 1       |
| Euro OTC                   | Paraffin, white | 1109002-01  | 2       |
| Euro OTC                   | Paraffin, white | 12337707    | 1       |
| Euro OTC                   | Paraffin, white | 1108046-01  | 2       |
| Euro OTC                   | Paraffin, white | F603290     | 1       |
| Euro OTC                   | Paraffin, white | 288714      | 1       |
| Euro OTC                   | Paraffin, white | 150901901   | 1       |
| Euro OTC                   | Paraffin, white | 1602009-01  | 4       |
| Euro OTC                   | Paraffin, white | 160519-01   | 1       |
| Euro OTC                   | Paraffin, white | 15441505    | 1       |
| Euro OTC                   | Paraffin, white | 1608041-01  | 9       |
| Euro OTC                   | Paraffin, white | 17106001    | 1       |
| Euro OTC                   | Paraffin, white | 1709016-01  | 7       |
| Euro OTC                   | Paraffin, white | 1811925-01  | 1       |

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| Supplier               | Substance       | Batch            | Spectra |
|------------------------|-----------------|------------------|---------|
| Euro OTC               | Paraffin, white | 190402801        | 1       |
| Euro OTC               | Paraffin, white | 1904028-01       | 11      |
| Euro OTC               | Paraffin, white | 2003054-01       | 11      |
| Euro OTC               | Paraffin, white | 1210006-01       | 8       |
| Euro OTC               | Paraffin, white | 1205048-01       | 3       |
| Euro OTC               | Paraffin, white | F602635          | 1       |
| Euro OTC               | Paraffin, white | 1305031-01       | 13      |
| Euro OTC               | Paraffin, white | 1804011-01       | 11      |
| Euro OTC               | Paraffin, white | 1230341          | 2       |
| Euro OTC               | Paraffin, white | 2101013-01       | 2       |
| Euro OTC               | Paraffin, white | 1505017-01       | 7       |
| Euro OTC               | Paraffin, white | 15339806         | 1       |
| Euro OTC               | Paraffin, white | 17347802         | 1       |
| Euro OTC               | Paraffin, white | 1210009-01       | 3       |
| Euro OTC               | Paraffin, white | 130503101        | 1       |
| Euro OTC               | Paraffin, white | 16138004         | 1       |
| Euro OTC               | Paraffin, white | 297283           | 1       |
| Euro OTC               | Paraffin, white | 18006513         | 1       |
| Euro OTC               | Paraffin, white | 18006514         | 1       |
| Euro OTC               | Paraffin, white | 150901           | 1       |
| Euro OTC               | Paraffin, white | 1811025-01       | 13      |
| Euro OTC               | Paraffin, white | 1904028-0-1      | 1       |
| Euro OTC               | Paraffin, white | 18006404         | 1       |
| Euro OTC               | Paraffin, white | 306020           | 2       |
| Euro OTC               | Paraffin, white | 13163701         | 2       |
| Euro OTC               | Paraffin, white | 17347903         | 1       |
| Euro OTC               | Paraffin, white | 1705015-01       | 8       |
| Euro OTC               | Paraffin, white | 171200801        | 1       |
| Euro OTC               | Paraffin, white | 1808001-01       | 11      |
| Euro OTC               | Paraffin, white | 302037           | 1       |
| Euro OTC               | Paraffin, white | 16227404         | 1       |
| Euro OTC               | Paraffin, white | 17342006         | 1       |
| Euro OTC               | Paraffin, white | 307661           | 1       |
| Euro/Phoenix           | Paraffin, white | 17347901         | 3       |
| Euroo/Gehe             | Paraffin, white | 1602009-01       | 1       |
| Euro OTC               | Paraffin, white | 1712008-01       | 14      |
| Euro OTC               | Paraffin, white | 232110           | 1       |
| Euro OTC               | Paraffin, white | 170901601        | 1       |
| Euro OTC               | Paraffin, white | 18005015         | 1       |
| Euro OTC               | Paraffin, white | 1904028-02       | 11      |
| Euro OTC               | Paraffin, white | 17052012         | 1       |
| Fa. Hansen & Rosenthal | Paraffin, white | 21812            | 26      |
| Fagron                 | Paraffin, white | 11K14-T01        | 7       |
| Fagron                 | Paraffin, white | 10H12-T01        | 1       |
| Fagron                 | Paraffin, white | 12D16-To1        | 1       |
| Fagron                 | Paraffin, white | 12D16-T01        | 2       |
| Fagron                 | Paraffin, white | 12H10-T05        | 2       |
| Fagron                 | Paraffin, white | 12/17-T01        | 2       |
| Fagron                 | Paraffin, white | 12K01-T52-000717 | 1       |
| Fagron                 | Paraffin, white | 11G11-T02        | 2       |
| Fagron                 | Paraffin, white | 12D19-T54-000715 | 1       |
| Fagron                 | Paraffin, white | 12115107         | 1       |
| Fagron                 | Paraffin, white | probe            | 1       |
| Fagron                 | Paraffin, white | 13I19-T05-006192 | 2       |
| Fagron                 | Paraffin, white | 13I19-T05-008452 | 2       |
| Fagron                 | Paraffin, white | 14C14T01         | 3       |
| Fagron                 | Paraffin, white | 13D02-T02-004621 | 1       |
| Fagron                 | Paraffin, white | 14201001         | 1       |
| Fagron                 | Paraffin, white | 13h19-T05-008453 | 1       |
| Fagron                 | Paraffin, white | 14E30-T07-012095 | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Paraffin, white  | 13119-T05-008452  | 1              |
| Fagron          | Paraffin, white  | 790619-013771     | 2              |
| Fagron          | Paraffin, white  | 14E30-T07-012094  | 1              |
| Fagron          | Paraffin, white  | 14F30-T07-014285  | 1              |
| Fagron          | Paraffin, white  | 291318            | 2              |
| Fagron          | Paraffin, white  | 14e30-t07-012095  | 1              |
| Fagron          | Paraffin, white  | 14j03-t003-020827 | 1              |
| Fagron          | Paraffin, white  | 14j03-to3-020827  | 1              |
| Fagron          | Paraffin, white  | 14j03-t03020831   | 1              |
| Fagron          | Paraffin, white  | 14J03-T03         | 1              |
| Fagron          | Paraffin, white  | 14J03-020827      | 1              |
| Fagron          | Paraffin, white  | 14J03-T03-020827  | 6              |
| Fagron          | Paraffin, white  | 14L11-T03-027930  | 7              |
| Fagron          | Paraffin, white  | 14j03-t03-020827  | 1              |
| Fagron          | Paraffin, white  | 162274112         | 4              |
| Fagron          | Paraffin, white  | 16272004          | 3              |
| Fagron          | Paraffin, white  | 14L11-T03-0277930 | 1              |
| Fagron          | Paraffin, white  | 1140324           | 1              |
| Fagron          | Paraffin, white  | 17052001          | 1              |
| Fagron          | Paraffin, white  | 1735004           | 1              |
| Fagron          | Paraffin, white  | 16L27T01042281    | 1              |
| Fagron          | Paraffin, white  | 17L22-T05-056479  | 1              |
| Fagron          | Paraffin, white  | 17E02-T01-062810  | 2              |
| Fagron          | Paraffin, white  | 1260333           | 3              |
| Fagron          | Paraffin, white  | 3395              | 1              |
| Fagron          | Paraffin, white  | 19H05-T01-074234  | 1              |
| Fagron          | Paraffin, white  | 19H05-T01-074340  | 2              |
| Fagron          | Paraffin, white  | 13338703          | 1              |
| Fagron          | Paraffin, white  | 1912688/1         | 1              |
| Fagron          | Paraffin, white  | 14E30-T07-014285  | 9              |
| Fagron          | Paraffin, white  | 12J31-T52-000963  | 1              |
| Fagron          | Paraffin, white  | 290441            | 1              |
| Fagron          | Paraffin, white  | 12/17-To1         | 1              |
| Fagron          | Paraffin, white  | 12K01-T52-002659  | 2              |
| Fagron          | Paraffin, white  | 17L22-T05-056478  | 4              |
| Fagron          | Paraffin, white  | 1808585/2         | 1              |
| Fagron          | Paraffin, white  | 1166979           | 1              |
| Fagron          | Paraffin, white  | 18K01-T06-065455  | 1              |
| Fagron          | Paraffin, white  | 13I19-T05-006193  | 1              |
| Fagron          | Paraffin, white  | 14E30-T07         | 3              |
| Fagron          | Paraffin, white  | 14I03-T03-020831  | 1              |
| Fagron          | Paraffin, white  | 16L27-T01-042282  | 1              |
| Fagron          | Paraffin, white  | 17L22-T05-056230  | 1              |
| Fagron          | Paraffin, white  | 12I17-T01         | 2              |
| Fagron          | Paraffin, white  | 306019            | 2              |
| Fagron          | Paraffin, white  | 1205317           | 2              |
| Fagron          | Paraffin, white  | 18003484          | 1              |
| Fagron          | Paraffin, white  | 17347903          | 1              |
| Fagron          | Paraffin, white  | 19004888          | 1              |
| Fagron          | Paraffin, white  | 13/19-T05-006193  | 1              |
| Fagron          | Paraffin, white  | 1BK01-T06-063753  | 1              |
| Fagron          | Paraffin, white  | 14E30-T07-012096  | 4              |
| Fagron          | Paraffin, white  | 14189012          | 2              |
| Fagron          | Paraffin, white  | 14J03T-03-020831  | 1              |
| Fagron          | Paraffin, white  | 16L27-T01-042281  | 3              |
| Fagron          | Paraffin, white  | 13D02T02002660    | 1              |
| Fagron          | Paraffin, white  | 14J03-T03-020831  | 2              |
| Fagron          | Paraffin, white  | 14J03T03020831    | 1              |
| Fagron          | Paraffin, white  | 27930             | 1              |
| Fagron          | Paraffin, white  | 17E02-T01-062809  | 1              |

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| Supplier                   | Substance       | Batch            | Spectra |
|----------------------------|-----------------|------------------|---------|
| Fagron                     | Paraffin, white | 18K01-T06-065453 | 1       |
| Fagron                     | Paraffin, white | 19H05-T01-079917 | 1       |
| Fagron                     | Paraffin, white | 13/19-T05-006192 | 1       |
| Fagron                     | Paraffin, white | 13D02-T02-002660 | 1       |
| Fagron                     | Paraffin, white | 14189019         | 1       |
| Fagron                     | Paraffin, white | 14L11-T03-027931 | 1       |
| Fiebig                     | Paraffin, white | 15060014         | 2       |
| Fiebig                     | Paraffin, white | 15162507         | 1       |
| Fiebig                     | Paraffin, white | 16227403         | 1       |
| Fiebig                     | Paraffin, white | 16181903         | 1       |
| Fiebig                     | Paraffin, white | 1618904          | 1       |
| Fiebig                     | Paraffin, white | 16181904         | 1       |
| Fiebig                     | Paraffin, white | 16326702         | 4       |
| Fiebig                     | Paraffin, white | 17106001         | 2       |
| Fiebig                     | Paraffin, white | 17106002         | 1       |
| Fiebig                     | Paraffin, white | 17347901         | 1       |
| Fiebig                     | Paraffin, white | 17347801         | 1       |
| Fiebig                     | Paraffin, white | 17347802         | 1       |
| Fiebig                     | Paraffin, white | 18006401         | 3       |
| Fiebig                     | Paraffin, white | 17350017         | 1       |
| Fiebig                     | Paraffin, white | 18006404         | 1       |
| Fiebig                     | Paraffin, white | 18006406         | 2       |
| Fiebig                     | Paraffin, white | 18005016         | 1       |
| Fiebig                     | Paraffin, white | 17350018         | 1       |
| Fiebig                     | Paraffin, white | 18005023         | 2       |
| Fiebig                     | Paraffin, white | 20000510007      | 1       |
| Fiebig 22.02.13 ek:3,63EUR | Paraffin, white | 12115107         | 1       |
| Fagron                     | Paraffin, white | 16181902         | 2       |
| FJG                        | Paraffin, white | 14301804         | 1       |
| Fragon/Phoenix             | Paraffin, white | 14J03-T03-020831 | 1       |
| Gatt-Koller                | Paraffin, white | 1802870          | 1       |
| Gatt-Koller                | Paraffin, white | 1803869          | 1       |
| Gatt-Koller                | Paraffin, white | 1900832          | 1       |
| gehe                       | Paraffin, white | 15339806         | 1       |
| Gehe                       | Paraffin, white | 268099           | 1       |
| Gehe                       | Paraffin, white | 11315403         | 1       |
| Gehe                       | Paraffin, white | 12032404         | 1       |
| Gehe                       | Paraffin, white | 1205048-01       | 1       |
| Gehe                       | Paraffin, white | 12311004         | 1       |
| Gehe                       | Paraffin, white | 277059           | 2       |
| Gehe                       | Paraffin, white | 277060           | 1       |
| Gehe                       | Paraffin, white | 279969           | 1       |
| Gehe                       | Paraffin, white | 279161           | 1       |
| Gehe                       | Paraffin, white | 1210006-01       | 1       |
| Gehe                       | Paraffin, white | 282966           | 1       |
| Gehe                       | Paraffin, white | 286095           | 2       |
| Gehe                       | Paraffin, white | 286096           | 1       |
| Gehe                       | Paraffin, white | 288714           | 2       |
| Gehe                       | Paraffin, white | 291318           | 1       |
| Gehe                       | Paraffin, white | 13380721         | 1       |
| Gehe                       | Paraffin, white | 13380720         | 1       |
| Gehe                       | Paraffin, white | 15060012         | 1       |
| Gehe                       | Paraffin, white | 15204302         | 2       |
| Gehe                       | Paraffin, white | 297282           | 1       |
| Gehe                       | Paraffin, white | 293553           | 1       |
| Gehe                       | Paraffin, white | 15339806         | 3       |
| Gehe                       | Paraffin, white | 1509019-01       | 1       |
| Gehe                       | Paraffin, white | 16138004         | 1       |
| Gehe                       | Paraffin, white | 16138003         | 1       |
| Gehe                       | Paraffin, white | 306019           | 1       |

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| Supplier                   | Substance       | Batch            | Spectra |
|----------------------------|-----------------|------------------|---------|
| Gehe                       | Paraffin, white | 60081104         | 1       |
| Gehe                       | Paraffin, white | 16326702         | 2       |
| Gehe                       | Paraffin, white | 16241105         | 1       |
| Gehe                       | Paraffin, white | 309564           | 1       |
| Gehe                       | Paraffin, white | 17106001         | 1       |
| Gehe                       | Paraffin, white | 17052001         | 2       |
| Gehe                       | Paraffin, white | 17106005         | 2       |
| Gehe                       | Paraffin, white | 17347801         | 2       |
| Gehe                       | Paraffin, white | 17347802         | 1       |
| Gehe                       | Paraffin, white | 18006404         | 1       |
| Gehe                       | Paraffin, white | 18005015         | 2       |
| Gehe                       | Paraffin, white | 18005025         | 2       |
| Gehe                       | Paraffin, white | 18005023         | 3       |
| Gehe                       | Paraffin, white | 18314803         | 1       |
| Gehe                       | Paraffin, white | 18005031         | 1       |
| Gehe                       | Paraffin, white | 19006208         | 1       |
| GEHE                       | Paraffin, white | 270163           | 1       |
| GEHE                       | Paraffin, white | 270834           | 1       |
| GEHE                       | Paraffin, white | 12115106         | 1       |
| GEHE                       | Paraffin, white | 300119           | 1       |
| GEHE                       | Paraffin, white | 17350004         | 1       |
| GEHE                       | Paraffin, white | 18174307         | 1       |
| GEHE                       | Paraffin, white | 18314811         | 1       |
| Gehe 20.06.15/euro         | Paraffin, white | 13380709         | 1       |
| gehe 26.11.13              | Paraffin, white | 5489700          | 1       |
| Gehe am 03.02.2014         | Paraffin, white | 5489700          | 1       |
| Gehe am 27.2.14            | Paraffin, white | 12337706         | 1       |
| Caelo                      | Paraffin, white | 18179716         | 60      |
| Bombastus                  | Paraffin, white | 304124           | 20      |
| Bombastus                  | Paraffin, white | 307661           | 27      |
| Bombastus                  | Paraffin, white | 270489           | 3       |
| Caelo                      | Paraffin, white | 15349707         | 4       |
| Caelo                      | Paraffin, white | 16227405         | 11      |
| Caelo                      | Paraffin, white | 16029220/1170117 | 1       |
| Caelo                      | Paraffin, white | 1730005          | 1       |
| Caelo                      | Paraffin, white | 1800505          | 1       |
| Caelo                      | Paraffin, white | 13338707         | 9       |
| Euro OTC                   | Paraffin, white | 1210010-01       | 2       |
| Euro OTC                   | Paraffin, white | 929392           | 1       |
| Fagron                     | Paraffin, white | 1401453          | 1       |
| Caelo                      | Paraffin, white | 14189012         | 2       |
| Gutenberg-Apotheke         | Paraffin, white | 13185502         | 1       |
| Hanpu Pharm                | Paraffin, white | 4914987          | 1       |
| Hansen und Rosenthal KG    | Paraffin, white | 42027            | 20      |
| Hansen&Rosenthal/Phönix    | Paraffin, white | 1108046-01       | 1       |
| Hedinger                   | Paraffin, white | 15060004         | 1       |
| Hedinger                   | Paraffin, white | 17106004         | 1       |
| Hedinger/Noweda            | Paraffin, white | 4-219072         | 1       |
| Henry Lamotte              | Paraffin, white | 1509019-01       | 1       |
| Henry Lamotte              | Paraffin, white | 8002875007       | 1       |
| Henry Lamotte GMBH/AHD     | Paraffin, white | 5691100          | 2       |
| Henry Lamotte Oils         | Paraffin, white | 16181904         | 1       |
| henry lamotte oils gmbh    | Paraffin, white | 5538300          | 1       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 5098800          | 2       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 5322600          | 1       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 5489700          | 3       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 5538300          | 2       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 5691100          | 1       |
| Henry Lamotte Oils GmbH    | Paraffin, white | 6000083007       | 2       |
| Henry Lamotte Oils GmbH... | Paraffin, white | 1705015-01       | 1       |

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| Supplier                   | Substance       | Batch               | Spectra |
|----------------------------|-----------------|---------------------|---------|
| Henry Lamotte Oils/Anzag   | Paraffin, white | 8004538003          | 2       |
| Henry Lamotte/ AHD         | Paraffin, white | 6002062001          | 1       |
| Henry Lamotte/AHD          | Paraffin, white | 8004538003          | 3       |
| Henry Lamotte/N/14.12.12   | Paraffin, white | 5322600             | 1       |
| HenryLamotte               | Paraffin, white | 6002062001          | 3       |
| Herbasinica                | Paraffin, white | 13338712            | 1       |
| HerryLamotte/AHD           | Paraffin, white | 5098800             | 1       |
| Ichthyol                   | Paraffin, white | 13A010              | 2       |
| ICHTHYOL                   | Paraffin, white | 18006401            | 3       |
| Ichthyol/Phönix            | Paraffin, white | 16138003            | 1       |
| Ichthyol-Gesellschaft      | Paraffin, white | 160829VA            | 1       |
| Ichthyol-Gesellschaft      | Paraffin, white | 17347903            | 1       |
| Ichthyol-Gesellschaft C... | Paraffin, white | 17204201            | 1       |
| Kehr                       | Paraffin, white | 17038202            | 1       |
| Caelo                      | Paraffin, white | 192540002           | 8       |
| Caelo                      | Paraffin, white | 16272003            | 12      |
| Kögl                       | Paraffin, white | 305109163916        | 1       |
| Kögl                       | Paraffin, white | 396911160317        | 2       |
| Kögl                       | Paraffin, white | 400111165016        | 1       |
| Kögl                       | Paraffin, white | 16402171117         | 1       |
| Kögl                       | Paraffin, white | 16402170817         | 1       |
| Kögl                       | Paraffin, white | 63403171917         | 1       |
| Kögl                       | Paraffin, white | 166205172017        | 1       |
| Kögl                       | Paraffin, white | 218806172717        | 1       |
| Kögl                       | Paraffin, white | 1700060             | 1       |
| Kögl                       | Paraffin, white | 1700760             | 1       |
| Kögl                       | Paraffin, white | 1700443             | 1       |
| Kögl                       | Paraffin, white | 1701037             | 1       |
| Kögl                       | Paraffin, white | 1701633             | 1       |
| Kögl                       | Paraffin, white | 1800323             | 1       |
| Kögl                       | Paraffin, white | 1802638             | 2       |
| Caelo                      | Paraffin, white | 16272004            | 6       |
| Bombastus                  | Paraffin, white | 300119              | 3       |
| Bombastus                  | Paraffin, white | 309563              | 2       |
| L12                        | Paraffin, white | 16227406            | 1       |
| L12                        | Paraffin, white | 16272003            | 3       |
| Labor                      | Paraffin, white | 1917M-07061Nasensal | 1       |
| Labor                      | Paraffin, white | 3117M-07002         | 1       |
| Labor Defektur Nasensal... | Paraffin, white | 3717A-07061         | 1       |
| Labor Defektur Nasensal... | Paraffin, white | 5217M-07002         | 1       |
| Lamotte                    | Paraffin, white | 5322600             | 1       |
| Lamotte                    | Paraffin, white | 5215200             | 1       |
| Lamotte                    | Paraffin, white | 6000083007          | 1       |
| Lamotte                    | Paraffin, white | 6002062001          | 2       |
| Lamotte                    | Paraffin, white | 8002875007          | 1       |
| Lamotte 001                | Paraffin, white | 5691100             | 1       |
| Lamotte/ Anzag             | Paraffin, white | 5538300             | 1       |
| Markt Apotheke             | Paraffin, white | 4618I-07061         | 1       |
| Marktapotheke              | Paraffin, white | 3716I-07061         | 2       |
| Marktapotheke              | Paraffin, white | 260916              | 1       |
| Marktapotheke              | Paraffin, white | 817E-07002          | 1       |
| Marktapotheke              | Paraffin, white | 3717A-07002         | 1       |
| Midas                      | Paraffin, white | 17038204            | 1       |
| Midas                      | Paraffin, white | 17204209            | 2       |
| Midas                      | Paraffin, white | 17350004            | 1       |
| Midas                      | Paraffin, white | 17204201            | 1       |
| Midas                      | Paraffin, white | 18003484            | 1       |
| Midas                      | Paraffin, white | 18174301            | 1       |
| Midas                      | Paraffin, white | 18174304            | 1       |
| Nasensalbe Dr.Quade        | Paraffin, white | 319I-07061          | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Nasensalbe Dr.Quade        | Paraffin, white  | 1919A-02549      | 1              |
| Nasensalbe mit Lavendel... | Paraffin, white  | 117A-07002       | 1              |
| Noweda                     | Paraffin, white  | 255510           | 1              |
| Noweda                     | Paraffin, white  | 263762           | 1              |
| Noweda                     | Paraffin, white  | 270163           | 3              |
| Noweda                     | Paraffin, white  | 12209203         | 1              |
| Noweda                     | Paraffin, white  | 271261           | 1              |
| Noweda                     | Paraffin, white  | 12337707         | 1              |
| Noweda                     | Paraffin, white  | 13337706         | 1              |
| Noweda                     | Paraffin, white  | 13268421         | 1              |
| Noweda                     | Paraffin, white  | 13380721         | 1              |
| Noweda                     | Paraffin, white  | 15339806         | 1              |
| Noweda                     | Paraffin, white  | 16138004         | 1              |
| Noweda                     | Paraffin, white  | 16181901         | 1              |
| Noweda                     | Paraffin, white  | 307661           | 1              |
| Noweda                     | Paraffin, white  | 16272018         | 1              |
| Noweda                     | Paraffin, white  | 16326702         | 1              |
| Noweda                     | Paraffin, white  | 17106005         | 1              |
| Noweda                     | Paraffin, white  | 17052003         | 2              |
| Noweda                     | Paraffin, white  | 17038213         | 1              |
| Noweda                     | Paraffin, white  | 311259           | 2              |
| Noweda                     | Paraffin, white  | 17347802         | 2              |
| Noweda                     | Paraffin, white  | 17350005         | 1              |
| Noweda                     | Paraffin, white  | 1712008-01       | 1              |
| Noweda                     | Paraffin, white  | 18006404         | 1              |
| Noweda                     | Paraffin, white  | 18174314         | 1              |
| Noweda                     | Paraffin, white  | 18174303         | 1              |
| Noweda                     | Paraffin, white  | 18179704         | 1              |
| Noweda                     | Paraffin, white  | 1904028-01       | 1              |
| Noweda                     | Paraffin, white  | 18005033         | 1              |
| Noweda                     | Paraffin, white  | 192540001        | 2              |
| Noweda                     | Paraffin, white  | 20000510009      | 1              |
| Noweda                     | Paraffin, white  | 2000051014       | 1              |
| Noweda/ Bombatus           | Paraffin, white  | 18003484         | 1              |
| Fagron                     | Paraffin, white  | 18K01-T06-065452 | 1              |
| Bombastus                  | Paraffin, white  | 12/2019          | 1              |
| Bombastus                  | Paraffin, white  | 287149           | 6              |
| Caelo                      | Paraffin, white  | 14200901         | 4              |
| Fagron                     | Paraffin, white  | 12K01-T52        | 1              |
| Fagron                     | Paraffin, white  | 13/19-T05-008452 | 1              |
| OQEMA                      | Paraffin, white  | 11907            | 8              |
| Caelo                      | Paraffin, white  | 17350016         | 22             |
| Caelo                      | Paraffin, white  | 19135408         | 23             |
| Pharmachem GmbH            | Paraffin, white  | 1038202          | 1              |
| Phoenix                    | Paraffin, white  | 270491           | 1              |
| Phoenix                    | Paraffin, white  | 13084906         | 1              |
| Phoenix                    | Paraffin, white  | 13268423         | 1              |
| Phoenix                    | Paraffin, white  | 15349706         | 1              |
| Phoenix                    | Paraffin, white  | 16029210         | 1              |
| Phoenix                    | Paraffin, white  | 3024             | 1              |
| Phoenix                    | Paraffin, white  | 16272010         | 1              |
| Phoenix                    | Paraffin, white  | 16326706         | 1              |
| Phoenix                    | Paraffin, white  | 17106001         | 1              |
| Phoenix                    | Paraffin, white  | 18003484         | 1              |
| Phoenix                    | Paraffin, white  | 18174303         | 1              |
| Phoenix                    | Paraffin, white  | 18174312         | 1              |
| Phoenix                    | Paraffin, white  | 3393             | 1              |
| Phoenix                    | Paraffin, white  | 200500506        | 1              |
| PHOENIX                    | Paraffin, white  | 18K01-T06-063753 | 1              |
| Phoenix 18.03.2014         | Paraffin, white  | 12337709         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Phoenix 24.01.2019         | Paraffin, white  | 17L22-T05-056478 | 3              |
| Phoenix 25.4.2014          | Paraffin, white  | 13185514         | 1              |
| Phoenix am 10.03.2014      | Paraffin, white  | 13338703         | 1              |
| Phoenix am 22.04.2014      | Paraffin, white  | 270981           | 1              |
| Caelo                      | Paraffin, white  | 17347901/2110418 | 1              |
| Caelo                      | Paraffin, white  | 280702           | 1              |
| Caelo                      | Paraffin, white  | 13095701         | 5              |
| Caelo                      | Paraffin, white  | 13D02-T02-002660 | 1              |
| Phonix                     | Paraffin, white  | 13341604         | 1              |
| phönix                     | Paraffin, white  | 16138003         | 1              |
| Phönix                     | Paraffin, white  | 12032413         | 1              |
| Phönix                     | Paraffin, white  | 12115107         | 1              |
| Phönix                     | Paraffin, white  | 12209210         | 1              |
| Phönix                     | Paraffin, white  | 5489700          | 1              |
| Phönix                     | Paraffin, white  | 277987           | 1              |
| Phönix                     | Paraffin, white  | 277986           | 1              |
| Phönix                     | Paraffin, white  | 280451           | 1              |
| Phönix                     | Paraffin, white  | 281291           | 1              |
| Phönix                     | Paraffin, white  | 13268410         | 1              |
| Phönix                     | Paraffin, white  | 304124           | 1              |
| Phönix                     | Paraffin, white  | 306020           | 1              |
| Phönix                     | Paraffin, white  | 16227406         | 1              |
| Phönix                     | Paraffin, white  | 15441514         | 2              |
| Phönix                     | Paraffin, white  | 1612007-01       | 1              |
| Phönix                     | Paraffin, white  | 17204209         | 1              |
| Phönix                     | Paraffin, white  | 3156             | 1              |
| Phönix                     | Paraffin, white  | 17038215         | 1              |
| Phönix                     | Paraffin, white  | 17350013         | 1              |
| Phönix                     | Paraffin, white  | 17350017         | 1              |
| Phönix                     | Paraffin, white  | 18174302         | 1              |
| Phönix                     | Paraffin, white  | 18005015         | 3              |
| Phönix                     | Paraffin, white  | 17347902         | 1              |
| Phönix                     | Paraffin, white  | 18174312         | 1              |
| Phönix                     | Paraffin, white  | 18314809         | 1              |
| Phönix                     | Paraffin, white  | 18005033         | 1              |
| Phönix                     | Paraffin, white  | 19135405         | 1              |
| PHÖNIX                     | Paraffin, white  | 16227402         | 1              |
| PHÖNIX                     | Paraffin, white  | 17204204         | 1              |
| PHÖNIX                     | Paraffin, white  | 17350007         | 1              |
| PHÖNIX                     | Paraffin, white  | 1811025-01       | 1              |
| Phönix 08.04.2013          | Paraffin, white  | 12/17-T01        | 1              |
| Phönix 15.10.2019          | Paraffin, white  | 18314809         | 1              |
| Phönix 16.10.12            | Paraffin, white  | 12D16-T01        | 1              |
| Phönix Gotha               | Paraffin, white  | 270633           | 1              |
| Phönix Gotha               | Paraffin, white  | 12032413         | 1              |
| Phönix Gotha               | Paraffin, white  | 270634           | 1              |
| Phönix Gotha               | Paraffin, white  | 14087402         | 1              |
| Phönix Gotha               | Paraffin, white  | 289344           | 1              |
| Phönix Gotha               | Paraffin, white  | 15060012         | 1              |
| Caelo                      | Paraffin, white  | 17342015         | 31             |
| Caelo                      | Paraffin, white  | 13185514         | 2              |
| Caelo                      | Paraffin, white  | 306020           | 2              |
| Phönix/Caesar & Loretz ... | Paraffin, white  | 18174305         | 1              |
| Fagron                     | Paraffin, white  | 12B20-T02        | 1              |
| Sana 21.03.16 EK 4,96      | Paraffin, white  | 15336810         | 1              |
| Sanacorp                   | Paraffin, white  | 12190401         | 1              |
| Sanacorp                   | Paraffin, white  | 12115107         | 1              |
| Sanacorp                   | Paraffin, white  | 1215107          | 1              |
| Sanacorp                   | Paraffin, white  | 12374502         | 1              |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Sanacorp                    | Paraffin, white  | 12337704     | 2              |
| Sanacorp                    | Paraffin, white  | 12311010     | 1              |
| Sanacorp                    | Paraffin, white  | 13130909     | 2              |
| Sanacorp                    | Paraffin, white  | 12337708     | 1              |
| Sanacorp                    | Paraffin, white  | 12031506     | 1              |
| Sanacorp                    | Paraffin, white  | 13084906     | 2              |
| Sanacorp                    | Paraffin, white  | 13338712     | 1              |
| Sanacorp                    | Paraffin, white  | 102/AKD1     | 1              |
| Sanacorp                    | Paraffin, white  | 16AKD2       | 1              |
| Sanacorp                    | Paraffin, white  | 13268420     | 1              |
| Sanacorp                    | Paraffin, white  | 14087410     | 1              |
| Sanacorp                    | Paraffin, white  | 13380709     | 1              |
| Sanacorp                    | Paraffin, white  | 13380707     | 1              |
| Sanacorp                    | Paraffin, white  | 106/AKD4     | 1              |
| Sanacorp                    | Paraffin, white  | 107/AKD6     | 1              |
| Sanacorp                    | Paraffin, white  | 15204301     | 1              |
| Sanacorp                    | Paraffin, white  | 15339808     | 1              |
| Sanacorp                    | Paraffin, white  | 15441504     | 1              |
| Sanacorp                    | Paraffin, white  | 16227412     | 1              |
| Sanacorp                    | Paraffin, white  | 17106001     | 1              |
| Sanacorp                    | Paraffin, white  | 17106002     | 2              |
| Sanacorp                    | Paraffin, white  | 17204201     | 2              |
| Sanacorp                    | Paraffin, white  | 17204209     | 1              |
| Sanacorp                    | Paraffin, white  | 309563       | 1              |
| Sanacorp                    | Paraffin, white  | 17350007     | 1              |
| Sanacorp                    | Paraffin, white  | 17347802     | 1              |
| Sanacorp                    | Paraffin, white  | 17347803     | 1              |
| Sanacorp                    | Paraffin, white  | 16181907     | 1              |
| Sanacorp                    | Paraffin, white  | 17350016     | 1              |
| Sanacorp                    | Paraffin, white  | 1205317      | 1              |
| Sanacorp                    | Paraffin, white  | 18174301     | 1              |
| Sanacorp                    | Paraffin, white  | 18174304     | 1              |
| Sanacorp                    | Paraffin, white  | 18005016     | 1              |
| Sanacorp                    | Paraffin, white  | 18005023     | 1              |
| Sanacorp                    | Paraffin, white  | 18006406     | 1              |
| Sanacorp                    | Paraffin, white  | 18005039     | 1              |
| Sanacorp                    | Paraffin, white  | 19135402     | 1              |
| Sanacorp E.K:5,64 -100...   | Paraffin, white  | 309564       | 1              |
| Caelo                       | Paraffin, white  | 13338713     | 14             |
| Caelo                       | Paraffin, white  | 13380707     | 12             |
| Sanacorp 05.07.14 EK: 6...  | Paraffin, white  | 13365104     | 2              |
| Sanacorp 06.07.2019 5,68EUR | Paraffin, white  | 18006514     | 1              |
| Sanacorp 37.03.2017 ek:...  | Paraffin, white  | 16272002     | 1              |
| Sanacorp, 21.07.2016        | Paraffin, white  | 1605019-01   | 2              |
| sanacorp, 6,08EUR, 29.08... | Paraffin, white  | 16138003     | 1              |
| Sanacorp,04.04.17, 6,08EUR  | Paraffin, white  | 16181904     | 1              |
| Caelo                       | Paraffin, white  | 17350004     | 17             |
| Caelo                       | Paraffin, white  | 11060209     | 3              |
| Caelo                       | Paraffin, white  | 11104910     | 5              |
| Caelo                       | Paraffin, white  | 11104901     | 1              |
| Caelo                       | Paraffin, white  | 12071804     | 1              |
| Caelo                       | Paraffin, white  | 100/AKD8     | 1              |
| Caelo                       | Paraffin, white  | AKD50        | 1              |
| Caelo                       | Paraffin, white  | 13380706     | 3              |
| Caelo                       | Paraffin, white  | 16181904     | 25             |
| Caelo                       | Paraffin, white  | 15201301     | 1              |
| Caelo                       | Paraffin, white  | 18314809     | 41             |
| Caelo                       | Paraffin, white  | 183148809    | 1              |
| Caelo                       | Paraffin, white  | 192540004    | 5              |
| Sigma-Aldrich               | Paraffin, white  | STBJ4032     | 1              |

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| Supplier                  | Substance        | Batch            | Spectra |
|---------------------------|------------------|------------------|---------|
| Spangro 26.2.2014         | Paraffin, white  | 13338702         | 1       |
| Caelo                     | Paraffin, white  | 13338712         | 7       |
| Vaselinumm album          | Paraffin, white  | 18006401         | 1       |
| vdI                       | Paraffin, white  | 11265710         | 1       |
| VDL;13.06.14              | Paraffin, white  | 13268421         | 1       |
| WE:Phönix 02.09.2016 E... | Paraffin, white  | 302037           | 2       |
| wolff/AHD                 | Paraffin, white  | 5538300          | 1       |
| 18092014                  | Paraffin, yellow | 889574           | 1       |
| 21.03.2017                | Paraffin, yellow | 12321902         | 1       |
| AHD                       | Paraffin, yellow | 19005892         | 1       |
| Bombastus                 | Paraffin, yellow | 306182           | 13      |
| Fagron                    | Paraffin, yellow | 13K20-T05-009125 | 2       |
| Euro OTC                  | Paraffin, yellow | 181102401        | 1       |
| Euro OTC                  | Paraffin, yellow | 1503036-01       | 19      |
| Alliance Healthcare       | Paraffin, yellow | 303809           | 1       |
| Bombastus                 | Paraffin, yellow | 290713           | 2       |
| Bombastus                 | Paraffin, yellow | 28270            | 1       |
| Bombastus                 | Paraffin, yellow | 296654           | 11      |
| Bombastus                 | Paraffin, yellow | 300422           | 1       |
| Bombastus                 | Paraffin, yellow | 303809           | 8       |
| Bombastus                 | Paraffin, yellow | 15330401         | 1       |
| Bombastus                 | Paraffin, yellow | 106429           | 1       |
| Bombastus                 | Paraffin, yellow | 303871           | 1       |
| Bombastus                 | Paraffin, yellow | 180000670        | 1       |
| Bombastus                 | Paraffin, yellow | 18005700         | 2       |
| Bombastus                 | Paraffin, yellow | 19001881         | 1       |
| Bombastus                 | Paraffin, yellow | 19005891         | 1       |
| Bombastus                 | Paraffin, yellow | 300423           | 9       |
| Bombastus                 | Paraffin, yellow | 18006803         | 19      |
| Bombastus                 | Paraffin, yellow | 19001882         | 17      |
| Bombastus                 | Paraffin, yellow | 18004334         | 12      |
| Bombastus                 | Paraffin, yellow | 19004375         | 5       |
| Bombastus                 | Paraffin, yellow | 19005892         | 9       |
| Bombastus                 | Paraffin, yellow | 307079           | 14      |
| Bombastus                 | Paraffin, yellow | 293629           | 12      |
| Bombastus                 | Paraffin, yellow | 16181902         | 1       |
| Bombastus                 | Paraffin, yellow | 310191           | 1       |
| Bombastus                 | Paraffin, yellow | 18005701         | 12      |
| Bombastus                 | Paraffin, yellow | 18006802         | 1       |
| Bombastus                 | Paraffin, yellow | 20005305         | 3       |
| Bombastus                 | Paraffin, yellow | 1197768          | 1       |
| Bombastus                 | Paraffin, yellow | 18000669         | 3       |
| Bombastus                 | Paraffin, yellow | 304847           | 5       |
| Bombastus                 | Paraffin, yellow | 301908           | 12      |
| Bombastus                 | Paraffin, yellow | 1709015-01       | 1       |
| Bombastus                 | Paraffin, yellow | 310192           | 17      |
| bombatus                  | Paraffin, yellow | 19005891         | 1       |
| Bombatus                  | Paraffin, yellow | 18006803         | 2       |
| Caelo                     | Paraffin, yellow | 17082015E        | 1       |
| Caelo                     | Paraffin, yellow | 28071509         | 1       |
| Caelo                     | Paraffin, yellow | 1432501          | 1       |
| Caelo                     | Paraffin, yellow | 16032502         | 3       |
| Caelo                     | Paraffin, yellow | 15063904         | 4       |
| Caelo                     | Paraffin, yellow | 150717VF         | 1       |
| Caelo                     | Paraffin, yellow | 16281001         | 25      |
| Caelo                     | Paraffin, yellow | 16187702         | 5       |
| Caelo                     | Paraffin, yellow | 16096905         | 1       |
| Caelo                     | Paraffin, yellow | 1041701          | 1       |
| Caelo                     | Paraffin, yellow | 17052401         | 25      |
| Caelo                     | Paraffin, yellow | 8061714          | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|-----------------|------------------|--------------------|----------------|
| Caelo           | Paraffin, yellow | 16187801           | 8              |
| Caelo           | Paraffin, yellow | 17052402           | 12             |
| Caelo           | Paraffin, yellow | 6111703            | 1              |
| Caelo           | Paraffin, yellow | 1401017-01         | 1              |
| Caelo           | Paraffin, yellow | 1606029-01         | 1              |
| Caelo           | Paraffin, yellow | 310192             | 1              |
| Caelo           | Paraffin, yellow | 17223102           | 17             |
| Caelo           | Paraffin, yellow | 17130402           | 8              |
| Caelo           | Paraffin, yellow | 26051810           | 1              |
| Caelo           | Paraffin, yellow | 9061818            | 1              |
| Caelo           | Paraffin, yellow | 22091804           | 1              |
| Caelo           | Paraffin, yellow | 18191504           | 8              |
| Caelo           | Paraffin, yellow | 1804012-01         | 1              |
| Caelo           | Paraffin, yellow | 19165702           | 14             |
| Caelo           | Paraffin, yellow | 19001804           | 5              |
| Caelo           | Paraffin, yellow | 20000003004        | 3              |
| Caelo           | Paraffin, yellow | 2000003004         | 1              |
| Caelo           | Paraffin, yellow | 20000002001        | 3              |
| Caelo           | Paraffin, yellow | 19165701           | 19             |
| Caelo           | Paraffin, yellow | CH-B16096913       | 1              |
| Caelo           | Paraffin, yellow | 13163606           | 1              |
| Caelo           | Paraffin, yellow | 2717M-02551        | 1              |
| Caelo           | Paraffin, yellow | 304847             | 1              |
| Caelo           | Paraffin, yellow | 18092002           | 6              |
| Caelo           | Paraffin, yellow | 16096904           | 5              |
| Caelo           | Paraffin, yellow | 17223103           | 7              |
| Caelo           | Paraffin, yellow | 15330402           | 4              |
| Caelo           | Paraffin, yellow | 16096910           | 1              |
| Caelo           | Paraffin, yellow | 17303501P-180920-4 | 1              |
| Caelo           | Paraffin, yellow | 19165701P-200319-7 | 1              |
| Caelo           | Paraffin, yellow | 19001803P-190926-6 | 1              |
| Caelo           | Paraffin, yellow | 14324501           | 11             |
| Caelo           | Paraffin, yellow | 134(16096910)      | 1              |
| Caelo           | Paraffin, yellow | 18191503           | 18             |
| Caelo           | Paraffin, yellow | 1609603            | 1              |
| Caelo           | Paraffin, yellow | 1223102            | 1              |
| Caelo           | Paraffin, yellow | 5114E-02551        | 1              |
| Caelo           | Paraffin, yellow | 3018E-02551        | 2              |
| Caelo           | Paraffin, yellow | 18092010           | 2              |
| Caelo           | Paraffin, yellow | 173003501          | 1              |
| Caelo           | Paraffin, yellow | 19001803           | 19             |
| Caelo           | Paraffin, yellow | 1606029            | 1              |
| Caelo           | Paraffin, yellow | 132(16096904)      | 1              |
| Caelo           | Paraffin, yellow | 133(16096910)      | 1              |
| Caelo           | Paraffin, yellow | 18092001           | 1              |
| Caelo           | Paraffin, yellow | 20001759001        | 2              |
| Caelo           | Paraffin, yellow | 1503036-01         | 1              |
| Caelo           | Paraffin, yellow | 1618701            | 1              |
| Caelo           | Paraffin, yellow | 307079             | 2              |
| Caelo           | Paraffin, yellow | 1052401            | 1              |
| Caelo           | Paraffin, yellow | 17303503           | 4              |
| Caelo           | Paraffin, yellow | 19165803           | 6              |
| Caelo           | Paraffin, yellow | 18092015           | 2              |
| Caelo           | Paraffin, yellow | 1705402            | 1              |
| Caelo           | Paraffin, yellow | 20000003003        | 13             |
| Caelo           | Paraffin, yellow | 19177601           | 1              |
| Caelo           | Paraffin, yellow | 161587801          | 1              |
| Caelo           | Paraffin, yellow | 15063901           | 1              |
| Caelo           | Paraffin, yellow | 16096908           | 2              |
| Caelo           | Paraffin, yellow | 16281002           | 3              |

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| Supplier                   | Substance        | Batch            | Spectra |
|----------------------------|------------------|------------------|---------|
| Caelo                      | Paraffin, yellow | 1628101          | 1       |
| Caelo                      | Paraffin, yellow | 17162901         | 1       |
| Caelo                      | Paraffin, yellow | 17303401         | 23      |
| Caelo                      | Paraffin, yellow | 17162906         | 4       |
| Caelo                      | Paraffin, yellow | 18092006         | 1       |
| Caelo                      | Paraffin, yellow | 16032603         | 5       |
| Caelo                      | Paraffin, yellow | 15219904         | 1       |
| Caelo                      | Paraffin, yellow | 6895914          | 2       |
| Caerol/ Noweda             | Paraffin, yellow | 17052401         | 1       |
| Caesar & Loretz            | Paraffin, yellow | 18092002         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 17303501         | 2       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18191503         | 3       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 16096910         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18092002         | 2       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18296802         | 4       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 19001803         | 5       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 19001804         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 15330401         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 19165701         | 4       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18092006         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18092014         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 19165803         | 4       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 19165702         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 18092015         | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 192300004        | 1       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 20000003003      | 4       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 192497004        | 2       |
| Caesar & Loretz GmbH       | Paraffin, yellow | 20001760002      | 1       |
| Caesar & Loretz GmbH / ... | Paraffin, yellow | 19001803         | 1       |
| Caesar & Loretz GmbH Hi... | Paraffin, yellow | 14324601         | 1       |
| Caesar & Loretz GmbH Je... | Paraffin, yellow | 20000003003      | 1       |
| Caesar & Loretz GmbH, P... | Paraffin, yellow | 16090913         | 1       |
| Caesar & Loretz GmbH/Fi... | Paraffin, yellow | 17303501         | 1       |
| Caesar & Loretz GmbH/Je... | Paraffin, yellow | 19165803         | 1       |
| Caesar & Loretz GmbH/Kr... | Paraffin, yellow | 19165701         | 1       |
| Caesar & Loretz GmbH/sa... | Paraffin, yellow | 20001760002      | 2       |
| Caesar & Loretz GmbH/Sa... | Paraffin, yellow | 19001803         | 1       |
| Caesar & Loretz GmbH/Sa... | Paraffin, yellow | 19165701         | 1       |
| Caesar & Loretz/ Noweda    | Paraffin, yellow | 1606913          | 1       |
| Caesar & Loretz/Noweda     | Paraffin, yellow | 15330401         | 1       |
| Caesar und Loretz GmbH     | Paraffin, yellow | 19001803         | 1       |
| Caesar&Loretz              | Paraffin, yellow | 16096903         | 1       |
| Caesar&Loretz/Noweda       | Paraffin, yellow | 14324301         | 1       |
| Cealo                      | Paraffin, yellow | 17052401         | 1       |
| Eplus                      | Paraffin, yellow | 16187702         | 1       |
| Euro OTC                   | Paraffin, yellow | 1606029/01       | 1       |
| Euro OTC                   | Paraffin, yellow | 1705016-01       | 1       |
| Euro OTC                   | Paraffin, yellow | 1709015-01       | 7       |
| Euro OTC                   | Paraffin, yellow | 1804012-01       | 12      |
| Euro OTC                   | Paraffin, yellow | 1911029-01       | 2       |
| Euro OTC                   | Paraffin, yellow | 289344           | 1       |
| Euro OTC                   | Paraffin, yellow | 1606029-01       | 4       |
| Euro OTC                   | Paraffin, yellow | 1904027-02       | 1       |
| Euro OTC                   | Paraffin, yellow | B1811024-01      | 1       |
| Euro OTC                   | Paraffin, yellow | 1904027-01       | 2       |
| Europharm / Gehe           | Paraffin, yellow | 16096910         | 1       |
| Fagron                     | Paraffin, yellow | 14K27-T29-019303 | 2       |
| Fagron                     | Paraffin, yellow | 1705016-01       | 1       |
| Fagron                     | Paraffin, yellow | 13I03-T03-007018 | 1       |
| Fagron                     | Paraffin, yellow | 19001803         | 1       |

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| Supplier                  | Substance         | Batch            | Spectra |
|---------------------------|-------------------|------------------|---------|
| Fagron                    | Paraffin, yellow  | 14K27T29019302   | 1       |
| Fagron                    | Paraffin, yellow  | 19G24-T06-071048 | 1       |
| Fagron                    | Paraffin, yellow  | 16E17-T01-035266 | 1       |
| Fagron                    | Paraffin, yellow  | 16E17-T01-035265 | 1       |
| Gehe                      | Paraffin, yellow  | 16032602         | 1       |
| Gehe                      | Paraffin, yellow  | 16281001         | 1       |
| Gehe                      | Paraffin, yellow  | 16096913         | 1       |
| Gehe                      | Paraffin, yellow  | 310191           | 1       |
| GEHE                      | Paraffin, yellow  | 17223102         | 2       |
| GEHE                      | Paraffin, yellow  | 17303401         | 2       |
| GEHE                      | Paraffin, yellow  | 19001804         | 1       |
| Bombastus                 | Paraffin, yellow  | 20002910         | 4       |
| Gehe/EuRho                | Paraffin, yellow  | 1606029-01       | 1       |
| Euro OTC                  | Paraffin, yellow  | 1904027-1        | 1       |
| Euro OTC                  | Paraffin, yellow  | 180401201        | 1       |
| Hedinger                  | Paraffin, yellow  | 17223103         | 2       |
| Hedinger/ Anzag           | Paraffin, yellow  | 307079           | 1       |
| Caelo                     | Paraffin, yellow  | 17162904         | 3       |
| L12                       | Paraffin, yellow  | 17052401         | 5       |
| L12                       | Paraffin, yellow  | 17303501         | 1       |
| Nachprüfung               | Paraffin, yellow  | 1607E02551       | 1       |
| Noweda                    | Paraffin, yellow  | 15330402         | 1       |
| Noweda                    | Paraffin, yellow  | 16032502         | 1       |
| Noweda                    | Paraffin, yellow  | 18000669         | 1       |
| Noweda                    | Paraffin, yellow  | 19165701         | 1       |
| Noweda                    | Paraffin, yellow  | 20001760002      | 1       |
| Caelo                     | Paraffin, yellow  | 15063902         | 3       |
| Caelo                     | Paraffin, yellow  | 16096903         | 9       |
| Caelo                     | Paraffin, yellow  | 192497004        | 2       |
| Euro OTC                  | Paraffin, yellow  | 12321908         | 1       |
| Pharmachem                | Paraffin, yellow  | 150303-01        | 1       |
| Pharmachem GmbH & Co KG   | Paraffin, yellow  | 18191503         | 1       |
| Phoenix                   | Paraffin, yellow  | 57/AKD7          | 1       |
| Caelo                     | Paraffin, yellow  | 20001760002      | 3       |
| Phönix                    | Paraffin, yellow  | 14324301         | 1       |
| Phönix                    | Paraffin, yellow  | 16032602         | 1       |
| Phönix                    | Paraffin, yellow  | 16281001         | 1       |
| Phönix                    | Paraffin, yellow  | 17303501         | 2       |
| Phönix Gotha              | Paraffin, yellow  | 18000670         | 1       |
| Sana 29.11.Ek.6,95        | Paraffin, yellow  | 15063904         | 1       |
| sanacorb                  | Paraffin, yellow  | 17162906         | 1       |
| Sanacorp                  | Paraffin, yellow  | 57/AKD4          | 1       |
| Sanacorp                  | Paraffin, yellow  | 58/AKD12         | 1       |
| Sanacorp                  | Paraffin, yellow  | 15330401         | 1       |
| Sanacorp                  | Paraffin, yellow  | 16096904         | 1       |
| Sanacorp                  | Paraffin, yellow  | 17052401         | 1       |
| Sanacorp                  | Paraffin, yellow  | 310192           | 2       |
| Sanacorp                  | Paraffin, yellow  | 17303401         | 1       |
| Sanacorp                  | Paraffin, yellow  | 18296802         | 1       |
| Sanacorp                  | Paraffin, yellow  | 19165701         | 1       |
| Caelo                     | Paraffin, yellow  | 60081202         | 1       |
| Caelo                     | Paraffin, yellow  | 17162903         | 1       |
| Caelo                     | Paraffin, yellow  | 18092008         | 6       |
| Caelo                     | Paraffin, yellow  | 192300004        | 11      |
| Euro OTC                  | Paraffin, yellow  | 18092002         | 1       |
| VDL                       | Paraffin, yellow  | 18092208         | 1       |
| WE:Sanacorp05.09.2016 ... | Paraffin, yellow  | 15330601         | 2       |
| 04.03.20/Gehe/Ichtyol     | Unguentum Cordes® | 18A113           | 2       |
| 20A0060                   | Unguentum Cordes® | 20A0060          | 1       |
| A.H.D.                    | Unguentum Cordes® | 15A060           | 1       |

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| Supplier                   | Substance                     | Batch   | Spectra |
|----------------------------|-------------------------------|---------|---------|
| Aallianc. Healthc./Icht... | Unguentum Cordes <sup>®</sup> | 17A087  | 1       |
| aep Cordes                 | Unguentum Cordes <sup>®</sup> | 18A112  | 1       |
| AHC                        | Unguentum Cordes <sup>®</sup> | 15A192  | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 16A102  | 7       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 14A117  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 15A021  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 16A085  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 16A140  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 16A070  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 17A045  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 18A070  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 17A085  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 18A131  | 3       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 18A113  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 19A004  | 1       |
| AHD                        | Unguentum Cordes <sup>®</sup> | 19A111  | 1       |
| Euro OTC                   | Unguentum Cordes <sup>®</sup> | 16A139  | 1       |
| Ahd/ Ichthyol              | Unguentum Cordes <sup>®</sup> | 18A050  | 1       |
| Ahd/ Ichthyol              | Unguentum Cordes <sup>®</sup> | 18A166  | 1       |
| AHD/Ichthyol               | Unguentum Cordes <sup>®</sup> | 18A051  | 1       |
| AHD/Ichthyol               | Unguentum Cordes <sup>®</sup> | 20A0030 | 1       |
| AHD/Ichthyol-Gesellschaft  | Unguentum Cordes <sup>®</sup> | 16A101  | 2       |
| AHL                        | Unguentum Cordes <sup>®</sup> | 16A143  | 1       |
| AHL                        | Unguentum Cordes <sup>®</sup> | 17A049  | 1       |
| AHL                        | Unguentum Cordes <sup>®</sup> | 17A056  | 1       |
| ALH                        | Unguentum Cordes <sup>®</sup> | 16A061  | 1       |
| Allianc. Health. / Icht... | Unguentum Cordes <sup>®</sup> | 16A184  | 1       |
| Allianc. Health. / Icht... | Unguentum Cordes <sup>®</sup> | 18A111  | 1       |
| Alliance                   | Unguentum Cordes <sup>®</sup> | 12A184  | 1       |
| Alliance                   | Unguentum Cordes <sup>®</sup> | 15A020  | 1       |
| Alliance health            | Unguentum Cordes <sup>®</sup> | 14A079  | 1       |
| Alliance health            | Unguentum Cordes <sup>®</sup> | 15A023  | 1       |
| Alliance Health            | Unguentum Cordes <sup>®</sup> | 13A032  | 1       |
| Alliance Health 11.03.14   | Unguentum Cordes <sup>®</sup> | 13A090  | 1       |
| Alliance Healthcare        | Unguentum Cordes <sup>®</sup> | 18A048  | 1       |
| Alliance Healthcare        | Unguentum Cordes <sup>®</sup> | 18A131  | 2       |
| Alliance Healthcare        | Unguentum Cordes <sup>®</sup> | 18A112  | 2       |
| Alliance Healthcare        | Unguentum Cordes <sup>®</sup> | 18A156  | 1       |
| Alliance Healthcare/Apo... | Unguentum Cordes <sup>®</sup> | 17A142  | 1       |
| Alliance/ Ichtyol          | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| Alliance/Ichthyol          | Unguentum Cordes <sup>®</sup> | 18A224  | 1       |
| Alliance/Ichthyol          | Unguentum Cordes <sup>®</sup> | 19A0149 | 1       |
| Allianz                    | Unguentum Cordes <sup>®</sup> | 18A002  | 1       |
| Anza                       | Unguentum Cordes <sup>®</sup> | 16A181  | 1       |
| anzag                      | Unguentum Cordes <sup>®</sup> | 14A079  | 1       |
| anzag                      | Unguentum Cordes <sup>®</sup> | 15A062  | 1       |
| anzag                      | Unguentum Cordes <sup>®</sup> | 15a192  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 12A055  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 12A115  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 13A172  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 15A021  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 15A023  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 16A014  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 16A178  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 17A008  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 18A007  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 18A215  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 19A004  | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 19A0257 | 1       |
| Anzag                      | Unguentum Cordes <sup>®</sup> | 19A0153 | 1       |

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| Supplier          | Substance         | Batch          | Spectra |
|-------------------|-------------------|----------------|---------|
| Anzag 26.09.2012  | Unguentum Cordes® | 11A202         | 1       |
| Anzag 29.10.12    | Unguentum Cordes® | 12A007         | 1       |
| Anzag, 03.01.2019 | Unguentum Cordes® | 17A087         | 1       |
| Euro OTC          | Unguentum Cordes® | 17A085         | 1       |
| Anzag/ Ichthyol   | Unguentum Cordes® | 13A029         | 1       |
| Anzag/ Ichthyol   | Unguentum Cordes® | 18A224         | 1       |
| Anzag/Cordes      | Unguentum Cordes® | 16A102         | 1       |
| Anzag/Cordes      | Unguentum Cordes® | 16A184         | 1       |
| Fagron            | Unguentum Cordes® | 12A152         | 1       |
| Anzag/Ichthyol    | Unguentum Cordes® | 13A180         | 1       |
| Anzag/Ichthyol    | Unguentum Cordes® | 17A045         | 1       |
| Anzag/Ichthyol    | Unguentum Cordes® | 18A110         | 1       |
| Anzag/Ichthyol    | Unguentum Cordes® | 20A0090        | 1       |
| Beiersdorf AG     | Unguentum Cordes® | 62932210       | 2       |
| Berkel AHK        | Unguentum Cordes® | 13A158         | 1       |
| Berkel AHK        | Unguentum Cordes® | 14A056         | 1       |
| Bombastus         | Unguentum Cordes® | 15A020         | 1       |
| Bombastus         | Unguentum Cordes® | 12A102         | 1       |
| Bombastus         | Unguentum Cordes® | 12A123         | 1       |
| Bombastus         | Unguentum Cordes® | 15A149         | 1       |
| Bombastus         | Unguentum Cordes® | 16A083         | 1       |
| Bombastus         | Unguentum Cordes® | 16A184         | 1       |
| Bombastus         | Unguentum Cordes® | 16A176170613-6 | 1       |
| Bombastus         | Unguentum Cordes® | 14A060         | 1       |
| Bombastus         | Unguentum Cordes® | 13A181         | 1       |
| Bombastus         | Unguentum Cordes® | 17A104         | 1       |
| Bombastus         | Unguentum Cordes® | 18A050         | 1       |
| Bombastus         | Unguentum Cordes® | 17A003         | 1       |
| Bombastus         | Unguentum Cordes® | 17A005         | 2       |
| Bombastus         | Unguentum Cordes® | 16A183         | 1       |
| Caelo             | Unguentum Cordes® | 12A183         | 2       |
| Caelo             | Unguentum Cordes® | 13A047         | 1       |
| Caelo             | Unguentum Cordes® | 13A043         | 1       |
| Caelo             | Unguentum Cordes® | 13A090         | 2       |
| Caelo             | Unguentum Cordes® | 17A127         | 4       |
| Caelo             | Unguentum Cordes® | 11A162         | 1       |
| Caelo             | Unguentum Cordes® | 11A118         | 2       |
| Caelo             | Unguentum Cordes® | 12A056         | 1       |
| Caelo             | Unguentum Cordes® | 9A163          | 1       |
| Caelo             | Unguentum Cordes® | 12A141         | 1       |
| Caelo             | Unguentum Cordes® | 12A206         | 4       |
| Caelo             | Unguentum Cordes® | Ichthyol       | 1       |
| Caelo             | Unguentum Cordes® | 13A157         | 2       |
| Caelo             | Unguentum Cordes® | 13A136         | 1       |
| Caelo             | Unguentum Cordes® | 13A113         | 1       |
| Caelo             | Unguentum Cordes® | 14A079         | 1       |
| Caelo             | Unguentum Cordes® | 14A143         | 1       |
| Caelo             | Unguentum Cordes® | 15A091         | 1       |
| Caelo             | Unguentum Cordes® | 15A073         | 2       |
| Caelo             | Unguentum Cordes® | 16A074         | 1       |
| Caelo             | Unguentum Cordes® | 14A095         | 1       |
| Caelo             | Unguentum Cordes® | 14A172         | 1       |
| Caelo             | Unguentum Cordes® | 15A020         | 1       |
| Caelo             | Unguentum Cordes® | 15A042         | 1       |
| Caelo             | Unguentum Cordes® | 15A073         | 1       |
| Caelo             | Unguentum Cordes® | 15A137         | 2       |
| Caelo             | Unguentum Cordes® | 15A139         | 1       |
| Caelo             | Unguentum Cordes® | 15A125         | 1       |
| Caelo             | Unguentum Cordes® | 16A010         | 1       |
| Caelo             | Unguentum Cordes® | 15A124         | 1       |

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| Supplier | Substance                     | Batch            | Spectra |
|----------|-------------------------------|------------------|---------|
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A173           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A048           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A085           | 5       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A077           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16a085           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A122           | 4       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A099           | 5       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A137           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A140           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A141           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A101           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A142           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A143           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A144           | 4       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A176           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A053           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A070           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A0025376       | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A164           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 14A056           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17a004           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 1717004          | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A098           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17a005           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A202           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 3051804          | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A007           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A084           | 6       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18167702         | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A105           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A147           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17a085           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17a087           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A142           | 6       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18a131           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A191           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 19141001         | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18025702         | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 20A0131          | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A083           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A105           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 13A141           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 16A045           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 13A172           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 15A061           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 19233702         | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 12A078           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 14A173           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17a055           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 12A156           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 13A042           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 13A181           | 3       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 12A131           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A256P-191022-4 | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 14A312           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A216           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 15A123           | 2       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 17A112           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A048           | 1       |
| Caelo    | Unguentum Cordes <sup>®</sup> | 18A067           | 3       |

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| Supplier | Substance         | Batch       | Spectra |
|----------|-------------------|-------------|---------|
| Caelo    | Unguentum Cordes® | 16A183      | 3       |
| Caelo    | Unguentum Cordes® | 17255301    | 1       |
| Caelo    | Unguentum Cordes® | 13A049      | 1       |
| Caelo    | Unguentum Cordes® | 15A192      | 1       |
| Caelo    | Unguentum Cordes® | 16A239      | 1       |
| Caelo    | Unguentum Cordes® | 17A101      | 2       |
| Caelo    | Unguentum Cordes® | 18A112      | 2       |
| Caelo    | Unguentum Cordes® | 15A149      | 1       |
| Caelo    | Unguentum Cordes® | 3264        | 1       |
| Caelo    | Unguentum Cordes® | 15A089      | 1       |
| Caelo    | Unguentum Cordes® | 16A123      | 2       |
| Caelo    | Unguentum Cordes® | 12A185      | 1       |
| Caelo    | Unguentum Cordes® | 12A211      | 1       |
| Caelo    | Unguentum Cordes® | 17A005      | 4       |
| Caelo    | Unguentum Cordes® | 15A040      | 1       |
| Caelo    | Unguentum Cordes® | 15A124      | 2       |
| Caelo    | Unguentum Cordes® | 15A191      | 6       |
| Caelo    | Unguentum Cordes® | 1418E-02532 | 1       |
| Caelo    | Unguentum Cordes® | 10A105      | 1       |
| Caelo    | Unguentum Cordes® | 15A159      | 1       |
| Caelo    | Unguentum Cordes® | 16A047      | 1       |
| Caelo    | Unguentum Cordes® | 16A119      | 1       |
| Caelo    | Unguentum Cordes® | 18A190      | 1       |
| Caelo    | Unguentum Cordes® | 11A202      | 1       |
| Caelo    | Unguentum Cordes® | 12A021      | 1       |
| Caelo    | Unguentum Cordes® | 13A171      | 2       |
| Caelo    | Unguentum Cordes® | 14A063      | 2       |
| Caelo    | Unguentum Cordes® | 15A062      | 4       |
| Caelo    | Unguentum Cordes® | 16/082/C    | 1       |
| Caelo    | Unguentum Cordes® | 16A013      | 1       |
| Caelo    | Unguentum Cordes® | 17A051      | 1       |
| Caelo    | Unguentum Cordes® | 17A004      | 5       |
| Caelo    | Unguentum Cordes® | 17A055      | 1       |
| Caelo    | Unguentum Cordes® | 17A085      | 3       |
| Caelo    | Unguentum Cordes® | 18A007      | 1       |
| Caelo    | Unguentum Cordes® | 20A0084     | 1       |
| Caelo    | Unguentum Cordes® | 17A113      | 7       |
| Caelo    | Unguentum Cordes® | 17A045      | 6       |
| Caelo    | Unguentum Cordes® | 18A130      | 1       |
| Caelo    | Unguentum Cordes® | 14A117      | 1       |
| Caelo    | Unguentum Cordes® | 15A106      | 1       |
| Caelo    | Unguentum Cordes® | 16A051      | 2       |
| Caelo    | Unguentum Cordes® | 16A058      | 5       |
| Caelo    | Unguentum Cordes® | 17A002      | 2       |
| Caelo    | Unguentum Cordes® | 18A049      | 3       |
| Caelo    | Unguentum Cordes® | 17A087      | 4       |
| Caelo    | Unguentum Cordes® | 18A101      | 1       |
| Caelo    | Unguentum Cordes® | 18A111      | 3       |
| Caelo    | Unguentum Cordes® | 13A004      | 1       |
| Caelo    | Unguentum Cordes® | 15A020      | 1       |
| Caelo    | Unguentum Cordes® | 15A092      | 2       |
| Caelo    | Unguentum Cordes® | 17A003      | 8       |
| Caelo    | Unguentum Cordes® | 17A163      | 2       |
| Caelo    | Unguentum Cordes® | 17A104      | 3       |
| Caelo    | Unguentum Cordes® | 18A215      | 3       |
| Caelo    | Unguentum Cordes® | 17A085      | 1       |
| Caelo    | Unguentum Cordes® | 18A070      | 3       |
| Caelo    | Unguentum Cordes® | 17A054      | 1       |
| Caelo    | Unguentum Cordes® | 14A009      | 1       |
| Caelo    | Unguentum Cordes® | 14A114      | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Caelo                      | Unguentum Cordes <sup>®</sup> | 16A210      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 17A217      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 15a149      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 17A126      | 3       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 17A067      | 4       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 18A003      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 18A052      | 4       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 19A003      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 15A150      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 12A022      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 12A140      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 12A146      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 13A138      | 3       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 13A153      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 14A113      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 14A115      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 14A116      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 14A213      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 15A023      | 2       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 15A060      | 3       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 16A022      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 18A050      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 18A005      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 16A044      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 13A043      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 15A141      | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 913M-02532  | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 3112A-02532 | 1       |
| Caelo                      | Unguentum Cordes <sup>®</sup> | 16A072      | 1       |
| Caelo/ Noweda              | Unguentum Cordes <sup>®</sup> | 16A023      | 1       |
| Caeolo/Gehe                | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Caesar & Loretz GmbH       | Unguentum Cordes <sup>®</sup> | 17A087      | 1       |
| Caesar & Loretz GmbH Hi... | Unguentum Cordes <sup>®</sup> | 13A090      | 1       |
| Cealo                      | Unguentum Cordes <sup>®</sup> | 14A113      | 1       |
| Cealo/Noweda               | Unguentum Cordes <sup>®</sup> | 16A142      | 2       |
| Cealo/Noweda               | Unguentum Cordes <sup>®</sup> | 16A143      | 1       |
| Chiesi                     | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Cichthyl/K                 | Unguentum Cordes <sup>®</sup> | 11A199      | 1       |
| cordes                     | Unguentum Cordes <sup>®</sup> | 14A116      | 1       |
| cordes                     | Unguentum Cordes <sup>®</sup> | 18A048      | 1       |
| cordes                     | Unguentum Cordes <sup>®</sup> | 18A051      | 1       |
| cordes                     | Unguentum Cordes <sup>®</sup> | 18A105      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 12A155      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 12A079      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 13A052      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 13a025      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 13A106      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 14A055      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 14A062      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 15A060      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 14A117      | 2       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 15A040      | 2       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 15A106      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 16A046      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 16A051      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 16A122      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 16A137      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 16A184      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Cordes                     | Unguentum Cordes <sup>®</sup> | 17A005      | 2       |

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| Supplier                | Substance         | Batch   | Spectra |
|-------------------------|-------------------|---------|---------|
| Cordes                  | Unguentum Cordes® | 18A048  | 1       |
| Cordes                  | Unguentum Cordes® | 17A045  | 1       |
| Cordes                  | Unguentum Cordes® | 17A067  | 1       |
| Cordes                  | Unguentum Cordes® | 18A051  | 1       |
| Cordes                  | Unguentum Cordes® | 17A087  | 1       |
| Cordes                  | Unguentum Cordes® | 18A223  | 1       |
| Cordes / Gehe           | Unguentum Cordes® | 17A085  | 1       |
| Cordes / Noweda         | Unguentum Cordes® | 19A111  | 1       |
| Cordes- Fiebig          | Unguentum Cordes® | 17A070  | 1       |
| Cordes Hermann          | Unguentum Cordes® | 15A020  | 1       |
| Cordes Hermann          | Unguentum Cordes® | 16A085  | 1       |
| Cordes Phönix           | Unguentum Cordes® | 17A051  | 1       |
| Cordes, Hermani / Gehe  | Unguentum Cordes® | 14A112  | 1       |
| Cordes, Hermani / Gehe  | Unguentum Cordes® | 14A171  | 1       |
| Cordes/Anzag            | Unguentum Cordes® | 17A002  | 1       |
| Cordes/gehe             | Unguentum Cordes® | 17A084  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 13A172  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 13A157  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 16A155  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 17A098  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 19A004  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 18A111  | 1       |
| Cordes/Gehe             | Unguentum Cordes® | 19A128  | 1       |
| Cordes/Gehe/07.05.21    | Unguentum Cordes® | 20A0090 | 1       |
| Cordes/Noweda           | Unguentum Cordes® | 16A121  | 1       |
| Cordes/Noweda           | Unguentum Cordes® | 16A101  | 1       |
| Cordes/Noweda           | Unguentum Cordes® | 16A140  | 2       |
| Cordes/Noweda           | Unguentum Cordes® | 17A002  | 1       |
| Cordes/Noweda           | Unguentum Cordes® | 17A106  | 1       |
| cordes/phoenix          | Unguentum Cordes® | 13A047  | 1       |
| Cordes/Phoenix          | Unguentum Cordes® | 15A124  | 1       |
| Cordes/Phoenix          | Unguentum Cordes® | 15A125  | 1       |
| Cordes/Phoenix          | Unguentum Cordes® | 16A102  | 1       |
| Cordes/Phoenix          | Unguentum Cordes® | 18A101  | 1       |
| Cordes/Phönix           | Unguentum Cordes® | 13A050  | 1       |
| Cordes/Phönix           | Unguentum Cordes® | 15A124  | 1       |
| Cordes/Phönix           | Unguentum Cordes® | 16A083  | 2       |
| Cordes/Phönix           | Unguentum Cordes® | 16A142  | 2       |
| Cordes/Phönix           | Unguentum Cordes® | 17A055  | 2       |
| Cordes/Phönix           | Unguentum Cordes® | 18A051  | 1       |
| Cordes/Phönix           | Unguentum Cordes® | 18A113  | 1       |
| Cordes/Phönix           | Unguentum Cordes® | 19A0181 | 1       |
| Cordes/Sanacorp         | Unguentum Cordes® | 17A045  | 1       |
| Cordes/Sanacorp         | Unguentum Cordes® | 20A0153 | 1       |
| Cordesl/Phönix          | Unguentum Cordes® | 17A142  | 1       |
| Delta                   | Unguentum Cordes® | 17A045  | 1       |
| Dr. August Wolff/Phönix | Unguentum Cordes® | 17A087  | 1       |
| E Plus                  | Unguentum Cordes® | 17A051  | 1       |
| E Plus                  | Unguentum Cordes® | 17A163  | 1       |
| E Plus                  | Unguentum Cordes® | 17A101  | 1       |
| Ebert 17.08.16 KKH      | Unguentum Cordes® | 16A048  | 1       |
| Ebert/Ichthyol          | Unguentum Cordes® | 13A052  | 1       |
| Ebert-Jacobi            | Unguentum Cordes® | 17A008  | 1       |
| EJ/Ichthyol             | Unguentum Cordes® | 18A005  | 1       |
| EJ/Ichthyol             | Unguentum Cordes® | 18A084  | 1       |
| E-Plus                  | Unguentum Cordes® | 16A101  | 1       |
| eurho                   | Unguentum Cordes® | 14A079  | 1       |
| Euro OTC                | Unguentum Cordes® | 14A079  | 1       |
| Euro OTC                | Unguentum Cordes® | 15A155  | 1       |
| Euro OTC                | Unguentum Cordes® | 13A068  | 1       |

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| Supplier                | Substance                     | Batch            | Spectra |
|-------------------------|-------------------------------|------------------|---------|
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 16A074           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 17A087           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 15A159           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 14A078           | 2       |
| Euro/Krieger            | Unguentum Cordes <sup>®</sup> | 18A052           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 16A101           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 17A007           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 14A172           | 1       |
| Euro OTC                | Unguentum Cordes <sup>®</sup> | 16A123           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 17A005           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 17A007           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 18A110           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | Ichthyol/Phoenix | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 17A052           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 15A010           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 17a054           | 1       |
| Fagron                  | Unguentum Cordes <sup>®</sup> | 15A073           | 1       |
| FEJ                     | Unguentum Cordes <sup>®</sup> | 18A193           | 1       |
| Fiebig                  | Unguentum Cordes <sup>®</sup> | 15A036           | 1       |
| Fiebig                  | Unguentum Cordes <sup>®</sup> | 15A164           | 1       |
| Fiebig                  | Unguentum Cordes <sup>®</sup> | 16A013           | 1       |
| Fiebig                  | Unguentum Cordes <sup>®</sup> | 17A105           | 1       |
| Fiebig                  | Unguentum Cordes <sup>®</sup> | 18a052           | 1       |
| Fiebig/Ichthyol         | Unguentum Cordes <sup>®</sup> | 15A124           | 1       |
| Fiebig/Ichthyol         | Unguentum Cordes <sup>®</sup> | 17A002           | 2       |
| Fiebig/Ichthyol         | Unguentum Cordes <sup>®</sup> | 17A045           | 2       |
| Fiebig/Ichthyol         | Unguentum Cordes <sup>®</sup> | 18A110           | 1       |
| Fiebig/Ichthyol         | Unguentum Cordes <sup>®</sup> | 18A132           | 1       |
| Fiebig/Ichthyol Gesell. | Unguentum Cordes <sup>®</sup> | 18A051           | 1       |
| Fiebig/Ichthyol Gesell. | Unguentum Cordes <sup>®</sup> | 18A130           | 1       |
| förster                 | Unguentum Cordes <sup>®</sup> | 17A113           | 1       |
| Förster/Phönix          | Unguentum Cordes <sup>®</sup> | 158142           | 1       |
| Galderma/Phönix         | Unguentum Cordes <sup>®</sup> | 16A077           | 1       |
| gebepharma              | Unguentum Cordes <sup>®</sup> | 913I-02532       | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 11A223           | 2       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 11A161           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A054           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 11A234           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A056           | 2       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A087           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A079           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A075           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A124           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12a155           | 2       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A155           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 12A205           | 2       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A031           | 3       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A054           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A106           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A136           | 2       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A153           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A141           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A156           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 13A166           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 14A213           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 14A179           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 15A021           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 15A022           | 1       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 15A062           | 3       |
| Gehe                    | Unguentum Cordes <sup>®</sup> | 15A091           | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Gehe                       | Unguentum Cordes® | 15A089  | 1       |
| Gehe                       | Unguentum Cordes® | 15A148  | 1       |
| Gehe                       | Unguentum Cordes® | 15A150  | 1       |
| Gehe                       | Unguentum Cordes® | 15A142  | 1       |
| Gehe                       | Unguentum Cordes® | 15A191  | 1       |
| Gehe                       | Unguentum Cordes® | 16A046  | 1       |
| Gehe                       | Unguentum Cordes® | 16A123  | 1       |
| Gehe                       | Unguentum Cordes® | 16A101  | 1       |
| Gehe                       | Unguentum Cordes® | 16A141  | 1       |
| Gehe                       | Unguentum Cordes® | 16A143  | 1       |
| Gehe                       | Unguentum Cordes® | 16A184  | 1       |
| Gehe                       | Unguentum Cordes® | 17A004  | 1       |
| Gehe                       | Unguentum Cordes® | 17A085  | 2       |
| Gehe                       | Unguentum Cordes® | 18A110  | 1       |
| Gehe                       | Unguentum Cordes® | 18A112  | 1       |
| Gehe                       | Unguentum Cordes® | 18A232  | 1       |
| Gehe                       | Unguentum Cordes® | 18A111  | 1       |
| Gehe                       | Unguentum Cordes® | 19A006  | 1       |
| Gehe                       | Unguentum Cordes® | 18A156  | 1       |
| Gehe                       | Unguentum Cordes® | 18A113  | 1       |
| Gehe                       | Unguentum Cordes® | 18A224  | 1       |
| Gehe                       | Unguentum Cordes® | 19A0153 | 1       |
| Gehe                       | Unguentum Cordes® | 20A0105 | 1       |
| GEHE                       | Unguentum Cordes® | 16A099  | 1       |
| GEHE                       | Unguentum Cordes® | 17A113  | 1       |
| GEHE                       | Unguentum Cordes® | 17A127  | 2       |
| GEHE                       | Unguentum Cordes® | 18A048  | 2       |
| GEHE                       | Unguentum Cordes® | 18A049  | 1       |
| GEHE                       | Unguentum Cordes® | 18A050  | 2       |
| GEHE                       | Unguentum Cordes® | 18A067  | 1       |
| GEHE                       | Unguentum Cordes® | 18A147  | 2       |
| GEHE                       | Unguentum Cordes® | 17A053  | 1       |
| GEHE                       | Unguentum Cordes® | 18A215  | 1       |
| GEHE                       | Unguentum Cordes® | 18A107  | 1       |
| Gehe - Ichthyol            | Unguentum Cordes® | 12A183  | 1       |
| Gehe - Ichthyol            | Unguentum Cordes® | 13A136  | 1       |
| Gehe - Ichthyol            | Unguentum Cordes® | 15A027  | 1       |
| Caelo                      | Unguentum Cordes® | 19A0182 | 1       |
| Gehe / Ichthyol-Gesells... | Unguentum Cordes® | 16A061  | 1       |
| Gehe Kassel                | Unguentum Cordes® | 15A021  | 1       |
| Gehe,11.05.15/Cordes       | Unguentum Cordes® | 15A040  | 1       |
| Gehe/ Ichthyol             | Unguentum Cordes® | 17A067  | 1       |
| Gehe/ ichthyol             | Unguentum Cordes® | 18A156  | 1       |
| Gehe/ Ichthyol             | Unguentum Cordes® | 20A0030 | 1       |
| Gehe/ Ichthyol Gesellsc... | Unguentum Cordes® | 18A232  | 1       |
| Bombastus                  | Unguentum Cordes® | 16A099  | 1       |
| Caelo                      | Unguentum Cordes® | 15A027  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 13A090  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 14A061  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 15A124  | 4       |
| Gehe/Ichthyol              | Unguentum Cordes® | 15A191  | 4       |
| Gehe/Ichthyol              | Unguentum Cordes® | 15A141  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 15A192  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 16A099  | 3       |
| Gehe/Ichthyol              | Unguentum Cordes® | 16A085  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 16A139  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 18A232  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 19A003  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 19A112  | 1       |
| Gehe/Ichthyol              | Unguentum Cordes® | 20A0030 | 1       |

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| Supplier                    | Substance                     | Batch       | Spectra |
|-----------------------------|-------------------------------|-------------|---------|
| Gehe-Ichthyol               | Unguentum Cordes <sup>®</sup> | 15A060      | 2       |
| Gehe-Ichthyol               | Unguentum Cordes <sup>®</sup> | 15A073      | 1       |
| Gehe-Ichthyol               | Unguentum Cordes <sup>®</sup> | 15A123      | 1       |
| Gehe-Ichthyol               | Unguentum Cordes <sup>®</sup> | 16A083      | 2       |
| Caelo                       | Unguentum Cordes <sup>®</sup> | 17a084      | 1       |
| Geibo/Ichthyol-Gesellsc...  | Unguentum Cordes <sup>®</sup> | 17A002      | 1       |
| Geibo/Ichthyol-Gesellsc...  | Unguentum Cordes <sup>®</sup> | 17a045      | 1       |
| Geibo/Ichthyol-Gesellsc...  | Unguentum Cordes <sup>®</sup> | 18A110      | 1       |
| Geibo/Ichthyol              | Unguentum Cordes <sup>®</sup> | 18A110      | 1       |
| Geibo/Ichthyol-Gesellsch... | Unguentum Cordes <sup>®</sup> | 17A067      | 1       |
| harn                        | Unguentum Cordes <sup>®</sup> | 17A069      | 1       |
| Hedinger                    | Unguentum Cordes <sup>®</sup> | 13A053      | 1       |
| Hedinger/Krieger            | Unguentum Cordes <sup>®</sup> | 16A048      | 1       |
| hedinger/Noweda             | Unguentum Cordes <sup>®</sup> | khuhfhk     | 1       |
| Henry Lamotte               | Unguentum Cordes <sup>®</sup> | 16A102      | 1       |
| Hermann & Co GmbH           | Unguentum Cordes <sup>®</sup> | 18A10       | 2       |
| Heyl                        | Unguentum Cordes <sup>®</sup> | 17A008      | 1       |
| hjahf                       | Unguentum Cordes <sup>®</sup> | 19A004      | 1       |
| Ich.Cordes                  | Unguentum Cordes <sup>®</sup> | 17A045      | 2       |
| Ich.Cordes                  | Unguentum Cordes <sup>®</sup> | 17A084      | 1       |
| Ichhyol                     | Unguentum Cordes <sup>®</sup> | 12A078      | 1       |
| Ichhyol Gesellschaft        | Unguentum Cordes <sup>®</sup> | 19A020      | 1       |
| Ichhyol-Gesellschaft        | Unguentum Cordes <sup>®</sup> | 19a0153     | 1       |
| Ichhyol-Gesellschaft        | Unguentum Cordes <sup>®</sup> | 20a0084     | 1       |
| Ichhyol-Gesellschaft        | Unguentum Cordes <sup>®</sup> | 20a0105     | 1       |
| Ichhyol-Gesellschaft/Ge...  | Unguentum Cordes <sup>®</sup> | 20A0084     | 1       |
| Ichth/Noweda                | Unguentum Cordes <sup>®</sup> | 16A144      | 1       |
| Ichthiol                    | Unguentum Cordes <sup>®</sup> | 2112212532  | 1       |
| Ichthiol                    | Unguentum Cordes <sup>®</sup> | 13A110      | 1       |
| Ichthiol/Sanacorp           | Unguentum Cordes <sup>®</sup> | 17A202      | 1       |
| Ichthol Gesellschaft        | Unguentum Cordes <sup>®</sup> | 16A144      | 1       |
| Ichthol Gesellschaft        | Unguentum Cordes <sup>®</sup> | 17A112      | 1       |
| Ichthol Gesellschaft        | Unguentum Cordes <sup>®</sup> | 18A216      | 1       |
| Ichthol/ gehe 31.01.19      | Unguentum Cordes <sup>®</sup> | 18A105      | 1       |
| Ichthol/ Phönix             | Unguentum Cordes <sup>®</sup> | 10A070      | 1       |
| Ichthol/Anzag               | Unguentum Cordes <sup>®</sup> | 16A102      | 1       |
| Ichthol/Phönix              | Unguentum Cordes <sup>®</sup> | 19A006      | 1       |
| Ichtholan Gesellschaft      | Unguentum Cordes <sup>®</sup> | 16A061      | 1       |
| Ichthol-Gesellschaft/Sa...  | Unguentum Cordes <sup>®</sup> | 15A037      | 1       |
| Ichthtyol                   | Unguentum Cordes <sup>®</sup> | 12a152      | 1       |
| Ichthtyol                   | Unguentum Cordes <sup>®</sup> | 12A185      | 1       |
| Ichthtyol                   | Unguentum Cordes <sup>®</sup> | 13A178      | 1       |
| Ichthtyol                   | Unguentum Cordes <sup>®</sup> | 15A089      | 1       |
| Ichthy                      | Unguentum Cordes <sup>®</sup> | 12A185      | 1       |
| Ichthyiol                   | Unguentum Cordes <sup>®</sup> | intern462   | 1       |
| Ichthyl / Phönix            | Unguentum Cordes <sup>®</sup> | 18A101      | 1       |
| Ichthyl Gesellschaft        | Unguentum Cordes <sup>®</sup> | 17A142      | 1       |
| Ichthyl Phönix              | Unguentum Cordes <sup>®</sup> | 12A129      | 1       |
| Ichthyl Phönix              | Unguentum Cordes <sup>®</sup> | 13A053      | 1       |
| Ichthyl/Phönix              | Unguentum Cordes <sup>®</sup> | 18A112      | 2       |
| Ichthyl-Gesellschaft/Ph...  | Unguentum Cordes <sup>®</sup> | 15A141      | 1       |
| Ichthylo Gesellschaft/N...  | Unguentum Cordes <sup>®</sup> | 18A110      | 1       |
| ichthylo/Noweda             | Unguentum Cordes <sup>®</sup> | 20170920    | 1       |
| Ichthyo/Phoenix             | Unguentum Cordes <sup>®</sup> | 18A256      | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 12A129      | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 20201112-1  | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 12A060      | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 12A102      | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 12A115      | 1       |
| ichthyol                    | Unguentum Cordes <sup>®</sup> | 1413M-02532 | 1       |

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| Supplier | Substance         | Batch      | Spectra |
|----------|-------------------|------------|---------|
| ichthyol | Unguentum Cordes® | 12A190     | 1       |
| ichthyol | Unguentum Cordes® | 12A152     | 1       |
| ichthyol | Unguentum Cordes® | 12A139     | 1       |
| ichthyol | Unguentum Cordes® | 12A206     | 1       |
| ichthyol | Unguentum Cordes® | 13A032     | 1       |
| ichthyol | Unguentum Cordes® | 13A1008    | 1       |
| ichthyol | Unguentum Cordes® | 13A090     | 1       |
| ichthyol | Unguentum Cordes® | 14a113     | 1       |
| ichthyol | Unguentum Cordes® | 14A172     | 1       |
| ichthyol | Unguentum Cordes® | 15A139     | 1       |
| ichthyol | Unguentum Cordes® | 15A061     | 1       |
| ichthyol | Unguentum Cordes® | 15A124     | 2       |
| ichthyol | Unguentum Cordes® | 15A125     | 1       |
| ichthyol | Unguentum Cordes® | 16A119     | 1       |
| ichthyol | Unguentum Cordes® | 16A140     | 1       |
| ichthyol | Unguentum Cordes® | 16A101     | 4       |
| ichthyol | Unguentum Cordes® | 16A143     | 1       |
| ichthyol | Unguentum Cordes® | 16A176     | 1       |
| ichthyol | Unguentum Cordes® | 17A051     | 1       |
| ichthyol | Unguentum Cordes® | 17a003     | 1       |
| ichthyol | Unguentum Cordes® | 17A163     | 2       |
| ichthyol | Unguentum Cordes® | 17A003     | 1       |
| ichthyol | Unguentum Cordes® | 17A0075535 | 1       |
| ichthyol | Unguentum Cordes® | 18A001     | 1       |
| ichthyol | Unguentum Cordes® | 18A003     | 1       |
| ichthyol | Unguentum Cordes® | 18A084     | 2       |
| ichthyol | Unguentum Cordes® | 18A132     | 1       |
| ichthyol | Unguentum Cordes® | 18a111     | 1       |
| ichthyol | Unguentum Cordes® | 18A111     | 1       |
| ichthyol | Unguentum Cordes® | 19A006     | 1       |
| ichthyol | Unguentum Cordes® | 18a223     | 1       |
| ichthyol | Unguentum Cordes® | 19A0262    | 1       |
| ichthyol | Unguentum Cordes® | 19a0262    | 1       |
| ichthyol | Unguentum Cordes® | 20A0049    | 1       |
| ichthyol | Unguentum Cordes® | 20a0049    | 1       |
| Ichthyol | Unguentum Cordes® | 11A150     | 1       |
| Ichthyol | Unguentum Cordes® | 11A120     | 1       |
| Ichthyol | Unguentum Cordes® | 11A153     | 1       |
| Ichthyol | Unguentum Cordes® | 11A085     | 3       |
| Ichthyol | Unguentum Cordes® | 26101201   | 1       |
| Ichthyol | Unguentum Cordes® | 14121203   | 1       |
| Ichthyol | Unguentum Cordes® | 12A120     | 1       |
| Ichthyol | Unguentum Cordes® | 12A064     | 1       |
| Ichthyol | Unguentum Cordes® | 12A131     | 2       |
| Ichthyol | Unguentum Cordes® | 12A121     | 3       |
| Ichthyol | Unguentum Cordes® | 12A139     | 1       |
| Ichthyol | Unguentum Cordes® | 12a145     | 1       |
| Ichthyol | Unguentum Cordes® | 12A115     | 2       |
| Ichthyol | Unguentum Cordes® | 12A157     | 1       |
| Ichthyol | Unguentum Cordes® | 12A160     | 1       |
| Ichthyol | Unguentum Cordes® | 12A152     | 3       |
| Ichthyol | Unguentum Cordes® | 11A233     | 1       |
| Ichthyol | Unguentum Cordes® | 12A190     | 1       |
| Ichthyol | Unguentum Cordes® | 12A211     | 1       |
| Ichthyol | Unguentum Cordes® | 12A205     | 3       |
| Ichthyol | Unguentum Cordes® | 13A029     | 2       |
| Ichthyol | Unguentum Cordes® | 13A005     | 1       |
| Ichthyol | Unguentum Cordes® | 13A003     | 1       |
| Ichthyol | Unguentum Cordes® | 13A030     | 2       |
| Ichthyol | Unguentum Cordes® | 13A031     | 2       |

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| Supplier | Substance                     | Batch      | Spectra |
|----------|-------------------------------|------------|---------|
| Ichthyol | Unguentum Cordes <sup>®</sup> | 12A185     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A032     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A034     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A006     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A048     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A047     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13092013D  | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A050     | 5       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A042     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A043     | 4       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A052     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A053     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A055     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A107     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A106     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A089     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A111     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A109     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A068     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 24022014B  | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A138     | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A140     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A136     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A112     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A090     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14031409   | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A141     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A015     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 414022-2-P | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A142     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 5052014B   | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A153     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A171     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A159     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A178     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A166     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A172     | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13A180     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A009     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 30092014C  | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A057     | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A095     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A061     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A005     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A060     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 7011501    | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A172     | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A117     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A171     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 15A075     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 15A123     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A113     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A063     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A098     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 13012015B  | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A114     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A132     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A179     | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A173     | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 14A116     | 1       |

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| Supplier | Substance         | Batch    | Spectra |
|----------|-------------------|----------|---------|
| Ichthyol | Unguentum Cordes® | 13041504 | 1       |
| Ichthyol | Unguentum Cordes® | 15A021   | 2       |
| Ichthyol | Unguentum Cordes® | 15A042   | 3       |
| Ichthyol | Unguentum Cordes® | 15A023   | 1       |
| Ichthyol | Unguentum Cordes® | 15A-042  | 1       |
| Ichthyol | Unguentum Cordes® | 15A020   | 1       |
| Ichthyol | Unguentum Cordes® | 15A060   | 2       |
| Ichthyol | Unguentum Cordes® | 15A089   | 2       |
| Ichthyol | Unguentum Cordes® | 15A040   | 1       |
| Ichthyol | Unguentum Cordes® | 4091516  | 1       |
| Ichthyol | Unguentum Cordes® | 15A091   | 2       |
| Ichthyol | Unguentum Cordes® | 15A076   | 1       |
| Ichthyol | Unguentum Cordes® | 15A092   | 3       |
| Ichthyol | Unguentum Cordes® | 15A074   | 1       |
| Ichthyol | Unguentum Cordes® | 15A093   | 2       |
| Ichthyol | Unguentum Cordes® | 15A106   | 1       |
| Ichthyol | Unguentum Cordes® | 14A079   | 1       |
| Ichthyol | Unguentum Cordes® | 15A062   | 2       |
| Ichthyol | Unguentum Cordes® | 15A107   | 2       |
| Ichthyol | Unguentum Cordes® | 15A108   | 2       |
| Ichthyol | Unguentum Cordes® | 15A073   | 3       |
| Ichthyol | Unguentum Cordes® | 15A140   | 3       |
| Ichthyol | Unguentum Cordes® | 15A124   | 2       |
| Ichthyol | Unguentum Cordes® | 15A148   | 5       |
| Ichthyol | Unguentum Cordes® | 15A079   | 3       |
| Ichthyol | Unguentum Cordes® | 15A087   | 1       |
| Ichthyol | Unguentum Cordes® | 15A142   | 1       |
| Ichthyol | Unguentum Cordes® | 15A155   | 1       |
| Ichthyol | Unguentum Cordes® | 15A159   | 1       |
| Ichthyol | Unguentum Cordes® | 15a159   | 1       |
| Ichthyol | Unguentum Cordes® | 15A191   | 5       |
| Ichthyol | Unguentum Cordes® | 16A011   | 1       |
| Ichthyol | Unguentum Cordes® | 16A047   | 1       |
| Ichthyol | Unguentum Cordes® | 15A156   | 1       |
| Ichthyol | Unguentum Cordes® | 16A048   | 2       |
| Ichthyol | Unguentum Cordes® | 15A192   | 3       |
| Ichthyol | Unguentum Cordes® | 16A077   | 1       |
| Ichthyol | Unguentum Cordes® | 16A045   | 1       |
| Ichthyol | Unguentum Cordes® | Ungt5/16 | 1       |
| Ichthyol | Unguentum Cordes® | 16A058   | 3       |
| Ichthyol | Unguentum Cordes® | 16A083   | 1       |
| Ichthyol | Unguentum Cordes® | 16A173   | 3       |
| Ichthyol | Unguentum Cordes® | 16A121   | 1       |
| Ichthyol | Unguentum Cordes® | 16A061   | 4       |
| Ichthyol | Unguentum Cordes® | 16A123   | 2       |
| Ichthyol | Unguentum Cordes® | 16A085   | 3       |
| Ichthyol | Unguentum Cordes® | 16A122   | 3       |
| Ichthyol | Unguentum Cordes® | 16A023   | 1       |
| Ichthyol | Unguentum Cordes® | 16A124   | 1       |
| Ichthyol | Unguentum Cordes® | 16A099   | 4       |
| Ichthyol | Unguentum Cordes® | 16A082   | 1       |
| Ichthyol | Unguentum Cordes® | 16A140   | 3       |
| Ichthyol | Unguentum Cordes® | 16A119   | 1       |
| Ichthyol | Unguentum Cordes® | 16A101   | 1       |
| Ichthyol | Unguentum Cordes® | 16A178   | 1       |
| Ichthyol | Unguentum Cordes® | 16A022   | 1       |
| Ichthyol | Unguentum Cordes® | 16A183   | 8       |
| Ichthyol | Unguentum Cordes® | 16A176   | 3       |
| Ichthyol | Unguentum Cordes® | 16A102   | 3       |
| Ichthyol | Unguentum Cordes® | 16A210   | 3       |

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| Supplier | Substance                     | Batch  | Spectra |
|----------|-------------------------------|--------|---------|
| Ichthyol | Unguentum Cordes <sup>®</sup> | 16A16  | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 16A184 | 5       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 16A142 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A051 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A053 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A002 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A052 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 16A155 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A019 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 16a184 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A164 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A003 | 4       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A216 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A055 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A004 | 4       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A101 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A056 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A217 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A218 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A069 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A005 | 6       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17a005 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A098 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A049 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A105 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A007 | 6       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A106 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A112 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A045 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A113 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A127 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A049 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A006 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A067 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A084 | 5       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A085 | 4       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A007 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A215 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 17A087 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A087 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A105 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A216 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A101 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A084 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A110 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A112 | 7       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A051 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A243 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A248 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A244 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 19A001 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A253 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A252 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 19A005 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 19A020 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A258 | 1       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A113 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A156 | 2       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 18A223 | 3       |
| Ichthyol | Unguentum Cordes <sup>®</sup> | 19A008 | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Ichthyol                   | Unguentum Cordes® | 19A021  | 1       |
| Ichthyol                   | Unguentum Cordes® | 19A0184 | 1       |
| Ichthyol                   | Unguentum Cordes® | 19A0256 | 1       |
| Ichthyol                   | Unguentum Cordes® | 19a026  | 1       |
| Ichthyol                   | Unguentum Cordes® | 18A224  | 3       |
| Ichthyol                   | Unguentum Cordes® | 19A029  | 1       |
| Ichthyol                   | Unguentum Cordes® | 19A111  | 1       |
| Ichthyol                   | Unguentum Cordes® | 19A026  | 1       |
| Ichthyol                   | Unguentum Cordes® | 19A0262 | 2       |
| Ichthyol                   | Unguentum Cordes® | 19A0153 | 5       |
| Ichthyol                   | Unguentum Cordes® | 20A0002 | 1       |
| Ichthyol                   | Unguentum Cordes® | 18a224  | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0035 | 2       |
| Ichthyol                   | Unguentum Cordes® | 20A0045 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0093 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0095 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0111 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0149 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0090 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0150 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0105 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0105 | 1       |
| Ichthyol                   | Unguentum Cordes® | 21A0055 | 1       |
| Ichthyol                   | Unguentum Cordes® | 20A0211 | 1       |
| Ichthyol                   | Unguentum Cordes® | 21A0086 | 1       |
| Ichthyol                   | Unguentum Cordes® | 21A0057 | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 13A135  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 14A114  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 14A171  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 14A117  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 15A011  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 15a089  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 17A051  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 17A057  | 2       |
| ICHTHYOL                   | Unguentum Cordes® | 10A216  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 18A130  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 18A132  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 17A084  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 18A112  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 19A005  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 18A11   | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 19A006  | 1       |
| ICHTHYOL                   | Unguentum Cordes® | 19A0257 | 1       |
| Ichthyol / Gehe            | Unguentum Cordes® | 18A049  | 1       |
| Ichthyol / Gehe            | Unguentum Cordes® | 16A102  | 1       |
| Ichthyol / Gehe            | Unguentum Cordes® | 17A005  | 1       |
| Ichthyol / Gehe            | Unguentum Cordes® | 10A111  | 1       |
| Ichthyol - Ges.            | Unguentum Cordes® | 20A0045 | 3       |
| Ichthyol - Gesellschaft    | Unguentum Cordes® | 11A085  | 1       |
| ICHTHYOL - GESELLSCHAFT    | Unguentum Cordes® | 19A0256 | 1       |
| ICHTHYOL - GESELLSCHAFT    | Unguentum Cordes® | 20A0030 | 1       |
| ICHTHYOL - GESELLSCHAFT... | Unguentum Cordes® | 19A0181 | 1       |
| Ichthyol Jenne             | Unguentum Cordes® | 12A211  | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 17A106  | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 18A166  | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 19A0181 | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 19A0182 | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 19A111  | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 20A0030 | 1       |
| ICHTHYOL / 20              | Unguentum Cordes® | 20A0098 | 2       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Ichthyol / AHD             | Unguentum Cordes <sup>®</sup> | 17A002      | 1       |
| Ichthyol / Alliance        | Unguentum Cordes <sup>®</sup> | 18A107      | 1       |
| Ichthyol / Alliance HC     | Unguentum Cordes <sup>®</sup> | 20A0036     | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 16A099      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 16A139      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 16A144      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 17A163      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 17A053      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 17A049      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 17A069      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 18A048      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 17A085      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 18A067      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 18A215      | 1       |
| Ichthyol / Alliance Hea... | Unguentum Cordes <sup>®</sup> | 18A112      | 1       |
| Ichthyol / Anzag           | Unguentum Cordes <sup>®</sup> | 12A079      | 1       |
| Ichthyol / Anzag           | Unguentum Cordes <sup>®</sup> | 1017Q-02532 | 1       |
| Ichthyol / Anzag           | Unguentum Cordes <sup>®</sup> | 18A110      | 1       |
| Ichthyol / Anzag           | Unguentum Cordes <sup>®</sup> | 3018E-02532 | 1       |
| Ichthyol / Anzag           | Unguentum Cordes <sup>®</sup> | 2019U-02532 | 1       |
| Ichthyol / E               | Unguentum Cordes <sup>®</sup> | 14A079      | 1       |
| Ichthyol / Ebert           | Unguentum Cordes <sup>®</sup> | 17A067      | 1       |
| Ichthyol / Fiebig          | Unguentum Cordes <sup>®</sup> | 15A062      | 1       |
| Ichthyol / G               | Unguentum Cordes <sup>®</sup> | 15A020      | 1       |
| Ichthyol / G               | Unguentum Cordes <sup>®</sup> | 16A184      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 11A202      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 12A102      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 12A115      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 12A152      | 2       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 12A184      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A054      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A106      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A042      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A138      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A142      | 3       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A068      | 2       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A153      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A181      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A166      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 13A156      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 15A162      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 16A173      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 17A049      | 2       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 17A106      | 2       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 17A113      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 17A045      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 18A049      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 17A084      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 18A051      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 18A067      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 18A166      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 18A191      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 19A006      | 1       |
| Ichthyol / Gehe            | Unguentum Cordes <sup>®</sup> | 19A008      | 1       |
| Ichthyol / GEHE            | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Ichthyol / Geibo           | Unguentum Cordes <sup>®</sup> | 16A140      | 1       |
| Ichthyol / Geibo           | Unguentum Cordes <sup>®</sup> | 18A156      | 1       |
| Ichthyol / Geibo           | Unguentum Cordes <sup>®</sup> | 18A224      | 1       |
| Ichthyol / K               | Unguentum Cordes <sup>®</sup> | 15A191      | 1       |
| Ichthyol / Noweda          | Unguentum Cordes <sup>®</sup> | 11A146      | 1       |

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| Supplier                   | Substance         | Batch      | Spectra |
|----------------------------|-------------------|------------|---------|
| Ichthyol / Noweda          | Unguentum Cordes® | 12A152     | 2       |
| Ichthyol / Noweda          | Unguentum Cordes® | 13A042     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 13A043     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 13A051     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 11A042     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 14A172     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 14A173     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 14A179     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 15A021     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 15A073     | 3       |
| Ichthyol / Noweda          | Unguentum Cordes® | 16A140     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 16A123     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 17A005     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 17A143     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 18A112     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 18A248     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 19A007     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 18A156     | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 19A0256    | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 19A0257    | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 19A0153    | 1       |
| Ichthyol / Noweda          | Unguentum Cordes® | 20A0034    | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 15A123     | 2       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 15A125     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 16A099     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 16A139     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 17A069     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 17A106     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 17A084     | 1       |
| Ichthyol / Phoenix         | Unguentum Cordes® | 18A130     | 1       |
| Ichthyol / Phoenix Leip... | Unguentum Cordes® | 12A118     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 15A156     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 16A122     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 16A210     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A164     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A098     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A007     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A113     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A127     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A06      | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 18A051     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A067     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 17A142     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 19A128     | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 18A223     | 3       |
| Ichthyol / Phönix          | Unguentum Cordes® | 19A0256    | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 19A0153    | 1       |
| Ichthyol / Phönix          | Unguentum Cordes® | 20A0084    | 1       |
| Ichthyol / Sanacorp        | Unguentum Cordes® | 12A183     | 1       |
| Ichthyol / Sanacorp        | Unguentum Cordes® | 14A172     | 1       |
| Ichthyol / Sanacorp        | Unguentum Cordes® | 15A062     | 1       |
| Ichthyol / Sanacorp        | Unguentum Cordes® | 18A192     | 1       |
| Ichthyol / Sanacorp        | Unguentum Cordes® | 18A111     | 1       |
| Ichthyol / Sanacorp 27...  | Unguentum Cordes® | 17A128     | 1       |
| ichthyol /2                | Unguentum Cordes® | 18A191     | 1       |
| ichthyol /2                | Unguentum Cordes® | 19A128     | 1       |
| ichthyol /2                | Unguentum Cordes® | 20A0036    | 1       |
| Ichthyol /AHD              | Unguentum Cordes® | 15A155     | 1       |
| Ichthyol /Anzag            | Unguentum Cordes® | 62(18A051) | 1       |
| Ichthyol /Anzag            | Unguentum Cordes® | 63(18A107) | 1       |

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| Supplier                   | Substance                     | Batch      | Spectra |
|----------------------------|-------------------------------|------------|---------|
| Ichthyol /Anzag            | Unguentum Cordes <sup>®</sup> | 64(18A130) | 1       |
| Ichthyol /Anzag            | Unguentum Cordes <sup>®</sup> | 65(18A166) | 1       |
| Ichthyol /Gehe             | Unguentum Cordes <sup>®</sup> | 17A087     | 1       |
| Ichthyol /Gehe             | Unguentum Cordes <sup>®</sup> | 18A112     | 1       |
| Ichthyol /Gehe             | Unguentum Cordes <sup>®</sup> | 18A232     | 1       |
| Ichthyol /Jenne            | Unguentum Cordes <sup>®</sup> | 66(18A248) | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 12A152     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 13A090     | 2       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 13A181     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 13A067     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15A060     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15a073     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 12A118     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15A123     | 3       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15A148     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15A159     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 15A191     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 16A085     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 17A067     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 18A113     | 1       |
| Ichthyol /Noweda           | Unguentum Cordes <sup>®</sup> | 19A0154    | 1       |
| Ichthyol /Sanacorp         | Unguentum Cordes <sup>®</sup> | 18A067     | 1       |
| Ichthyol /Sanacorp         | Unguentum Cordes <sup>®</sup> | 18A190     | 1       |
| Ichthyol /Sanacorp         | Unguentum Cordes <sup>®</sup> | 19A111     | 1       |
| Ichthyol 07.03.2013 Spa... | Unguentum Cordes <sup>®</sup> | 12A102     | 1       |
| Ichthyol AG / Alliance ... | Unguentum Cordes <sup>®</sup> | 17A002     | 1       |
| Ichthyol AG / Anzag        | Unguentum Cordes <sup>®</sup> | 16A085     | 2       |
| Ichthyol Anzag             | Unguentum Cordes <sup>®</sup> | 18A216     | 1       |
| Ichthyol Anzag             | Unguentum Cordes <sup>®</sup> | 18A166     | 1       |
| Ichthyol Anzag             | Unguentum Cordes <sup>®</sup> | 19A004     | 1       |
| Ichthyol Cordes            | Unguentum Cordes <sup>®</sup> | 12A075     | 1       |
| Ichthyol cordes / Noweda   | Unguentum Cordes <sup>®</sup> | 14A079     | 1       |
| Ichthyol Cordes/Gehe       | Unguentum Cordes <sup>®</sup> | 17A005     | 1       |
| Ichthyol Cordes/Gehe       | Unguentum Cordes <sup>®</sup> | 17A045     | 1       |
| Ichthyol Cordes/Gehe       | Unguentum Cordes <sup>®</sup> | 17A087     | 1       |
| Ichthyol Cordes/Gehe       | Unguentum Cordes <sup>®</sup> | 18A110     | 1       |
| Ichthyol Cordes/Noweda ... | Unguentum Cordes <sup>®</sup> | 20A0131    | 1       |
| Ichthyol Cordes/Noweda2... | Unguentum Cordes <sup>®</sup> | 21A0055    | 1       |
| Ichthyol G/Alliance        | Unguentum Cordes <sup>®</sup> | 18A051     | 1       |
| Ichthyol G/Alliance        | Unguentum Cordes <sup>®</sup> | 18A131     | 1       |
| Ichthyol G/Noweda          | Unguentum Cordes <sup>®</sup> | 17A053     | 1       |
| Ichthyol G/Noweda          | Unguentum Cordes <sup>®</sup> | 17A056     | 1       |
| Ichthyol Gehe              | Unguentum Cordes <sup>®</sup> | 20A0051    | 1       |
| Ichthyol GEHE              | Unguentum Cordes <sup>®</sup> | 17A054     | 1       |
| Ichthyol Ges. / Gehe       | Unguentum Cordes <sup>®</sup> | 17A069     | 1       |
| Ichthyol Ges. / Gehe       | Unguentum Cordes <sup>®</sup> | 18A224     | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 17A101     | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 18A048     | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 18A216     | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 19A006     | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 19A0183    | 1       |
| Ichthyol Ges./Sanac        | Unguentum Cordes <sup>®</sup> | 20A0030    | 1       |
| Ichthyol Gesellsch.        | Unguentum Cordes <sup>®</sup> | 17A003     | 1       |
| Ichthyol Gesellsch.        | Unguentum Cordes <sup>®</sup> | 17A067     | 1       |
| Ichthyol Gesellsch.        | Unguentum Cordes <sup>®</sup> | 18A110     | 1       |
| Ichthyol Gesellsch.        | Unguentum Cordes <sup>®</sup> | 19A0153    | 1       |
| Ichthyol Gesellsch./Pho... | Unguentum Cordes <sup>®</sup> | 15A123     | 1       |
| Ichthyol Gesellsch./Pho... | Unguentum Cordes <sup>®</sup> | 16A183     | 1       |
| Ichthyol Gesellsch-/Phö... | Unguentum Cordes <sup>®</sup> | 15A042     | 1       |
| Ichthyol Gesellsch-/Phö... | Unguentum Cordes <sup>®</sup> | 15A159     | 1       |

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| Supplier              | Substance         | Batch  | Spectra |
|-----------------------|-------------------|--------|---------|
| ichthyol gesellschaft | Unguentum Cordes® | 13A051 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 13A055 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 14A143 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 15A022 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 15A076 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 15A041 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 15A159 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 16A011 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 16A143 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 17A054 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 17A069 | 1       |
| ichthyol gesellschaft | Unguentum Cordes® | 17A105 | 2       |
| ichthyol Gesellschaft | Unguentum Cordes® | 18A050 | 1       |
| ichthyol Gesellschaft | Unguentum Cordes® | 17A087 | 1       |
| ichthyol Gesellschaft | Unguentum Cordes® | 18a130 | 1       |
| ichthyol Gesellschaft | Unguentum Cordes® | 18A110 | 1       |
| ichthyol Gesellschaft | Unguentum Cordes® | 19A004 | 1       |
| Ichthyol gesellschaft | Unguentum Cordes® | 16A044 | 1       |
| Ichthyol gesellschaft | Unguentum Cordes® | 17A005 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 11A234 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 12A058 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 12A087 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 11A202 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 12A152 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 12A183 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A055 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A135 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A156 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A159 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A170 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A171 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 13A172 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 14A061 | 2       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 14A173 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A011 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A022 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A041 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A020 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A074 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A106 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A107 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A137 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A036 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A142 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 14A140 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A124 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 15A159 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A010 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A173 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A119 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A122 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A099 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A124 | 3       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A123 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A139 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A101 | 3       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A140 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A102 | 1       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 16A184 | 2       |
| Ichthyol Gesellschaft | Unguentum Cordes® | 17A051 | 3       |

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| Supplier                   | Substance                     | Batch           | Spectra |
|----------------------------|-------------------------------|-----------------|---------|
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A163          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A004          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A057          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A069          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A003          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A106          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A104          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A007          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A126          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A127          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A045          | 3       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A049          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A049          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A084          | 4       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 16A176          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A070          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A087          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 17A085          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A110          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A112          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A101          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A232          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 16A061          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 19A005          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A253          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A156          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 19A112          | 2       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18a113          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 18A113          | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 19A0181         | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 20A0060         | 1       |
| Ichthyol Gesellschaft      | Unguentum Cordes <sup>®</sup> | 20A0034         | 1       |
| Ichthyol -Gesellschaft     | Unguentum Cordes <sup>®</sup> | 12A064          | 1       |
| Ichthyol -Gesellschaft     | Unguentum Cordes <sup>®</sup> | 13A091          | 1       |
| Ichthyol -Gesellschaft     | Unguentum Cordes <sup>®</sup> | 13A181          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 15A149          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 16A083          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 16A155          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 17A007          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 17A045          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 17A084          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 18A112          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 18A248          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 18A223          | 1       |
| Ichthyol- Gesellschaft     | Unguentum Cordes <sup>®</sup> | 19A0256         | 1       |
| ICHTHYOL GESELLSCHAFT      | Unguentum Cordes <sup>®</sup> | 17A005          | 1       |
| ICHTHYOL GESELLSCHAFT      | Unguentum Cordes <sup>®</sup> | 17A085          | 2       |
| ICHTHYOL GESELLSCHAFT      | Unguentum Cordes <sup>®</sup> | 18A112          | 1       |
| ICHTHYOL GESELLSCHAFT      | Unguentum Cordes <sup>®</sup> | 18A156          | 1       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 15A125          | 1       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 171107UC/17A109 | 1       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 17A085          | 1       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 18A156          | 2       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 17A101          | 1       |
| ICHTHYOL Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 15A020          | 1       |
| Ichthyol Gesellschaft /... | Unguentum Cordes <sup>®</sup> | 17A045          | 1       |
| ICHTHYOL GESELLSCHAFT /... | Unguentum Cordes <sup>®</sup> | 18A224          | 1       |
| ichthyol- gesellschaft ... | Unguentum Cordes <sup>®</sup> | 11A202          | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 13A166          | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 14A056          | 1       |

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| Supplier                   | Substance         | Batch  | Spectra |
|----------------------------|-------------------|--------|---------|
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A079 | 3       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A060 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A168 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A095 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A063 | 2       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A062 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A113 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A116 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A130 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A027 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A038 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A090 | 2       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A076 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A092 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A080 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A137 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A140 | 2       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A079 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A150 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A047 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A121 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A140 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A021 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A060 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A061 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A099 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16a099 | 2       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A184 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A003 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A004 | 2       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A007 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A045 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A087 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 17A085 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 18A110 | 2       |
| Ichthyol- Gesellschaft ... | Unguentum Cordes® | 14A172 | 1       |
| Ichthyol- Gesellschaft ... | Unguentum Cordes® | 17A142 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 11A171 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 11A233 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A041 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A054 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A058 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A077 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A079 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A129 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A130 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A156 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A206 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A031 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A034 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A050 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A051 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A054 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 13A055 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 15A062 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 16A058 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 12A184 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 14A079 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 18A112 | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes® | 18A113 | 1       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| Ichthyol Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A003    | 1       |
| Ichthyol Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A045    | 1       |
| Ichthyol Gesellschaft H... | Unguentum Cordes <sup>®</sup> | 18A223    | 1       |
| Ichthyol Gesellschaft- ... | Unguentum Cordes <sup>®</sup> | 15A192    | 1       |
| ICHTHYOL GESELLSCHAFT -... | Unguentum Cordes <sup>®</sup> | CHB17A087 | 1       |
| Ichthyol Gesellschaft- ... | Unguentum Cordes <sup>®</sup> | 16A099    | 1       |
| Ichthyol Gesellschaft, ... | Unguentum Cordes <sup>®</sup> | 18A111    | 2       |
| Ichthyol Gesellschaft, ... | Unguentum Cordes <sup>®</sup> | 18A223    | 2       |
| Ichthyol Gesellschaft, ... | Unguentum Cordes <sup>®</sup> | 18A224    | 2       |
| Ichthyol Gesellschaft, ... | Unguentum Cordes <sup>®</sup> | 20A0084   | 2       |
| Ichthyol Gesellschaft, ... | Unguentum Cordes <sup>®</sup> | 20A0105   | 4       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 15A087    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 18A110    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 14A047    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 17A084    | 2       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 18A248    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A020    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 18A224    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A141    | 1       |
| ichthyol gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 17a003    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 13A181    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 15A090    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A102    | 1       |
| Ichthyol Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A144    | 1       |
| Ichthyol Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 13A180    | 1       |
| Ichthyol Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 17A054    | 1       |
| Ichthyol Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 19A0256   | 1       |
| Ichthyol Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 18A223    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 17A049    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 17A113    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 18A067    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 19A001    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 19A0181   | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 19A0257   | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 20A0045   | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 20A0150   | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 21A0055   | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 18A130    | 1       |
| Ichthyol Gesellschaft/C... | Unguentum Cordes <sup>®</sup> | 20A0098   | 1       |
| Ichthyol Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 13A089    | 1       |
| Ichthyol Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 16A141    | 1       |
| Ichthyol Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A087    | 1       |
| Ichthyol Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A049    | 1       |
| Ichthyol Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 19A008    | 1       |
| ICHTHYOL- GESELLSCHAFT/... | Unguentum Cordes <sup>®</sup> | 17A045    | 1       |
| ICHTHYOL- GESELLSCHAFT/... | Unguentum Cordes <sup>®</sup> | 18A156    | 1       |
| Ichthyol Gesellschaft/J... | Unguentum Cordes <sup>®</sup> | 19A008    | 1       |
| Ichthyol Gesellschaft/K... | Unguentum Cordes <sup>®</sup> | 20A0002   | 1       |
| Ichthyol Gesellschaft/K... | Unguentum Cordes <sup>®</sup> | 18A110    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 13A067    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 16a011    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 16A101    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 17A142    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 18A190    | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 19A0183   | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 20A0034   | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 20A0036   | 1       |
| Ichthyol Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 20A0152   | 1       |
| Ichthyol Gesellschaft/P... | Unguentum Cordes <sup>®</sup> | 18A049    | 1       |
| Ichthyol Gesellschaft/P... | Unguentum Cordes <sup>®</sup> | 18A215    | 1       |

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| Supplier                    | Substance         | Batch            | Spectra |
|-----------------------------|-------------------|------------------|---------|
| Ichthyol Gesellschaft/P...  | Unguentum Cordes® | 19A006           | 1       |
| Ichthyol Gesellschaft/P...  | Unguentum Cordes® | 19A112           | 1       |
| Ichthyol Gesellschaft/P...  | Unguentum Cordes® | 19A0184          | 1       |
| Ichthyol Gesellschaft/P...  | Unguentum Cordes® | 16A184           | 1       |
| Ichthyol- Gesellschaft/...  | Unguentum Cordes® | 14A095           | 1       |
| Ichthyol Gesellschaft/S...  | Unguentum Cordes® | 15A060           | 2       |
| Ichthyol Gesellschaft/S...  | Unguentum Cordes® | 18A105           | 1       |
| Ichthyol Gesellschaft-C...  | Unguentum Cordes® | 17A084           | 2       |
| Ichthyol Gesellschaft-C...  | Unguentum Cordes® | 16A085           | 1       |
| Ichthyol Gesellschaft       | Unguentum Cordes® | 17A056           | 1       |
| Ichthyol Gesellschaft       | Unguentum Cordes® | 18A001           | 1       |
| Ichthyol Gesellschaft       | Unguentum Cordes® | 17A113           | 1       |
| Ichthyol Gesellschaft       | Unguentum Cordes® | 18A190           | 1       |
| Ichthyol Gesellschaft       | Unguentum Cordes® | 19A008           | 1       |
| Ichthyol Gesellschaft/Ph... | Unguentum Cordes® | 19A0183          | 2       |
| Ichthyol Gesllschaft        | Unguentum Cordes® | 15A093           | 1       |
| Ichthyol Gesllschaft        | Unguentum Cordes® | 16A045           | 1       |
| Ichthyol Gesllschaft/Ph...  | Unguentum Cordes® | 18A048           | 1       |
| ichthyol gmbh               | Unguentum Cordes® | 19a0153          | 1       |
| Ichthyol gmbH               | Unguentum Cordes® | 17a003           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 18A232           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 19A112           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 18A224           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 19A111           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 13A137           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 15A041           | 1       |
| Ichthyol GmbH               | Unguentum Cordes® | 16A045           | 1       |
| Ichthyol GmbH/ Jenne        | Unguentum Cordes® | 17A085           | 1       |
| Ichthyol GmbH/ Jenne        | Unguentum Cordes® | 18A113           | 2       |
| Ichthyol GmbH/Alliance      | Unguentum Cordes® | 15A124           | 1       |
| Ichthyol GmbH/Noweda        | Unguentum Cordes® | 16A061           | 2       |
| Ichthyol GmbH/Noweda        | Unguentum Cordes® | 17A002           | 1       |
| Ichthyol GmbH/Noweda        | Unguentum Cordes® | 17A003           | 1       |
| Ichthyol Noweda             | Unguentum Cordes® | 19A128           | 1       |
| Ichthyol PH                 | Unguentum Cordes® | 17A126           | 1       |
| Ichthyol PH                 | Unguentum Cordes® | 18A105           | 2       |
| Ichthyol PH                 | Unguentum Cordes® | 19A003           | 1       |
| Ichthyol PH                 | Unguentum Cordes® | 19A0181          | 1       |
| Ichthyol PH                 | Unguentum Cordes® | 19A0256          | 1       |
| Ichthyol Pharma             | Unguentum Cordes® | 15A011           | 1       |
| Ichthyol Pharma             | Unguentum Cordes® | 15A042           | 1       |
| Ichthyol Pharma             | Unguentum Cordes® | 15A139           | 1       |
| Ichthyol Pharma             | Unguentum Cordes® | 15A141           | 1       |
| Ichthyol Pharma             | Unguentum Cordes® | 15A155           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 17A002           | 2       |
| Ichthyol Phönix             | Unguentum Cordes® | 17A164           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 17A106           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 18A048           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 18A067           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 18A131           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 19A004           | 1       |
| Ichthyol Phönix             | Unguentum Cordes® | 19A0262          | 1       |
| Spangropharm                | Unguentum Cordes® | 12A185           | 1       |
| ichthyol über Noweda 17...  | Unguentum Cordes® | 19A029P-200320-3 | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 13A166           | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 14A062           | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 14A114           | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 15A042           | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 15A092           | 1       |
| Ichthyol über Phoenix       | Unguentum Cordes® | 15A142           | 1       |

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| Supplier                   | Substance                     | Batch   | Spectra |
|----------------------------|-------------------------------|---------|---------|
| Ichthyol über Phoenix      | Unguentum Cordes <sup>®</sup> | 16A044  | 1       |
| Ichthyol über Phoenix      | Unguentum Cordes <sup>®</sup> | 16A058  | 1       |
| Ichthyol über Phoenix      | Unguentum Cordes <sup>®</sup> | 16A119  | 1       |
| Ichthyol, Cordes/ Kehr,... | Unguentum Cordes <sup>®</sup> | 19A0184 | 1       |
| Ichthyol, Cordes/ Kehr,... | Unguentum Cordes <sup>®</sup> | 19A003  | 1       |
| Ichthyol, Noweda           | Unguentum Cordes <sup>®</sup> | 15A023  | 1       |
| Ichthyol, Sanacorp         | Unguentum Cordes <sup>®</sup> | 19A020  | 1       |
| Ichthyol, Sanacorp         | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| Ichthyol, Sanacorp         | Unguentum Cordes <sup>®</sup> | 20A0028 | 1       |
| Ichthyol, Sanacorp         | Unguentum Cordes <sup>®</sup> | 18A111  | 1       |
| Ichthyol, Sanacorp         | Unguentum Cordes <sup>®</sup> | 20A0111 | 1       |
| ichthyol,Anzag             | Unguentum Cordes <sup>®</sup> | 12A124  | 1       |
| Ichthyol,Cordes/Kehr 30... | Unguentum Cordes <sup>®</sup> | 20A0030 | 1       |
| Ichthyol,Noweda            | Unguentum Cordes <sup>®</sup> | 12A142  | 1       |
| Ichthyol,Noweda            | Unguentum Cordes <sup>®</sup> | 13a009  | 2       |
| Ichthyol/                  | Unguentum Cordes <sup>®</sup> | 17A0367 | 1       |
| Ichthyol/                  | Unguentum Cordes <sup>®</sup> | 18A166  | 1       |
| Ichthyol/                  | Unguentum Cordes <sup>®</sup> | 19A0182 | 1       |
| Ichthyol/ AHD              | Unguentum Cordes <sup>®</sup> | 15A091  | 1       |
| Ichthyol/ AHD              | Unguentum Cordes <sup>®</sup> | 18A051  | 1       |
| Ichthyol/ Alliance         | Unguentum Cordes <sup>®</sup> | 17A084  | 1       |
| Ichthyol/ Alliance Heal... | Unguentum Cordes <sup>®</sup> | 17A003  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 15A139  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 15A141  | 2       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 15A155  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 16A046  | 2       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 16A119  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 16A141  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 16A155  | 2       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 17A005  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 18A105  | 2       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 18A131  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 18A130  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 18A113  | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 19A0184 | 2       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 20A0131 | 1       |
| Ichthyol/ Anzag            | Unguentum Cordes <sup>®</sup> | 21A0055 | 1       |
| Ichthyol/ Cordes           | Unguentum Cordes <sup>®</sup> | 12A139  | 1       |
| Ichthyol/ Cordes           | Unguentum Cordes <sup>®</sup> | 12A205  | 1       |
| Ichthyol/ E+J              | Unguentum Cordes <sup>®</sup> | 17A009  | 1       |
| Ichthyol/ E+J              | Unguentum Cordes <sup>®</sup> | 17A192  | 1       |
| Ichthyol/ E+J              | Unguentum Cordes <sup>®</sup> | 18A005  | 1       |
| Ichthyol/ Fiebig           | Unguentum Cordes <sup>®</sup> | 16A124  | 1       |
| Ichthyol/ Fiebig           | Unguentum Cordes <sup>®</sup> | 17A1050 | 1       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 14A056  | 1       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 15A020  | 2       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 16A139  | 1       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 19A0154 | 1       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 20A0084 | 1       |
| Ichthyol/ Gehe             | Unguentum Cordes <sup>®</sup> | 20A0105 | 1       |
| Ichthyol/ GEHE             | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| Ichthyol/ Geiki            | Unguentum Cordes <sup>®</sup> | 18A147  | 1       |
| Ichthyol/ Gotha            | Unguentum Cordes <sup>®</sup> | 16A176  | 1       |
| Ichthyol/ Gotha            | Unguentum Cordes <sup>®</sup> | 17A112  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 16A044  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 16A139  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 17A163  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 17A128  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 18A215  | 1       |
| Ichthyol/ Krieger          | Unguentum Cordes <sup>®</sup> | 18A191  | 1       |

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| Supplier           | Substance         | Batch   | Spectra |
|--------------------|-------------------|---------|---------|
| Ichthyol/ Now      | Unguentum Cordes® | 16A144  | 1       |
| Ichthyol/ Now      | Unguentum Cordes® | 16A210  | 1       |
| Ichthyol/ Now      | Unguentum Cordes® | 18A070  | 1       |
| Ichthyol/ Now      | Unguentum Cordes® | 19A006  | 1       |
| Ichthyol/ Now      | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol/ Now      | Unguentum Cordes® | 19A256  | 1       |
| ichthyol/ Noweda   | Unguentum Cordes® | 17A004  | 2       |
| ichthyol/ Noweda   | Unguentum Cordes® | 19A005  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 12A053  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 13A034  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 12A183  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 13A043  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 14A099  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 14A172  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 15A040  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 15A091  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 15A021  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 15A108  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 15A148  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 13A067  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 16A061  | 2       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 16A137  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 16A099  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A053  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 16A184  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A002  | 2       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A056  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A069  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A0005 | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A002  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 17A126  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A049  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A006  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A067  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A110  | 3       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A131  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 18A224  | 1       |
| Ichthyol/ Noweda   | Unguentum Cordes® | 20A0084 | 1       |
| Ichthyol/ Phoenix  | Unguentum Cordes® | 16A155  | 1       |
| Ichthyol/ Phoenix  | Unguentum Cordes® | 17A069  | 1       |
| Ichthyol/ Phoenix  | Unguentum Cordes® | 17A126  | 1       |
| ICHTHYOL/ Phoenix  | Unguentum Cordes® | 20A0098 | 1       |
| ICHTHYOL/ Phoenix  | Unguentum Cordes® | 21A0056 | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 15A150  | 4       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 16A101  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 17A005  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 17A085  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 18A107  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 18A101  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol/ Phönix   | Unguentum Cordes® | 19A0153 | 1       |
| ICHTHYOL/ Phönix   | Unguentum Cordes® | 16A083  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 15A108  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 15A150  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 16A044  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 16A046  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 16A155  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 17A101  | 1       |
| Ichthyol/ Sanacorp | Unguentum Cordes® | 18A048  | 1       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| Ichthyol/ Sanacorp         | Unguentum Cordes <sup>®</sup> | 19A215    | 1       |
| Ichthyol/ Sanacorp         | Unguentum Cordes <sup>®</sup> | 19A026    | 1       |
| Ichthyol/ Sanacorp         | Unguentum Cordes <sup>®</sup> | 18A113    | 1       |
| Ichthyol/ Sanacorp         | Unguentum Cordes <sup>®</sup> | 19A0154   | 1       |
| Ichthyol/ Spangro          | Unguentum Cordes <sup>®</sup> | 16A142    | 1       |
| Ichthyol/ VDL              | Unguentum Cordes <sup>®</sup> | 18A051    | 1       |
| Ichthyol/ VDL              | Unguentum Cordes <sup>®</sup> | 18A132    | 1       |
| Ichthyol/ VDL              | Unguentum Cordes <sup>®</sup> | 19A0182   | 1       |
| ICHTHYOL/1                 | Unguentum Cordes <sup>®</sup> | 19A020    | 1       |
| ICHTHYOL/11                | Unguentum Cordes <sup>®</sup> | 13A031    | 1       |
| Ichthyol/14.01.14/K        | Unguentum Cordes <sup>®</sup> | 13A026    | 1       |
| Ichthyol/15.11.19/Gehe     | Unguentum Cordes <sup>®</sup> | 18A111    | 1       |
| Ichthyol/25.09.19/Gehe     | Unguentum Cordes <sup>®</sup> | 18A156    | 3       |
| Ichthyol/25.09.19/Gehe     | Unguentum Cordes <sup>®</sup> | 10A111    | 1       |
| Ichthyol/AHC               | Unguentum Cordes <sup>®</sup> | 15A089    | 1       |
| Ichthyol/AHC               | Unguentum Cordes <sup>®</sup> | 17A084    | 1       |
| ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 13A109    | 1       |
| ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 20a0034   | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 12A185    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 17A005    | 2       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 61(17A113 | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 17A067    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 18A049    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 17A084    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 18A101    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 19A112    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 18A113    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 18A224    | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 20A0049   | 1       |
| Ichthyol/AHD               | Unguentum Cordes <sup>®</sup> | 20A0105   | 1       |
| ICHTHYOL/AHD               | Unguentum Cordes <sup>®</sup> | 19A01842  | 1       |
| Ichthyol/AHP               | Unguentum Cordes <sup>®</sup> | 154141    | 1       |
| Ichthyol/Alli. HC          | Unguentum Cordes <sup>®</sup> | 20A0090   | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 16A083    | 2       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 16A143    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 16A176    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 17A070    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 17A055    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 17A057    | 2       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 17A126    | 3       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 18A048    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 18A051    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 17A084    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 18A216    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 18A248    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 19A001    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 18A112    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 19A112    | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 19A0183   | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 19A0184   | 1       |
| Ichthyol/Alliance          | Unguentum Cordes <sup>®</sup> | 20A0172   | 2       |
| ICHTHYOL/Alliance          | Unguentum Cordes <sup>®</sup> | 20A0002   | 1       |
| ICHTHYOL/Alliance          | Unguentum Cordes <sup>®</sup> | 20A0034   | 1       |
| ICHTHYOL/Alliance          | Unguentum Cordes <sup>®</sup> | 20A0150   | 1       |
| Ichthyol/Alliance healt... | Unguentum Cordes <sup>®</sup> | 13A047    | 1       |
| Ichthyol/Alliance Healt... | Unguentum Cordes <sup>®</sup> | 16A099    | 1       |
| Ichthyol/Alliance Healt... | Unguentum Cordes <sup>®</sup> | 17A003    | 2       |
| Ichthyol/Alliance Healt... | Unguentum Cordes <sup>®</sup> | 17A126    | 1       |
| Ichthyol/Alliance Healt... | Unguentum Cordes <sup>®</sup> | 18A049    | 1       |
| Ichthyol/Alliance Healt... | Unguentum Cordes <sup>®</sup> | 17A127    | 1       |

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| Supplier                   | Substance         | Batch         | Spectra |
|----------------------------|-------------------|---------------|---------|
| Ichthyol/Alliance Healt... | Unguentum Cordes® | 18A147        | 2       |
| Ichthyol/AllianceHealth... | Unguentum Cordes® | 16A101        | 1       |
| Ichthyol/AllianceHealth... | Unguentum Cordes® | 16A183        | 1       |
| Ichthyol/AllianceHealth... | Unguentum Cordes® | 17A052        | 1       |
| Ichthyol/AllianceHealth... | Unguentum Cordes® | 17A113        | 1       |
| ichthyol/ANZAG             | Unguentum Cordes® | 13A047        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 12A055        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 12A124        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 12A130        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 11A187        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 13A067        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 13A049/13A050 | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 15A020        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 1415A-02532   | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 15A141        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 15A123        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 1713M-02532   | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 15A195        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 16A048        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 16A083        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 2316I-02532   | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 16A183        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 16A184        | 2       |
| Ichthyol/Anzag             | Unguentum Cordes® | 17A003        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 17A049        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 17A098        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 17A045        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A048        | 2       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A110        | 2       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A007        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A112        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A257        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 19A0181       | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 18A113        | 1       |
| Ichthyol/Anzag             | Unguentum Cordes® | 19A0206       | 1       |
| Caelo                      | Unguentum Cordes® | 131A043       | 1       |
| Ichthyol/E&J               | Unguentum Cordes® | 17A008        | 1       |
| Ichthyol/E&J               | Unguentum Cordes® | 17A218        | 1       |
| Ichthyol/E&J               | Unguentum Cordes® | 18A004        | 1       |
| Ichthyol/ebert             | Unguentum Cordes® | 13A034        | 1       |
| Ichthyol/Ebert             | Unguentum Cordes® | 13A090        | 1       |
| Ichthyol/Ebert             | Unguentum Cordes® | 13A159        | 1       |
| Ichthyol/Ebert             | Unguentum Cordes® | 14A060        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 13A166        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 14A179        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 15A040        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 15A043        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 15A140        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 16A184        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 16A143        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 16A153        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 17A018        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 17A09         | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 17A045        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 18A110        | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 19A0184       | 1       |
| Ichthyol/Fiebig            | Unguentum Cordes® | 20A0111       | 1       |
| ichthyol/gehe              | Unguentum Cordes® | 17A005        | 1       |
| ichthyol/Gehe              | Unguentum Cordes® | 13A109        | 1       |
| ichthyol/Gehe              | Unguentum Cordes® | 13A091        | 1       |

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| Supplier      | Substance                     | Batch       | Spectra |
|---------------|-------------------------------|-------------|---------|
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A114      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A005      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A099      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 12A060      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 12A079      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 11A043      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 12A156      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 12A190      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A006      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A051      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A106      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A109      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A181      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A178      | 3       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A172      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A055      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 13A216      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 4913Q-02532 | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A056      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A062      | 3       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A172      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A006      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A130      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A027      | 4       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A112      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A020      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A021      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 14A117      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A040      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A023      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A043      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A060      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A073      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A108      | 3       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A106      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A042      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A148      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A139      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A156      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A083      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A051      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A058      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 15A123      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A099      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A070      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A141      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A102      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A183      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 16A210      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A002      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A052      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A164      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A049      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A057      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A069      | 2       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A106      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A045      | 4       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 17A127      | 1       |
| Ichthyol/Gehe | Unguentum Cordes <sup>®</sup> | 18A048      | 2       |

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| Supplier               | Substance         | Batch   | Spectra |
|------------------------|-------------------|---------|---------|
| Ichthyol/Gehe          | Unguentum Cordes® | 18A049  | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 17A067  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 17A084  | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 17A085  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A083  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A067  | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A105  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 17A142  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A107  | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A190  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A244  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 16A061  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A112  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A004  | 3       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A111  | 4       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A020  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A112  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A020  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 18A113  | 4       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A0183 | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A184  | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 19A0153 | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 20A0049 | 2       |
| Ichthyol/Gehe          | Unguentum Cordes® | 20A0084 | 1       |
| Ichthyol/Gehe          | Unguentum Cordes® | 20A0172 | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 13A034  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 13a138  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 13A142  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 14a113  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 15A061  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 16A143  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 17A127  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 18A113  | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 19A0183 | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 20A0028 | 1       |
| Ichthyol/GEHE          | Unguentum Cordes® | 19A0153 | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 16A099  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 17A127  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A049  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A147  | 2       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A107  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A131  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A191  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 18A253  | 1       |
| ICHTHYOL/Gehe          | Unguentum Cordes® | 19A026  | 1       |
| ICHTHYOL/GEHE          | Unguentum Cordes® | 15A011  | 1       |
| Ichthyol/GeiBo         | Unguentum Cordes® | 19A0153 | 1       |
| Ichthyol/GeiBo         | Unguentum Cordes® | 20A0172 | 1       |
| Ichthyol/Geilenkircheb | Unguentum Cordes® | 17A056  | 1       |
| Ichthyol/Geilenkircheb | Unguentum Cordes® | 19A0183 | 1       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 14A095  | 1       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 17A085  | 2       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 18A110  | 2       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 17A087  | 1       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 18A223  | 2       |
| Ichthyol/Geilenkirchen | Unguentum Cordes® | 20A0105 | 1       |
| Ichthyol/Holdermann    | Unguentum Cordes® | 17A085  | 1       |
| ichthyol/Jenne         | Unguentum Cordes® | 18A248  | 1       |
| Ichthyol/Jenne         | Unguentum Cordes® | 17A142  | 1       |
| Ichthyol/Jenne         | Unguentum Cordes® | 20A0049 | 1       |

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| Supplier                   | Substance                     | Batch   | Spectra |
|----------------------------|-------------------------------|---------|---------|
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 17A113  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 17A142  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 18A166  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 18A156  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 18A191  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 19A0149 | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 18A232  | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 19A0153 | 1       |
| Ichthyol/Kehr              | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 11A202  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 11A146  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 12A102  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 12A184  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 16A121  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 16A123  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 17A054  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 17A049  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 17A005  | 2       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 18A070  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 18A216  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 18A215  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 19A001  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 19A005  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 19A008  | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 19A0181 | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 19A0182 | 1       |
| Ichthyol/Krieger           | Unguentum Cordes <sup>®</sup> | 20A0045 | 1       |
| Ichthyol/Krieger/23.05.... | Unguentum Cordes <sup>®</sup> | 13A209  | 1       |
| Ichthyol/N                 | Unguentum Cordes <sup>®</sup> | 16A046  | 1       |
| Ichthyol/N/14.02.13        | Unguentum Cordes <sup>®</sup> | 12A131  | 1       |
| ichthyol/N/PZN:01062983    | Unguentum Cordes <sup>®</sup> | 13A050  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 17A002  | 1       |
| ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 18A073  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 12A064  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A042  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A106  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A055  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A043  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A090  | 2       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A089  | 2       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A158  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 13A172  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 14A047  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 14A009  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A023  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A089  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A079  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A124  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A123  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A045  | 2       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 15A192  | 2       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A085  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A139  | 3       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A123  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A101  | 3       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A142  | 2       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A143  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A153  | 3       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A155  | 1       |
| Ichthyol/Noweda            | Unguentum Cordes <sup>®</sup> | 16A176  | 2       |

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| Supplier        | Substance         | Batch          | Spectra |
|-----------------|-------------------|----------------|---------|
| Ichthyol/Noweda | Unguentum Cordes® | 16A15501062983 | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 16A210         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A050         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A053         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A054         | 3       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A052         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A164         | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A002         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A003         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A049         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A057         | 3       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A069         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A004         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A105         | 4       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A007         | 3       |
| Ichthyol/Noweda | Unguentum Cordes® | 15A060         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A106         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A112         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A045         | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A127         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 16A099         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A051         | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 1A048          | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A052         | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A084         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 17A0852ma1250g | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A070         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A073         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A105         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A107         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A049         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A132         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A112         | 3       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A130         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A166         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A110         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A191         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A111         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A003         | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A007         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A005         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A008         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A128         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A181         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0182        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A020         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0183        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0184        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A224         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0256        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 18A223         | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0149        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A111         | 3       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0153        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0262        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 20A0028        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 20A0035        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 20A0045        | 1       |
| Ichthyol/Noweda | Unguentum Cordes® | 20A0149        | 2       |
| Ichthyol/Noweda | Unguentum Cordes® | 19A0204        | 1       |

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| Supplier         | Substance                     | Batch   | Spectra |
|------------------|-------------------------------|---------|---------|
| Ichthyol/Noweda  | Unguentum Cordes <sup>®</sup> | 20A0131 | 1       |
| Ichthyol/Noweda  | Unguentum Cordes <sup>®</sup> | 20A0150 | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 18A215  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A003  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 18A190  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A004  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A001  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A006  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A0181 | 2       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A0183 | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 19A111  | 3       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 20A0028 | 1       |
| ICHTHYOL/Noweda  | Unguentum Cordes <sup>®</sup> | 20A0045 | 1       |
| Ichthyol/O.G.    | Unguentum Cordes <sup>®</sup> | 16A140  | 1       |
| Ichthyol/O.G.    | Unguentum Cordes <sup>®</sup> | 16A153  | 1       |
| Ichthyol/O.G.    | Unguentum Cordes <sup>®</sup> | 16A210  | 1       |
| Ichthyol/OG      | Unguentum Cordes <sup>®</sup> | 17A003  | 2       |
| Ichthyol/OG      | Unguentum Cordes <sup>®</sup> | 17A067  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 12A020  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 12A130  | 2       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 12A130  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 13A055  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 13A136  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 13A159  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 14A113  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 15A010  | 1       |
| Ichthyol/Otto    | Unguentum Cordes <sup>®</sup> | 15A107  | 1       |
| Ichthyol/P       | Unguentum Cordes <sup>®</sup> | 17A069  | 1       |
| Ichthyol/P       | Unguentum Cordes <sup>®</sup> | 19A001  | 1       |
| Ichthyol/P       | Unguentum Cordes <sup>®</sup> | 19A004  | 1       |
| Ichthyol/Phö     | Unguentum Cordes <sup>®</sup> | 17AQ084 | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 13A049  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 13A135  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 13A054  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 13A166  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 14A079  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 14A095  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A020  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 14A172  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A022  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A023  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A042  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A061  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A046  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A011  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A090  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A106  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A107  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A141  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A149  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A156  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 15A191  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A048  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A047  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A047  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A121  | 4       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A137  | 1       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A140  | 3       |
| Ichthyol/Phoenix | Unguentum Cordes <sup>®</sup> | 16A102  | 1       |

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| Supplier                  | Substance         | Batch   | Spectra |
|---------------------------|-------------------|---------|---------|
| Ichthyol/Phoenix          | Unguentum Cordes® | 16A142  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A054  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A003  | 2       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A163  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A101  | 2       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A104  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 15A044  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A105  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A067  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A067  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A049  | 2       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A050  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A052  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A051  | 3       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A045  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A147  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A215  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A087  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 17A142  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A107  | 2       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A166  | 3       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A112  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A111  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 19A001  | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 18A156  | 2       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 19A0183 | 1       |
| Ichthyol/Phoenix          | Unguentum Cordes® | 19A0256 | 1       |
| ICHTHYOL/Phoenix          | Unguentum Cordes® | 16A140  | 1       |
| Ichthyol/Phoenix WE:02... | Unguentum Cordes® | 15A137  | 1       |
| Ichthyol/Phön.            | Unguentum Cordes® | 18A156  | 1       |
| ichthyol/Phönix           | Unguentum Cordes® | 19A128  | 1       |
| Ichthyol/phönix           | Unguentum Cordes® | 13A034  | 1       |
| Ichthyol/phönix           | Unguentum Cordes® | 15A020  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A030  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 12A184  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A010  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A033  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A054  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A140  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A089  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 13A166  | 3       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A057  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A095  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A062  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A172  | 2       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A116  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A123  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A142  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A020  | 2       |
| Ichthyol/Phönix           | Unguentum Cordes® | 14A179  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A023  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A042  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A062  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A092  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A061  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A073  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A124  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A162  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A150  | 1       |
| Ichthyol/Phönix           | Unguentum Cordes® | 15A125  | 1       |

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| Supplier        | Substance                     | Batch   | Spectra |
|-----------------|-------------------------------|---------|---------|
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16a044  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A048  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A045  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A119  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A023  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A141  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A142  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A102  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A101  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A155  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 16A184  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A002  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A054  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A164  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A049  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A003  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A004  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A101  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A056  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A057  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A005  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A0058 | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A069  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A104  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A112  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A007  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A002  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A126  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A127  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A067  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A048  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A049  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A050  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A084  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A051  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A052  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 17A085  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A105  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A216  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A107  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A130  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A084  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A13   | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A166  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A191  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A190  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A111  | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A003  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A-006 | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A006  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A020  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A112  | 2       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A156  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A0181 | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 18A113  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A0184 | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A0149 | 3       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A111  | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A0257 | 1       |
| Ichthyol/Phönix | Unguentum Cordes <sup>®</sup> | 19A0153 | 1       |

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| Supplier          | Substance         | Batch   | Spectra |
|-------------------|-------------------|---------|---------|
| Ichthyol/Phönix   | Unguentum Cordes® | 20A0002 | 1       |
| Ichthyol/Phönix   | Unguentum Cordes® | 19A0154 | 1       |
| Ichthyol/Phönix   | Unguentum Cordes® | 20A0093 | 1       |
| Ichthyol/Phönix   | Unguentum Cordes® | 20A0115 | 1       |
| Ichthyol/Phönix   | Unguentum Cordes® | 20A0234 | 2       |
| Ichthyol/Phönix   | Unguentum Cordes® | 21A0055 | 1       |
| ICHTHYOL/Phönix   | Unguentum Cordes® | 16A184  | 1       |
| ICHTHYOL/Phönix   | Unguentum Cordes® | 10A070  | 1       |
| ICHTHYOL/Phönix   | Unguentum Cordes® | 20A0151 | 1       |
| Ichthyol/Px       | Unguentum Cordes® | 15A137  | 1       |
| Ichthyol/Sana     | Unguentum Cordes® | 17A045  | 1       |
| Ichthyol/Sana     | Unguentum Cordes® | 18A110  | 1       |
| Ichthyol/Sana     | Unguentum Cordes® | 18A156  | 1       |
| Ichthyol/Sanac    | Unguentum Cordes® | 18A101  | 1       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 18A052  | 1       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 18A105  | 2       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 18A132  | 1       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 18A248  | 1       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 19A004  | 1       |
| Ichthyol/Sanacop  | Unguentum Cordes® | 19A0257 | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 12A183  | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 13A090  | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 17A003  | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 17A084  | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 18A156  | 1       |
| ichthyol/Sanacorp | Unguentum Cordes® | 18A223  | 2       |
| Ichthyol/sanacorp | Unguentum Cordes® | 16A083  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 16A101  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 16A184  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 16A183  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 17A106  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 17A113  | 2       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A052  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A105  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A216  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A131  | 2       |
| Ichthyol/sanacorp | Unguentum Cordes® | 19A001  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 19A005  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A156  | 3       |
| Ichthyol/sanacorp | Unguentum Cordes® | 18A112  | 1       |
| Ichthyol/sanacorp | Unguentum Cordes® | 19A0181 | 2       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 12A006  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A010  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A048  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 12A211  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A106  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A108  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A140  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A142  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 13A214  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A055  | 2       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A060  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A079  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A171  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A179  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 14A098  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 15A010  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 15A037  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 15A061  | 1       |
| Ichthyol/Sanacorp | Unguentum Cordes® | 15A093  | 1       |

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| Supplier               | Substance                     | Batch       | Spectra |
|------------------------|-------------------------------|-------------|---------|
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A106      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A074      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A123      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A149      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A164      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 15A191      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 16A044      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 16A142      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 16A026      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 16A176      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 16A184      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A002      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A163      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A101      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A056      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A005      | 3       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A106      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A007      | 3       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A127      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A045      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A104      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A052      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A067      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A147      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A070      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A084      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A107      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A142      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A216      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A112      | 3       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18a112      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A003      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A111      | 3       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A11       | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A156      | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A128      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A113      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A223      | 3       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A026      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A0256     | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A0154     | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A224      | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 20A0084     | 2       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 20A0151     | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | AP210622-03 | 1       |
| Ichthyol/Sanacorp      | Unguentum Cordes <sup>®</sup> | 20A01503    | 1       |
| ICHTHYOL/Sanacorp      | Unguentum Cordes <sup>®</sup> | 17A085      | 1       |
| ICHTHYOL/Sanacorp      | Unguentum Cordes <sup>®</sup> | 19A003      | 1       |
| ICHTHYOL/Sanacorp      | Unguentum Cordes <sup>®</sup> | 18A112      | 1       |
| Ichthyol/Sanova Pharma | Unguentum Cordes <sup>®</sup> | 15A041      | 1       |
| Ichthyol/Sanova Pharma | Unguentum Cordes <sup>®</sup> | 15A156      | 1       |
| Ichthyol/Sanova Pharma | Unguentum Cordes <sup>®</sup> | 17A003      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 16A085      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 16A099      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 16A101      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 17A106      | 1       |
| Ichthyol/Spangro       | Unguentum Cordes <sup>®</sup> | 17A113      | 1       |
| Spangropharm           | Unguentum Cordes <sup>®</sup> | 18A105      | 1       |
| Ichthyol/VDL           | Unguentum Cordes <sup>®</sup> | 13A136      | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| ICHTHYOL_GESELLSCHAFFT     | Unguentum Cordes® | 18A190  | 1       |
| ICHTHYOL_GESELLSCHAFFT     | Unguentum Cordes® | 18A248  | 1       |
| ICHTHYOL_GESELLSCHAFFT     | Unguentum Cordes® | 19A0181 | 1       |
| IchthyolAnzag 10.05.2012   | Unguentum Cordes® | 11A234  | 1       |
| ichthyol-G.                | Unguentum Cordes® | 16A099  | 1       |
| Ichthyol-G./AHD            | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol-G./Noweda         | Unguentum Cordes® | 17A005  | 2       |
| Ichthyol-G./Noweda         | Unguentum Cordes® | 17A085  | 1       |
| Ichthyol-G./Noweda         | Unguentum Cordes® | 18A156  | 1       |
| ICHTHYOL-G./Noweda         | Unguentum Cordes® | 17A098  | 1       |
| ICHTHYOL-G./Noweda         | Unguentum Cordes® | 17A-126 | 1       |
| ICHTHYOL-G./Noweda         | Unguentum Cordes® | 18A050  | 1       |
| Ichthyol-Ges               | Unguentum Cordes® | 12A184  | 1       |
| ICHTHYOL-GES/GEHE          | Unguentum Cordes® | 11A040  | 1       |
| ICHTHYOL-GES/GEHE          | Unguentum Cordes® | 10A016  | 1       |
| ICHTHYOL-GES/GEHE          | Unguentum Cordes® | 12A152  | 1       |
| Ichthyol-Ges/Noweda        | Unguentum Cordes® | 17A018  | 1       |
| Ichthyol-Gesell./Anzag ... | Unguentum Cordes® | 17A085  | 1       |
| Ichthyol-Gesell./Anzag ... | Unguentum Cordes® | 17A087  | 1       |
| Ichthyol-Gesellsch.        | Unguentum Cordes® | 18A232  | 1       |
| Ichthyol-Gesellsch.        | Unguentum Cordes® | 19A0153 | 1       |
| Ichthyol-Gesellsch. Cor... | Unguentum Cordes® | 17A045  | 2       |
| Ichthyol-Gesellsch. Cor... | Unguentum Cordes® | 17A142  | 1       |
| Ichthyol-Gesellsch. Cor... | Unguentum Cordes® | 18A111  | 1       |
| ICHTHYOL-Gesellsch. Cor... | Unguentum Cordes® | 18A131  | 1       |
| ICHTHYOL-Gesellsch. Cor... | Unguentum Cordes® | 19A004  | 1       |
| ICHTHYOL-Gesellsch. Cor... | Unguentum Cordes® | 19A111  | 1       |
| ICHTHYOL-Gesellsch. Cor... | Unguentum Cordes® | 20A0028 | 1       |
| Ichthyol-Gesellschaf       | Unguentum Cordes® | 17A126  | 1       |
| Ichthyol-Gesellschaf       | Unguentum Cordes® | 18A131  | 1       |
| Ichthyol-Gesellschaf       | Unguentum Cordes® | 19A0149 | 1       |
| Ichthyol-Gesellschafft ... | Unguentum Cordes® | 18A048  | 1       |
| Ichthyol-Gesellschafft ... | Unguentum Cordes® | 18A070  | 1       |
| ichthyol-gesellschaft      | Unguentum Cordes® | 13A068  | 2       |
| Ichthyolgesellschaft       | Unguentum Cordes® | 19A0262 | 1       |
| Ichthyolgesellschaft       | Unguentum Cordes® | 19A0181 | 1       |
| Ichthyol-gesellschaft      | Unguentum Cordes® | 18A050  | 2       |
| Ichthyol-gesellschaft      | Unguentum Cordes® | 18A166  | 1       |
| Ichthyol-gesellschaft      | Unguentum Cordes® | 19A003  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 11A085  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A102  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A130  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A115  | 2       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A053  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A205  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A123  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A206  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 13A034  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 12A183  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 11A177  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 13A055  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 13A142  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 13A180  | 3       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 14A057  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 14A063  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 14A079  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 14A095  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 13A172  | 1       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 14A114  | 2       |
| Ichthyol-Gesellschaft      | Unguentum Cordes® | 15A089  | 1       |

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| Supplier              | Substance                     | Batch           | Spectra |
|-----------------------|-------------------------------|-----------------|---------|
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A139          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A073          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A153          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 14A056          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 14A115          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 14A172          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 14A179          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 5052015A        | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A021          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 31072015A       | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A042          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A062          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A090          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A091          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A093          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A092          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A106          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A140          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A141          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15a142          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A124          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A142          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A148          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A150          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A044          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A156          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 15A191          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A045          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A046          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A048          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A047          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A083          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16a173          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 160726UC        | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A122          | 5       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A058          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A121          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A119          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A085          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A137          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A022/170117UC | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16a139          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A101          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A140          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A139          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A022          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A124          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A142          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A141          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A099          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A102          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A144          | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A143          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A155          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A183          | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 17A051          | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A210          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 6071714         | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 16A184          | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 17A053          | 1       |

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| Supplier              | Substance         | Batch      | Spectra |
|-----------------------|-------------------|------------|---------|
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A054     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A070     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A164     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A163     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A003     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A009     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A055     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 23121702   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A004     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A049     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A056     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A057     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A069     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A005     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A218     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A007     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A105     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A126     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A112     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 12051805   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A113     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A045     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A106     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A127     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 21071806   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 23071802   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A048     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A049     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 15A060     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A051     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A067     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A084     | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 13101802   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A006     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A067     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A085     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A070     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 181221-E02 | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 16A061     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A147     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A215     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18a067     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A105     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 17A087     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A107     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A110     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A112     | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A190     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A003     | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A001     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A248     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A166     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18a111     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A004     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A111     | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A008     | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A257     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A020     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 18A156     | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes® | 19A112     | 1       |

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| Supplier              | Substance                     | Batch    | Spectra |
|-----------------------|-------------------------------|----------|---------|
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A128   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0184  | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0257  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0183  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 18A223   | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0153  | 3       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19a0184  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0262  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0256  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 20A0034  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A015   | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 19A0154  | 2       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 20A0049  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 120A0049 | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 20A0084  | 4       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 20A0105  | 2       |
| ICHTHYOL-Gesellschaft | Unguentum Cordes <sup>®</sup> | 12A184   | 1       |
| ICHTHYOL-Gesellschaft | Unguentum Cordes <sup>®</sup> | 18A112   | 1       |
| ICHTHYOL-Gesellschaft | Unguentum Cordes <sup>®</sup> | 18A156   | 2       |
| ICHTHYOL-Gesellschaft | Unguentum Cordes <sup>®</sup> | 20A0049  | 2       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 12A155   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 11A202   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 12A184   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 13A043   | 3       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 14A179   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A043   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A091   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A042   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A156   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A191   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 16a048   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 15A12    | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 16A123   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 16A141   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 16a141   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 16A102   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A052   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A053   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A002   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A163   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A056   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A049   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A057   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A104   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A113   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A127   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A045   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A048   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A051   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 17A085   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A130   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A110   | 2       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A166   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 19A004   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A113   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 18A223   | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 19A0181  | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 19A0257  | 1       |
| ICHTHYOL-GESELLSCHAFT | Unguentum Cordes <sup>®</sup> | 19A0182  | 1       |
| Ichthyol-Gesellschaft | Unguentum Cordes <sup>®</sup> | 10A026   | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| ICHTHYOL-GESELLSCHAFT ...  | Unguentum Cordes® | 17A174  | 1       |
| Ichthyol-Gesellschaft /    | Unguentum Cordes® | 18A232  | 1       |
| Ichthyol-Gesellschaft /    | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A111  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A007  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A087  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A163  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A050  | 1       |
| Ichthyol-Gesellschaft / E  | Unguentum Cordes® | 12A152  | 1       |
| Ichthyol-Gesellschaft / G  | Unguentum Cordes® | 12A064  | 1       |
| Ichthyol-Gesellschaft / G  | Unguentum Cordes® | 12A123  | 1       |
| Ichthyol-Gesellschaft / G  | Unguentum Cordes® | 12A118  | 2       |
| Ichthyol-Gesellschaft / G  | Unguentum Cordes® | 13A042  | 1       |
| Ichthyolgesellschaft / ... | Unguentum Cordes® | 17A019  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A110  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A190  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 19A005  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 20A0Q28 | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 15A140  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 19A0149 | 1       |
| Ichthyol-Gesellschaft / K  | Unguentum Cordes® | 11A202  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 15A061  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A156  | 2       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 19A020  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 20A0150 | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 15A020  | 2       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 16A085  | 2       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 16A099  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A101  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A113  | 1       |
| ICHTHYOL-GESELLSCHAFT /... | Unguentum Cordes® | 18A216  | 1       |
| ICHTHYOL-GESELLSCHAFT /... | Unguentum Cordes® | 18A112  | 1       |
| ICHTHYOL-GESELLSCHAFT /... | Unguentum Cordes® | 19A004  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A005  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A112  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 19A008  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 15A023  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 15A124  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 17A004  | 2       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A111  | 1       |
| Ichthyol-Gesellschaft /... | Unguentum Cordes® | 18A113  | 1       |
| IchthyolGesellschaft Co... | Unguentum Cordes® | 12A152  | 1       |
| IchthyolGesellschaft Co... | Unguentum Cordes® | 12A183  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 12A115  | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 12A184  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 12A183  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 13A171  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A004  | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A061  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A123  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A124  | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A083  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A099  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A143  | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A102  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A155  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A210  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A101  | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A005  | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A104  | 1       |

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| Supplier                   | Substance                     | Batch               | Spectra |
|----------------------------|-------------------------------|---------------------|---------|
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A113              | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A007              | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A045              | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A048              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A127              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A067              | 4       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A084              | 4       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A051              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A087              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A107              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A085              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A110              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A132              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A112              | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A232              | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A004              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A190              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A113              | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A156              | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A128              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A223              | 6       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A224              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 20A002              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19AD154             | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 20A0049             | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 20A0084             | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 20A0149             | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 20A0090             | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 15A073              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 19A0154             | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A0181             | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 16A061              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A112              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A156              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A008              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A0153             | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 15A108              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A173              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A121              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A124              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A143              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A085              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A147              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A105              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A215              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A166              | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A003              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 18A110              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 19A112              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 13A089              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 15A123              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 15A124              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A083              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A004              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A101              | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A084-U20181115Ma4 | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 12A184              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 16A111              | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes <sup>®</sup> | 18A113              | 1       |
| ichthyol-Gesellschaft C... | Unguentum Cordes <sup>®</sup> | 17A004              | 1       |

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| Supplier                   | Substance         | Batch     | Spectra |
|----------------------------|-------------------|-----------|---------|
| ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A045    | 1       |
| ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A110    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A085    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 13A138    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 13A180    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 14A063    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A043    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A047    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A046    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 19A0154   | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 19A0153   | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A216    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A045    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A005    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A110    | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A156    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A202    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 19A0153   | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A112    | 3       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A112    | 1       |
| ICHTHYOL-Gesellschaft C... | Unguentum Cordes® | 17A045    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 11A187    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 12A185    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A176    | 2       |
| ICHTHYOL-Gesellschaft C... | Unguentum Cordes® | 18A110    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 17A004    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 18A110    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 18A112    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 18A113    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 18A224    | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 19A054    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A062    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A023    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A099    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A007    | 2       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A085    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A087    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 18A113    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 190560306 | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 16A083    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 17A003    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 15A140    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 19A008    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 20A0028   | 1       |
| ICHTHYOL-GESELLSCHAFT C... | Unguentum Cordes® | 15A060    | 1       |
| Ichthyol-Gesellschaft C... | Unguentum Cordes® | 13A172    | 1       |
| Ichthyolgesellschaft Gehe  | Unguentum Cordes® | 17A005    | 1       |
| Ichthyolgesellschaft I ... | Unguentum Cordes® | 19A0149   | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 11A122    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 11A162    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 13A034    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 13A050    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 15A191    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 16A123    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 16A160    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 17A057    | 1       |
| Ichthyol-Gesellschaft, ... | Unguentum Cordes® | 18A050    | 1       |
| Ichthyolgesellschaft/ A... | Unguentum Cordes® | 20A0089   | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes® | 17A049    | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes® | 17A067    | 1       |

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| Supplier                   | Substance                     | Batch   | Spectra |
|----------------------------|-------------------------------|---------|---------|
| Ichthyol-gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 10A216  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 14A005  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A013  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 18A130  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 20A0028 | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A004  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 20A0152 | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A143  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 17A106  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A061  | 2       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 18A131  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A044  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 16A141  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 17A056  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A006  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A003  | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A0182 | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A0184 | 1       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 19A111  | 2       |
| Ichthyol-Gesellschaft/ ... | Unguentum Cordes <sup>®</sup> | 20A0111 | 1       |
| Ichthyol-Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 17A112  | 1       |
| Ichthyol-Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 17A056  | 1       |
| Ichthyol-Gesellschaft/AHD  | Unguentum Cordes <sup>®</sup> | 17A142  | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 15A139  | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 17A049  | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 19A020  | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 19A0262 | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 20A0045 | 1       |
| Ichthyol-Gesellschaft/A... | Unguentum Cordes <sup>®</sup> | 18A113  | 1       |
| IchthyolGesellschaft/Gehe  | Unguentum Cordes <sup>®</sup> | 19A0149 | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 15A020  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 15A073  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 15A125  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 16A085  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A053  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A007  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A051  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A216  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A110  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 19A0149 | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 19A0257 | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 16A083  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 16A183  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 16A184  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A003  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A005  | 2       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A087  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A112  | 3       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 17A142  | 1       |
| Ichthyol-Gesellschaft/G... | Unguentum Cordes <sup>®</sup> | 18A223  | 1       |
| Ichthyolgesellschaft/Je... | Unguentum Cordes <sup>®</sup> | 20A0150 | 1       |
| Ichthyol-Gesellschaft/K... | Unguentum Cordes <sup>®</sup> | 16A101  | 1       |
| Ichthyol-Gesellschaft/K... | Unguentum Cordes <sup>®</sup> | 16A184  | 1       |
| Ichthyol-gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 19A111  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 17A051  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 17A106  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 17A105  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 18A049  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 18A051  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes <sup>®</sup> | 18A248  | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Ichthyol-Gesellschaft/N... | Unguentum Cordes® | 19A004  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes® | 18A244  | 1       |
| Ichthyol-Gesellschaft/N... | Unguentum Cordes® | 20A0028 | 2       |
| Ichthyolgesellschaft/PH    | Unguentum Cordes® | 19A112  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 13A053  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 14A114  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 16A083  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 16A210  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 16A013  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 17A105  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 17A007  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A048  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A050  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A051  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A070  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 19A004  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 19A0181 | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 19A111  | 2       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 20A0084 | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 20A0098 | 2       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 20A0049 | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 16A173  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 16A140  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 14A095  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 14A179  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 15A124  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 16A183  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 16A184  | 2       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 17A049  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 17A004  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A051  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 17A084  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 19A0149 | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 19A0257 | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 18A156  | 1       |
| Ichthyol-Gesellschaft/P... | Unguentum Cordes® | 20A0151 | 2       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 17A126  | 1       |
| ICHTHYOL-Gesellschaft/P... | Unguentum Cordes® | 18A110  | 1       |
| ICHTHYOL-Gesellschaft/P... | Unguentum Cordes® | 18A113  | 1       |
| ICHTHYOL-Gesellschaft/P... | Unguentum Cordes® | 18A224  | 1       |
| ICHTHYOL-Gesellschaft/P... | Unguentum Cordes® | 19A0154 | 2       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 15A148  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 16A121  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 16A144  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 16A210  | 2       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 18A048  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 18A130  | 1       |
| ICHTHYOL-GESELLSCHAFT/P... | Unguentum Cordes® | 18A166  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 16A153  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A069  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 18A048  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A101  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A007  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 10A131  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 18A190  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 19A004  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A164  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A101  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 17A106  | 1       |
| Ichthyol-Gesellschaft/S... | Unguentum Cordes® | 19A020  | 1       |

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| Supplier                    | Substance         | Batch   | Spectra |
|-----------------------------|-------------------|---------|---------|
| Ichthyol-Gesellschaft/V...  | Unguentum Cordes® | 12A183  | 1       |
| ichthyol-GesellschaftCo...  | Unguentum Cordes® | 18A113  | 1       |
| ichthyol-GesellschaftCo...  | Unguentum Cordes® | 18A223  | 1       |
| Ichthyol-Gesellschaft/Eb... | Unguentum Cordes® | 17A084  | 1       |
| Ichthyol-Gesellschaft/AHD   | Unguentum Cordes® | 18A215  | 1       |
| Ichthyol-Gesellschaft/AHD   | Unguentum Cordes® | 18A112  | 1       |
| Ichthyol-Gesellschaft/AHD   | Unguentum Cordes® | 19A006  | 1       |
| Ichthyol-Gesellschaft/AHD   | Unguentum Cordes® | 19A112  | 1       |
| Ichthyol-Gesellschaft/AHD   | Unguentum Cordes® | 19A0256 | 1       |
| Ichthyol-Gesellschaft/Ph... | Unguentum Cordes® | 18A147  | 1       |
| Ichthyol-Gesellschaft/GEHE  | Unguentum Cordes® | 17A007  | 1       |
| Ichthyol-Gesellschaft/Ph... | Unguentum Cordes® | 18A110  | 1       |
| Ichthyol-Noweda             | Unguentum Cordes® | 17A105  | 1       |
| IchthyolSanacorp            | Unguentum Cordes® | 13A025  | 1       |
| IchthyolSanacorp            | Unguentum Cordes® | 13A110  | 1       |
| IchthyolSanacorp            | Unguentum Cordes® | 15A076  | 1       |
| Ichtiol Gesellschaft/Ph...  | Unguentum Cordes® | 16A083  | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 19A0181 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 19A0184 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 19A0256 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 19A111  | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 20A0002 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 20A0049 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 20A0149 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 20A0105 | 1       |
| Ichtiol Gesellschaft/All... | Unguentum Cordes® | 20A0211 | 1       |
| Ichtiol-Gesellschaft,Cor... | Unguentum Cordes® | 16A144  | 1       |
| Ichtiol-Gesellschaft,Cor... | Unguentum Cordes® | 17A126  | 1       |
| Ichtiol-Gesellschaft        | Unguentum Cordes® | 18A111  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 17A126  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 17A127  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 18A048  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 18A070  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 18A107  | 1       |
| ichtxol-Gesellschaft/ G...  | Unguentum Cordes® | 18A191  | 2       |
| Ichtyhol                    | Unguentum Cordes® | 16A137  | 1       |
| Ichtyhol Gesellschaft       | Unguentum Cordes® | 16a045  | 1       |
| Ichtyhol Gesellschaft       | Unguentum Cordes® | 16A140  | 1       |
| Ichtyhol Gesellschaft       | Unguentum Cordes® | 16A142  | 1       |
| Ichtyhol Gesellschaft       | Unguentum Cordes® | 16A183  | 1       |
| Ichtyhol Gesellschaft//...  | Unguentum Cordes® | 17A052  | 1       |
| ichthyol gmbh/Alliance ...  | Unguentum Cordes® | 16A183  | 1       |
| ICHTYHOL/ Fiebig            | Unguentum Cordes® | 17A098  | 1       |
| ICHTYHOL/ Fiebig            | Unguentum Cordes® | 18A050  | 1       |
| ICHTYHOL/ Fiebig            | Unguentum Cordes® | 18A166  | 2       |
| Ichtyhol/AHD                | Unguentum Cordes® | 18A111  | 1       |
| Ichtyhol/Phönix             | Unguentum Cordes® | 18A224  | 1       |
| ichtyol                     | Unguentum Cordes® | 13A029  | 1       |
| ichtyol                     | Unguentum Cordes® | 13A106  | 1       |
| ichtyol                     | Unguentum Cordes® | 15a195  | 1       |
| ichtyol                     | Unguentum Cordes® | 15A156  | 1       |
| ichtyol                     | Unguentum Cordes® | 16A058  | 1       |
| ichtyol                     | Unguentum Cordes® | 16A122  | 1       |
| ichtyol                     | Unguentum Cordes® | 16A137  | 1       |
| ichtyol                     | Unguentum Cordes® | 16A210  | 1       |
| ichtyol                     | Unguentum Cordes® | 17A069  | 1       |
| ichtyol                     | Unguentum Cordes® | 18A130  | 1       |
| Ichtyol                     | Unguentum Cordes® | 12A157  | 1       |
| Ichtyol                     | Unguentum Cordes® | 13A067  | 1       |
| Ichtyol                     | Unguentum Cordes® | 11A038  | 1       |

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| Supplier                     | Substance         | Batch           | Spectra |
|------------------------------|-------------------|-----------------|---------|
| Ichtyol                      | Unguentum Cordes® | 12A106          | 1       |
| Ichtyol                      | Unguentum Cordes® | 13A054          | 1       |
| Ichtyol                      | Unguentum Cordes® | 13A137          | 1       |
| Ichtyol                      | Unguentum Cordes® | 13A111          | 1       |
| Ichtyol                      | Unguentum Cordes® | 15A040          | 1       |
| Ichtyol                      | Unguentum Cordes® | 15A042          | 1       |
| Ichtyol                      | Unguentum Cordes® | 300316-250-1314 | 1       |
| Ichtyol                      | Unguentum Cordes® | 15A125          | 1       |
| Ichtyol                      | Unguentum Cordes® | 15A192          | 1       |
| Ichtyol                      | Unguentum Cordes® | 15A142          | 1       |
| Ichtyol                      | Unguentum Cordes® | 16A184          | 1       |
| Ichtyol                      | Unguentum Cordes® | 16A181          | 1       |
| Ichtyol                      | Unguentum Cordes® | 17A003          | 1       |
| Ichtyol                      | Unguentum Cordes® | 17A007          | 1       |
| Ichtyol                      | Unguentum Cordes® | 19A020          | 1       |
| Ichtyol                      | Unguentum Cordes® | 18A223          | 1       |
| Ichtyol                      | Unguentum Cordes® | 19A0256         | 2       |
| Ichtyol                      | Unguentum Cordes® | 19A0154         | 1       |
| Ichtyol                      | Unguentum Cordes® | 19A0153         | 1       |
| Spangropharm                 | Unguentum Cordes® | 13A042          | 1       |
| Ichtyol - Gehe               | Unguentum Cordes® | 14A1115         | 1       |
| Ichtyol - Gesellschaft       | Unguentum Cordes® | 15A108          | 1       |
| Ichtyol / Alliance Heal. ... | Unguentum Cordes® | 17A098          | 1       |
| Ichtyol / Alliance Heal. ... | Unguentum Cordes® | 17A104          | 1       |
| Ichtyol / Gehe               | Unguentum Cordes® | 17A045          | 1       |
| Ichtyol / Gehe               | Unguentum Cordes® | 18A156          | 1       |
| Ichtyol / Noweda             | Unguentum Cordes® | 17A084          | 1       |
| Ichtyol 004                  | Unguentum Cordes® | 12A059          | 1       |
| Ichtyol Gesells./AHD         | Unguentum Cordes® | 17A005          | 1       |
| ichtyol gesellschaft         | Unguentum Cordes® | 18A156          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 15A027          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 15A060          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 16A099          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 17A002          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 17A007          | 1       |
| Ichtyol Gesellschaft         | Unguentum Cordes® | 17A084          | 1       |
| Ichtyol- Gesellschaft        | Unguentum Cordes® | 17A084          | 1       |
| Ichtyol- Gesellschaft        | Unguentum Cordes® | 18A101          | 2       |
| ICHTYOL GESELLSCHAFT         | Unguentum Cordes® | 19A005          | 1       |
| ICHTYOL GESELLSCHAFT         | Unguentum Cordes® | 19A128          | 1       |
| ICHTYOL GESELLSCHAFT         | Unguentum Cordes® | 19A0256         | 1       |
| Ichtyol Gesellschaft Co. ... | Unguentum Cordes® | 16A085          | 1       |
| Ichtyol Gesellschaft Co. ... | Unguentum Cordes® | 16A1010         | 1       |
| Ichtyol Gesellschaft Co. ... | Unguentum Cordes® | 17A084          | 2       |
| Ichtyol- Gesellschaft C. ... | Unguentum Cordes® | 18A111          | 1       |
| Ichtyol gesellschaft GmbH    | Unguentum Cordes® | 16A085          | 1       |
| Ichtyol Gesellschaft/ N. ... | Unguentum Cordes® | 18A048          | 1       |
| Ichtyol Gesellschaft/Gehe    | Unguentum Cordes® | 20A0131         | 3       |
| Ichtyol Gesellschaft/Gehe    | Unguentum Cordes® | 20A0211         | 1       |
| Ichtyol Gesllschaft          | Unguentum Cordes® | 16A048          | 1       |
| Ichtyol Gesllschaft          | Unguentum Cordes® | 17A098          | 1       |
| Ichtyol, Noweda              | Unguentum Cordes® | 12A147          | 1       |
| Ichtyol,Noweda               | Unguentum Cordes® | 12A139          | 1       |
| Ichtyol,Noweda               | Unguentum Cordes® | 13A047          | 1       |
| Ichtyol/ Anzag               | Unguentum Cordes® | 19A0154         | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes® | 18A107          | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes® | 18A131          | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes® | 18A248          | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes® | 19A006          | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes® | 19A0183         | 1       |

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| Supplier                     | Substance                     | Batch       | Spectra |
|------------------------------|-------------------------------|-------------|---------|
| Ichtyol/ Gehe                | Unguentum Cordes <sup>®</sup> | 19A111      | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes <sup>®</sup> | 19A0262     | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes <sup>®</sup> | 20A0034     | 1       |
| Ichtyol/ Gehe                | Unguentum Cordes <sup>®</sup> | 20A0035     | 1       |
| Ichtyol/ Noweda              | Unguentum Cordes <sup>®</sup> | 15A141      | 1       |
| Ichtyol/ Noweda              | Unguentum Cordes <sup>®</sup> | 17A101      | 1       |
| Ichtyol/ Noweda              | Unguentum Cordes <sup>®</sup> | 18A070      | 1       |
| Ichtyol/ Noweda              | Unguentum Cordes <sup>®</sup> | 19A001      | 1       |
| Ichtyol/ Phönix              | Unguentum Cordes <sup>®</sup> | 13A135      | 1       |
| Ichtyol//Krieger             | Unguentum Cordes <sup>®</sup> | 19A0181     | 1       |
| Ichtyol/AHD                  | Unguentum Cordes <sup>®</sup> | 16A184      | 1       |
| Ichtyol/AHD                  | Unguentum Cordes <sup>®</sup> | 18A130      | 1       |
| Ichtyol/AHD                  | Unguentum Cordes <sup>®</sup> | 19A0149     | 1       |
| Ichtyol/AHD                  | Unguentum Cordes <sup>®</sup> | 19A0153     | 1       |
| Ichtyol/AHD                  | Unguentum Cordes <sup>®</sup> | 20A0002     | 1       |
| Ichtyol/Anzag                | Unguentum Cordes <sup>®</sup> | 15A074      | 1       |
| Ichtyol/Anzag                | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 15A78       | 1       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 15A150      | 2       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 13A184      | 1       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 18A003      | 1       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 17A087      | 1       |
| Ichtyol/Gehe                 | Unguentum Cordes <sup>®</sup> | 17A142      | 1       |
| Ichtyol/Kehr                 | Unguentum Cordes <sup>®</sup> | 16A101      | 1       |
| Ichtyol/Krieger              | Unguentum Cordes <sup>®</sup> | 18A070      | 1       |
| Ichtyol/Krieger              | Unguentum Cordes <sup>®</sup> | 18A166      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 13A042      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 13A053      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 15A124      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 16A119      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 16A099      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 16A176      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 17A049      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 17A004      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 17A005      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 17A007      | 1       |
| Ichtyol/Noweda               | Unguentum Cordes <sup>®</sup> | 19A0181     | 1       |
| Ichtyol/Noweda 31.01.2017    | Unguentum Cordes <sup>®</sup> | 16A140      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 15A137      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 17A007      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 17A105      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 17A045      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 18A190      | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 19A0181     | 1       |
| Ichtyol/Phoenix              | Unguentum Cordes <sup>®</sup> | 20A0149     | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 4113Q-02532 | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 15A029      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 15A140      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 16A048      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 17A084      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 18A191      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 18A111      | 1       |
| Ichtyol/Phönix               | Unguentum Cordes <sup>®</sup> | 18A113      | 1       |
| Ichtyol/sana EK: EUR 13,5... | Unguentum Cordes <sup>®</sup> | 18A110      | 1       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 14A097      | 1       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 17A007      | 1       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 19A001      | 1       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 18A111      | 2       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 18A112      | 1       |
| Ichtyol/Sanacorp             | Unguentum Cordes <sup>®</sup> | 18A223      | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Ichtyolan/Noweda           | Unguentum Cordes® | 16A139  | 1       |
| Ichtyol-Ges HH/Kehr        | Unguentum Cordes® | 17A007  | 1       |
| Ichtyol-Ges HH/Sanacorp    | Unguentum Cordes® | 17A142  | 1       |
| ICHTYOL-Gesellsch./Sana... | Unguentum Cordes® | 17A004  | 1       |
| ichtyol-gesellschaft       | Unguentum Cordes® | 15A191  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 12A184  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 13A053  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 13A178  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 14A079  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A020  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A043  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A061  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A137  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A107  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 15A191  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 16A051  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 16A099  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 16A153  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 17A055  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 17A049  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 17A101  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 17A126  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 18A049  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 18A215  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 17A005  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 18A132  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 18A131  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 19A001  | 1       |
| Ichtyol-Gesellschaft       | Unguentum Cordes® | 19A020  | 1       |
| Ichtyol-Gesellschaft / G   | Unguentum Cordes® | 18A112  | 1       |
| Ichtyol-Gesellschaft / Ph  | Unguentum Cordes® | 17A105  | 1       |
| Ichtyol-Gesellschaft / Ph  | Unguentum Cordes® | 18A110  | 1       |
| Ichtyol-Gesellschaft / Ph  | Unguentum Cordes® | 18A166  | 1       |
| Ichtyol-Gesellschaft / ... | Unguentum Cordes® | 17A112  | 2       |
| Ichtyol-Gesellschaft / ... | Unguentum Cordes® | 17A126  | 1       |
| Ichtyol-Gesellschaft / ... | Unguentum Cordes® | 18A191  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 16A101  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 16A184  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 16A183  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 17A002  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 17A085  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 18A110  | 2       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 18A112  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 18A111  | 4       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 18A223  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 18A113  | 1       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 19A0153 | 2       |
| Ichtyolgesellschaft Cor... | Unguentum Cordes® | 20A0049 | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 16A085  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 18A223  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 19A0154 | 1       |
| ICHTYOL-GESELLSCHAFT Co... | Unguentum Cordes® | 16A085  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 17A005  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 17A045  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 18A050  | 2       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 18A190  | 1       |
| Ichtyol-Gesellschaft Co... | Unguentum Cordes® | 19A003  | 1       |
| Ichtyol-Gesellschaft, C... | Unguentum Cordes® | 18A113  | 1       |
| Ichtyol-Gesellschaft/ P... | Unguentum Cordes® | 17A112  | 1       |
| Ichtyol-Gesellschaft/Ph... | Unguentum Cordes® | 12A058  | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Ichtyol-Gesellschaft/Ph... | Unguentum Cordes® | 14A095  | 1       |
| Ichtyol-Gesellschaft/Ph... | Unguentum Cordes® | 18A193  | 1       |
| Ichtyol-Gesellschaft/Sa... | Unguentum Cordes® | 18A244  | 1       |
| Ichtyol-Gesellschaft/Sa... | Unguentum Cordes® | 20A0111 | 1       |
| Ichtyol-Gruppe             | Unguentum Cordes® | 15A155  | 1       |
| InfectoPharm               | Unguentum Cordes® | 16A085  | 1       |
| Jenne                      | Unguentum Cordes® | 13A049  | 1       |
| Jenne                      | Unguentum Cordes® | 16A183  | 1       |
| Caelo                      | Unguentum Cordes® | 18A110  | 5       |
| Kehr                       | Unguentum Cordes® | 17A002  | 1       |
| Kehr                       | Unguentum Cordes® | 17A003  | 1       |
| Kehr                       | Unguentum Cordes® | 17A004  | 1       |
| Kehr                       | Unguentum Cordes® | 17A007  | 1       |
| Kehr / Ichthyol-Geselsc... | Unguentum Cordes® | 17A126  | 1       |
| Kehr,11.3.19               | Unguentum Cordes® | 18A105  | 1       |
| Kehr/Ichthyol              | Unguentum Cordes® | 17A005  | 1       |
| Kehr/Ichthyol              | Unguentum Cordes® | 17A087  | 1       |
| Kehr/Ichthyol              | Unguentum Cordes® | 17A142  | 1       |
| Kehr/ICHTHYOL-GESELLSCH... | Unguentum Cordes® | 17A067  | 1       |
| Kehr/ICHTHYOL-GESELLSCH... | Unguentum Cordes® | 17A084  | 2       |
| Kehr/ICHTHYOL-GESELLSCH... | Unguentum Cordes® | 17A085  | 3       |
| Kehr/ICHTHYOL-GESELLSCH... | Unguentum Cordes® | 18A105  | 1       |
| krieger                    | Unguentum Cordes® | 19A001  | 1       |
| krieger                    | Unguentum Cordes® | 19A0181 | 1       |
| Krieger                    | Unguentum Cordes® | 18A004  | 1       |
| Krieger                    | Unguentum Cordes® | 18A111  | 1       |
| Krieger/ Ichthyol          | Unguentum Cordes® | 16A153  | 1       |
| Krieger/ Ichthyol          | Unguentum Cordes® | 18A050  | 1       |
| Caelo                      | Unguentum Cordes® | 16A184  | 8       |
| L10                        | Unguentum Cordes® | 17A087  | 2       |
| L10/Cordes                 | Unguentum Cordes® | 18A112  | 1       |
| L12                        | Unguentum Cordes® | 16A101  | 1       |
| L12                        | Unguentum Cordes® | 17A002  | 1       |
| L12                        | Unguentum Cordes® | 17A004  | 3       |
| L12                        | Unguentum Cordes® | 17A045  | 2       |
| L12/Ichthyol               | Unguentum Cordes® | 16A085  | 2       |
| L12/Ichthyol- Gesellsch... | Unguentum Cordes® | 17A067  | 1       |
| Nachprüfung                | Unguentum Cordes® | 12a124  | 1       |
| noweda                     | Unguentum Cordes® | 19A0256 | 1       |
| Noweda                     | Unguentum Cordes® | 11a199  | 1       |
| Noweda                     | Unguentum Cordes® | 12A123  | 1       |
| Noweda                     | Unguentum Cordes® | 12A184  | 1       |
| Noweda                     | Unguentum Cordes® | 12A183  | 2       |
| Noweda                     | Unguentum Cordes® | 13A091  | 1       |
| Noweda                     | Unguentum Cordes® | 15A029  | 1       |
| Noweda                     | Unguentum Cordes® | 15A062  | 1       |
| Noweda                     | Unguentum Cordes® | 15A123  | 1       |
| Noweda                     | Unguentum Cordes® | 15A060  | 1       |
| Noweda                     | Unguentum Cordes® | 15A191  | 1       |
| Noweda                     | Unguentum Cordes® | 15A192  | 1       |
| Noweda                     | Unguentum Cordes® | 16A023  | 1       |
| Noweda                     | Unguentum Cordes® | 16A022  | 1       |
| Noweda                     | Unguentum Cordes® | 16A101  | 1       |
| Noweda                     | Unguentum Cordes® | 16A085  | 1       |
| Noweda                     | Unguentum Cordes® | 16A153  | 1       |
| Noweda                     | Unguentum Cordes® | 17A018  | 1       |
| Noweda                     | Unguentum Cordes® | 17A004  | 1       |
| Noweda                     | Unguentum Cordes® | 17A101  | 1       |
| Noweda                     | Unguentum Cordes® | 17A005  | 1       |
| Noweda                     | Unguentum Cordes® | 17A098  | 1       |

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| Supplier                    | Substance         | Batch   | Spectra |
|-----------------------------|-------------------|---------|---------|
| Noweda                      | Unguentum Cordes® | 17A104  | 2       |
| Noweda                      | Unguentum Cordes® | 16A047  | 1       |
| Noweda                      | Unguentum Cordes® | 17A007  | 2       |
| Noweda                      | Unguentum Cordes® | 17A045  | 1       |
| Noweda                      | Unguentum Cordes® | 17A067  | 3       |
| Noweda                      | Unguentum Cordes® | 17A126  | 1       |
| Noweda                      | Unguentum Cordes® | 18A006  | 1       |
| Noweda                      | Unguentum Cordes® | 17A085  | 2       |
| Noweda                      | Unguentum Cordes® | 17A084  | 1       |
| Noweda                      | Unguentum Cordes® | 18A073  | 1       |
| Noweda                      | Unguentum Cordes® | 18A215  | 1       |
| Noweda                      | Unguentum Cordes® | 18A087  | 1       |
| Noweda                      | Unguentum Cordes® | 18A110  | 1       |
| Noweda                      | Unguentum Cordes® | 18A131  | 1       |
| Noweda                      | Unguentum Cordes® | 18A084  | 1       |
| Noweda                      | Unguentum Cordes® | 18A112  | 2       |
| Noweda                      | Unguentum Cordes® | 18A166  | 1       |
| Noweda                      | Unguentum Cordes® | 19A004  | 1       |
| Noweda                      | Unguentum Cordes® | 18A256  | 1       |
| Noweda                      | Unguentum Cordes® | 19A020  | 1       |
| Noweda                      | Unguentum Cordes® | 18A113  | 1       |
| Noweda                      | Unguentum Cordes® | 19A0181 | 1       |
| Noweda                      | Unguentum Cordes® | 19A0182 | 1       |
| Noweda                      | Unguentum Cordes® | 18A258  | 1       |
| Noweda                      | Unguentum Cordes® | 18A156  | 1       |
| Noweda                      | Unguentum Cordes® | 18A070  | 1       |
| Noweda                      | Unguentum Cordes® | 20A0060 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0034 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0045 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0049 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0131 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0095 | 1       |
| Noweda                      | Unguentum Cordes® | 20A0097 | 1       |
| Noweda / Ichthyol           | Unguentum Cordes® | 16A101  | 1       |
| Noweda / Ichthyol           | Unguentum Cordes® | 16A102  | 1       |
| Noweda / Ichthyol Gesell... | Unguentum Cordes® | 15A060  | 1       |
| Noweda / Ichthyol-Gesell... | Unguentum Cordes® | 17A004  | 1       |
| Noweda / Ichthyol-Gesell... | Unguentum Cordes® | 17A007  | 1       |
| noweda ichthyol 07.02.18    | Unguentum Cordes® | 17A005  | 1       |
| Caelo                       | Unguentum Cordes® | 18A107  | 1       |
| Fagron                      | Unguentum Cordes® | 18A147  | 1       |
| Noweda/ Ichthyol-Gesell...  | Unguentum Cordes® | 18A252  | 1       |
| Noweda/ Ichthyol            | Unguentum Cordes® | 12A124  | 1       |
| Noweda/ Ichthyol Gesells... | Unguentum Cordes® | 18A051  | 1       |
| Noweda/ Ichthyol Gesells... | Unguentum Cordes® | 18A216  | 1       |
| Caelo                       | Unguentum Cordes® | 15A156  | 1       |
| Noweda/Cordes               | Unguentum Cordes® | 18A252  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A067  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A105  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A084  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A131  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A192  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A243  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A248  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 18A252  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 19A021  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 19A020  | 1       |
| noweda/Ichthyol             | Unguentum Cordes® | 19A026  | 2       |
| Noweda/Ichthyol             | Unguentum Cordes® | 13A106  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 14A113  | 1       |

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| Supplier                    | Substance         | Batch   | Spectra |
|-----------------------------|-------------------|---------|---------|
| Noweda/Ichthyol             | Unguentum Cordes® | 15A020  | 2       |
| Noweda/Ichthyol             | Unguentum Cordes® | 14A173  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 15A125  | 3       |
| Noweda/Ichthyol             | Unguentum Cordes® | 15A191  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 15A123  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 16A099  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 16A102  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 17A003  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 17A127  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 18A190  | 1       |
| Noweda/Ichthyol             | Unguentum Cordes® | 18A156  | 2       |
| Noweda/Ichthyol             | Unguentum Cordes® | 19A0257 | 2       |
| Noweda/Ichthyol             | Unguentum Cordes® | 20A0051 | 1       |
| Noweda/Ichthyol -Gesell...  | Unguentum Cordes® | 17A085  | 1       |
| Noweda/Ichthyol-Gesells...  | Unguentum Cordes® | 15A123  | 1       |
| Noweda/Ichthyol-Gesells...  | Unguentum Cordes® | 20A0034 | 1       |
| Noweda/Ichthyol-Geselsc...  | Unguentum Cordes® | 18A248  | 1       |
| Noweda/Ichthyol-Geselsc...  | Unguentum Cordes® | 19A0182 | 1       |
| Noweda/Ichthyol-Geselsc...  | Unguentum Cordes® | 19A0257 | 1       |
| noweda/Ichtyol              | Unguentum Cordes® | 13A043  | 1       |
| Noweda/Ichtyol              | Unguentum Cordes® | 16A047  | 1       |
| Noweda/Ichtyol              | Unguentum Cordes® | 16A124  | 1       |
| Noweda/Ichtyol              | Unguentum Cordes® | 16A184  | 1       |
| Noweda/Ichtyol              | Unguentum Cordes® | 17A127  | 1       |
| Caelo                       | Unguentum Cordes® | 18A131  | 2       |
| Noweda-Ichthyol             | Unguentum Cordes® | 17A054  | 1       |
| Occasio/ Ichthyol           | Unguentum Cordes® | 18A105  | 1       |
| Phoenix                     | Unguentum Cordes® | 12A056  | 1       |
| Phoenix                     | Unguentum Cordes® | 12A087  | 1       |
| Phoenix                     | Unguentum Cordes® | 15A027  | 1       |
| Phoenix                     | Unguentum Cordes® | 15ao93  | 1       |
| Phoenix                     | Unguentum Cordes® | 15A149  | 1       |
| Phoenix                     | Unguentum Cordes® | 16A046  | 1       |
| Phoenix                     | Unguentum Cordes® | 16A045  | 1       |
| Phoenix                     | Unguentum Cordes® | 16A121  | 1       |
| Phoenix                     | Unguentum Cordes® | 16A102  | 1       |
| Phoenix                     | Unguentum Cordes® | 16A153  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A218  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A005  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A104  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A112  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A113  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A045  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A084  | 1       |
| Phoenix                     | Unguentum Cordes® | 17A085  | 2       |
| Phoenix                     | Unguentum Cordes® | 19A001  | 1       |
| Phoenix                     | Unguentum Cordes® | 18A111  | 1       |
| Phoenix                     | Unguentum Cordes® | 18A113  | 1       |
| Phoenix                     | Unguentum Cordes® | 3422    | 1       |
| phoenix Ichthyol            | Unguentum Cordes® | 15A106  | 1       |
| phoenix / ichthyol          | Unguentum Cordes® | 15A108  | 1       |
| Phoenix 06.03.2017 13,14EUR | Unguentum Cordes® | 16A102  | 1       |
| Phoenix 07.11.2017          | Unguentum Cordes® | 17A003  | 1       |
| Phoenix 26.11.12            | Unguentum Cordes® | 12A185  | 1       |
| Phoenix 29.05.2018 13,...   | Unguentum Cordes® | 17A045  | 1       |
| Fagron                      | Unguentum Cordes® | 1744    | 1       |
| Phoenix/Cealo               | Unguentum Cordes® | 17A007  | 1       |
| Phoenix/Ichthyol            | Unguentum Cordes® | 13A055  | 1       |
| Phoenix/Ichthyol            | Unguentum Cordes® | 13A140  | 1       |
| Phoenix/Ichthyol            | Unguentum Cordes® | 17A055  | 1       |

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| Supplier                   | Substance         | Batch   | Spectra |
|----------------------------|-------------------|---------|---------|
| Phoenix/Ichthyol           | Unguentum Cordes® | 17A084  | 2       |
| Phoenix/Ichthyol           | Unguentum Cordes® | 18A223  | 1       |
| Phoenix/Ichthyol-Gesell... | Unguentum Cordes® | 17A055  | 1       |
| Phoenix/Ichthyol-Gesell... | Unguentum Cordes® | 18A130  | 2       |
| Phoenix/Ichthyol-Gesell... | Unguentum Cordes® | 20A0002 | 1       |
| PhoenixWE:7.02.2017 E...   | Unguentum Cordes® | 16A141  | 1       |
| phönix                     | Unguentum Cordes® | 13A051  | 1       |
| phönix                     | Unguentum Cordes® | 14A116  | 1       |
| Phönix                     | Unguentum Cordes® | 12A131  | 1       |
| Phönix                     | Unguentum Cordes® | 12A129  | 1       |
| Phönix                     | Unguentum Cordes® | 13A034  | 1       |
| Phönix                     | Unguentum Cordes® | 12A049  | 1       |
| Phönix                     | Unguentum Cordes® | 16A048  | 1       |
| Phönix                     | Unguentum Cordes® | 16A141  | 1       |
| Phönix                     | Unguentum Cordes® | 17A052  | 1       |
| Phönix                     | Unguentum Cordes® | 17A163  | 1       |
| Phönix                     | Unguentum Cordes® | 17A101  | 1       |
| Phönix                     | Unguentum Cordes® | 17A057  | 1       |
| Phönix                     | Unguentum Cordes® | 17A069  | 1       |
| Phönix                     | Unguentum Cordes® | 17A098  | 1       |
| Phönix                     | Unguentum Cordes® | 17A007  | 1       |
| Phönix                     | Unguentum Cordes® | 3147    | 1       |
| Phönix                     | Unguentum Cordes® | 3158    | 1       |
| Phönix                     | Unguentum Cordes® | 17A126  | 1       |
| Phönix                     | Unguentum Cordes® | 17A127  | 1       |
| Phönix                     | Unguentum Cordes® | 18A049  | 1       |
| Phönix                     | Unguentum Cordes® | 18A067  | 1       |
| Phönix                     | Unguentum Cordes® | 17A084  | 2       |
| Phönix                     | Unguentum Cordes® | 18A216  | 1       |
| Phönix                     | Unguentum Cordes® | 18A105  | 1       |
| Phönix                     | Unguentum Cordes® | 18A110  | 1       |
| Phönix                     | Unguentum Cordes® | 18A131  | 1       |
| Phönix                     | Unguentum Cordes® | 17A142  | 1       |
| Phönix                     | Unguentum Cordes® | 18A190  | 1       |
| Phönix                     | Unguentum Cordes® | 18A253  | 1       |
| Phönix                     | Unguentum Cordes® | 18a111  | 1       |
| Phönix                     | Unguentum Cordes® | 18A223  | 1       |
| Phönix                     | Unguentum Cordes® | 20A0093 | 1       |
| Phönix                     | Unguentum Cordes® | 20A0090 | 1       |
| PHÖNIX                     | Unguentum Cordes® | 16A124  | 1       |
| PHÖNIX                     | Unguentum Cordes® | 17A056  | 1       |
| PHÖNIX                     | Unguentum Cordes® | 17A098  | 1       |
| PHÖNIX                     | Unguentum Cordes® | 17A105  | 1       |
| Phönix / Ichthyol          | Unguentum Cordes® | 16A176  | 1       |
| Phönix Gotha               | Unguentum Cordes® | 13A032  | 1       |
| Phönix W.E:09.03.18 E...   | Unguentum Cordes® | 17A098  | 1       |
| Phönix/ Cordes             | Unguentum Cordes® | 19A128  | 1       |
| Phönix/Cordes              | Unguentum Cordes® | 17A104  | 1       |
| Phönix/Cordes              | Unguentum Cordes® | 18A215  | 3       |
| Fagron                     | Unguentum Cordes® | 14A079  | 1       |
| Fagron                     | Unguentum Cordes® | 15A020  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 12A139  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 15A123  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 17A052  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 17A069  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 17A005  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 17A113  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 18A050  | 1       |
| Phönix/Ichthyol            | Unguentum Cordes® | 17A084  | 1       |

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| Supplier                     | Substance                     | Batch    | Spectra |
|------------------------------|-------------------------------|----------|---------|
| Phönix/ICHTHYOL-Gesells. ... | Unguentum Cordes <sup>®</sup> | 18A111   | 1       |
| Phönix/ICHTHYOL-Gesells. ... | Unguentum Cordes <sup>®</sup> | 18A113   | 1       |
| sana/ Ichthyol               | Unguentum Cordes <sup>®</sup> | 20A0084  | 1       |
| Sanacop/Ichthyol             | Unguentum Cordes <sup>®</sup> | 17A007   | 1       |
| Sanacop/Ichthyol             | Unguentum Cordes <sup>®</sup> | 18A113   | 1       |
| sanacorb                     | Unguentum Cordes <sup>®</sup> | 17A007   | 1       |
| Sanacorb                     | Unguentum Cordes <sup>®</sup> | 18A112   | 1       |
| sanacorp                     | Unguentum Cordes <sup>®</sup> | 14A060   | 1       |
| sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A223   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 12A129   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 12A160   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 12a184   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 2/AKD2   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 13A042   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 13A068   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 13A136   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 103/AKD1 | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 13A159   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 15A043   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 14A172   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 15A060   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 15A137   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 16A048   | 2       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 16A085   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 15A191   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 16a184   | 2       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 17A069   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 17A045   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A001   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A007   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A087   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A110   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A112   | 3       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 19A003   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 19A006   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 19A182   | 3       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 19A026   | 1       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 20A0002  | 2       |
| Sanacorp                     | Unguentum Cordes <sup>®</sup> | 18A253   | 1       |
| SANACORP                     | Unguentum Cordes <sup>®</sup> | 18A190   | 1       |
| SANACORP                     | Unguentum Cordes <sup>®</sup> | 19A004   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 13A055   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 13A159   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 14A055   | 2       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 15A155   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 16A153   | 4       |
| Sanacorp / Ichthyol          | Unguentum Cordes <sup>®</sup> | 12A206   | 1       |
| Sanacorp / Ichthyol          | Unguentum Cordes <sup>®</sup> | 18A083   | 1       |
| Sanacorp 06.05.19 Ek: 5...   | Unguentum Cordes <sup>®</sup> | 18a101   | 1       |
| Sanacorp ichthyol 06.01...   | Unguentum Cordes <sup>®</sup> | 18a111   | 1       |
| Sanacorp, 15.08.2016, 3...   | Unguentum Cordes <sup>®</sup> | 16A048   | 1       |
| Sanacorp/ Ichthyol           | Unguentum Cordes <sup>®</sup> | 10A215   | 1       |
| Sanacorp/ Ichthyol           | Unguentum Cordes <sup>®</sup> | 18A215   | 1       |
| Sanacorp/ Ichthyol           | Unguentum Cordes <sup>®</sup> | 19A0181  | 1       |
| Sanacorp/ ICHTHYOL-Gese...   | Unguentum Cordes <sup>®</sup> | 17A106   | 1       |
| Sanacorp/ ICHTHYOL-Gese...   | Unguentum Cordes <sup>®</sup> | 17A113   | 1       |
| Sanacorp/ ICHTHYOL-Gese...   | Unguentum Cordes <sup>®</sup> | 18A049   | 1       |
| Sanacorp/ Sanova             | Unguentum Cordes <sup>®</sup> | 11A187   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 12A060   | 1       |
| Caelo                        | Unguentum Cordes <sup>®</sup> | 12A130   | 2       |

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| Supplier                   | Substance                 | Batch       | Spectra |
|----------------------------|---------------------------|-------------|---------|
| sanacorp/ichthyol          | Unguentum Cordes®         | 14A061      | 2       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 14A117      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 15A022      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 15A042      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 15A044      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 15A108      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 15A156      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 16A121      | 1       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 16A139      | 2       |
| sanacorp/ichthyol          | Unguentum Cordes®         | 16A142      | 1       |
| Sanacorp/Ichthyol          | Unguentum Cordes®         | 17A005      | 2       |
| Sanacorp/Ichthyol          | Unguentum Cordes®         | 17A007      | 1       |
| Sanacorp/Ichthyol          | Unguentum Cordes®         | 17A084      | 2       |
| Sanacorp/Ichthyol-Gesel... | Unguentum Cordes®         | 15A062      | 1       |
| Sanacorp/ICHTHYOL-Gesel... | Unguentum Cordes®         | 16A143      | 1       |
| Sanacorp/ICHTHYOL-Gesel... | Unguentum Cordes®         | 17A164      | 1       |
| Sanova                     | Unguentum Cordes®         | 11A040      | 1       |
| Sanova                     | Unguentum Cordes®         | 12A130      | 1       |
| Sanova                     | Unguentum Cordes®         | 17A002      | 1       |
| SANOVA                     | Unguentum Cordes®         | 15A044      | 1       |
| SANOVA                     | Unguentum Cordes®         | 16A045      | 1       |
| Sanova Pharma              | Unguentum Cordes®         | 13A166      | 1       |
| Sanova Pharma              | Unguentum Cordes®         | 17A142      | 1       |
| Sanova Pharma/Alliance...  | Unguentum Cordes®         | 20A0034     | 1       |
| Sanova Pharma/Gehe         | Unguentum Cordes®         | 16A102      | 2       |
| Bombastus                  | Unguentum Cordes®         | 13A042      | 1       |
| Spangropharm               | Unguentum Cordes®         | 13A171      | 1       |
| Stumpf/Ichthyol            | Unguentum Cordes®         | 12A115      | 1       |
| Stumpf/Ichthyol            | Unguentum Cordes®         | 12A190      | 1       |
| Stumpf/Ichthyol-Gesells... | Unguentum Cordes®         | 15A089      | 1       |
| Stumpf/Ichtyol             | Unguentum Cordes®         | 13A051      | 1       |
| Stumpf/Ichtyol             | Unguentum Cordes®         | 13A142      | 1       |
| Stumpf/Ichtyol             | Unguentum Cordes®         | 13A166      | 1       |
| Stumpf/Ichtyol             | Unguentum Cordes®         | 14A057      | 1       |
| Stumpf/Ichtyol             | Unguentum Cordes®         | 14A063      | 1       |
| Unguentum cordes           | Unguentum Cordes®         | 19A0153     | 1       |
| VDL                        | Unguentum Cordes®         | 15A140      | 1       |
| ychthyol                   | Unguentum Cordes®         | 16A184      | 1       |
| Ychtyol/Phönix             | Unguentum Cordes®         | 16A045      | 1       |
| Caelo                      | Wool alcohol ointment DAB | 468001      | 1       |
| Caelo                      | Wool alcohol ointment DAB | 3084001     | 1       |
| A.H. 05.06.13 ek: 3,33EUR  | Wool alcohol ointment DAB | 13067101    | 1       |
| Aallianc. Healthc. / Be... | Wool alcohol ointment DAB | 82541010    | 1       |
| AHD                        | Wool alcohol ointment DAB | 72915810    | 1       |
| AHD                        | Wool alcohol ointment DAB | 74017010    | 2       |
| AHD                        | Wool alcohol ointment DAB | 305879      | 1       |
| AHD                        | Wool alcohol ointment DAB | 81939510    | 1       |
| AHD                        | Wool alcohol ointment DAB | 84132310    | 1       |
| AHD                        | Wool alcohol ointment DAB | 18005545    | 1       |
| AHD 06.02.17 EK.9,28       | Wool alcohol ointment DAB | 16198401    | 1       |
| Caelo                      | Wool alcohol ointment DAB | 16066401    | 2       |
| Caelo                      | Wool alcohol ointment DAB | 20003085004 | 2       |
| Caelo                      | Wool alcohol ointment DAB | 19182301    | 9       |
| AHD, 05.04.2013            | Wool alcohol ointment DAB | 30831410    | 1       |
| Caelo                      | Wool alcohol ointment DAB | 18132603    | 29      |
| Caelo                      | Wool alcohol ointment DAB | 19007102    | 27      |
| ALH                        | Wool alcohol ointment DAB | 15407001    | 1       |
| Caelo                      | Wool alcohol ointment DAB | 20000381    | 1       |
| Allianc. Health. /Beier... | Wool alcohol ointment DAB | 62031710    | 1       |
| Alliance                   | Wool alcohol ointment DAB | 93456310    | 1       |

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| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| Alliance Health 30.10.2... | Wool alcohol ointment DAB | 14H19-T02-011354 | 1       |
| alliance healthcare        | Wool alcohol ointment DAB | 84222410         | 1       |
| Alliance Healthcare        | Wool alcohol ointment DAB | 13114001         | 1       |
| alliance Healthcare/Bei... | Wool alcohol ointment DAB | 30851510         | 1       |
| Alliance Healthcare/Bei... | Wool alcohol ointment DAB | 50454710         | 1       |
| Alliance Healthcare/Bei... | Wool alcohol ointment DAB | 84222410         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 11335101         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 22412510         | 2       |
| Anzag                      | Wool alcohol ointment DAB | 24254010         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 3312E-01370      | 1       |
| Anzag                      | Wool alcohol ointment DAB | 51015610         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 16007201         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 16198502         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 16331702         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 93456310         | 1       |
| Anzag                      | Wool alcohol ointment DAB | 19182301         | 2       |
| Anzag 25.02.2014 Ek 8...   | Wool alcohol ointment DAB | 13255001         | 1       |
| Anzag Ek: 3,24EUR 11.09.12 | Wool alcohol ointment DAB | 12076601         | 1       |
| Anzag/                     | Wool alcohol ointment DAB | 23223410         | 1       |
| Anzag/Beiersdorf           | Wool alcohol ointment DAB | 40930610         | 1       |
| Anzag/Beiersdorf           | Wool alcohol ointment DAB | 50815310         | 1       |
| Caelo                      | Wool alcohol ointment DAB | 12340001         | 4       |
| Apo Ident/ Noweda          | Wool alcohol ointment DAB | 83241810         | 1       |
| apomix                     | Wool alcohol ointment DAB | 1A180215         | 1       |
| Apomix                     | Wool alcohol ointment DAB | 1A170214         | 1       |
| Apomix                     | Wool alcohol ointment DAB | 285950           | 1       |
| athensteadt/Noweda         | Wool alcohol ointment DAB | 180041           | 1       |
| Baiersdorf                 | Wool alcohol ointment DAB | 4833010          | 1       |
| Baiersdorf                 | Wool alcohol ointment DAB | 82721410         | 1       |
| Baiersdorf                 | Wool alcohol ointment DAB | 83241810         | 1       |
| Baiersdorf AG              | Wool alcohol ointment DAB | 40726610         | 1       |
| Bambastus/Jenne            | Wool alcohol ointment DAB | 19003802         | 1       |
| Bären Apotheke             | Wool alcohol ointment DAB | 16198502         | 1       |
| Bayersdorf                 | Wool alcohol ointment DAB | 54137710         | 1       |
| Bayersdorf                 | Wool alcohol ointment DAB | 61149910         | 1       |
| BDF                        | Wool alcohol ointment DAB | 33343310         | 1       |
| BDF                        | Wool alcohol ointment DAB | 43142910         | 1       |
| BDF Beiersdorf AG          | Wool alcohol ointment DAB | 31322010         | 1       |
| BDF Phönix                 | Wool alcohol ointment DAB | 22422510         | 1       |
| BDF/ Noweda                | Wool alcohol ointment DAB | 33343310         | 1       |
| BDF/AHD                    | Wool alcohol ointment DAB | 70434110         | 1       |
| BDF/Anzag                  | Wool alcohol ointment DAB | 1710910          | 1       |
| bei                        | Wool alcohol ointment DAB | 73035910         | 1       |
| Beidersdorf/Kehr           | Wool alcohol ointment DAB | 72915810         | 1       |
| Beidersdorf/ Noweda        | Wool alcohol ointment DAB | 61841610         | 1       |
| Beieradorf                 | Wool alcohol ointment DAB | 53437010         | 1       |
| Beierdorf                  | Wool alcohol ointment DAB | 1710910          | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 60839310         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 34424610         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 40726610         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 50815310         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 64833610         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 71274810         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 74017010         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 83031710         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 83742110         | 1       |
| beiersdorf                 | Wool alcohol ointment DAB | 84132310         | 1       |
| Beiersdorf                 | Wool alcohol ointment DAB | 14939610         | 1       |
| Beiersdorf                 | Wool alcohol ointment DAB | 14349010         | 1       |
| Beiersdorf                 | Wool alcohol ointment DAB | 21241410         | 1       |

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| Supplier   | Substance                 | Batch      | Spectra |
|------------|---------------------------|------------|---------|
| Beiersdorf | Wool alcohol ointment DAB | 23223410   | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 23753710   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 20271211-3 | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 21431810   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 24233910   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 33111110   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 30831410   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 24113810   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 24635410   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 24655410   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 31322010   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 30851510   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 11235310   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 33323210   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 31231810   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 33343310   | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 33723610   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 30821610   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 31121710   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 31241810   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 11856010   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 34224110   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 14021301   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 34554710   | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 34414610   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 40956810   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 40726610   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 41026910   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 41047010   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 41839810   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 41940610   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 41910710   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 42541910   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 42531910   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 45054410   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 50414810   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 50955510   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 50845210   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 60919510   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 62922210   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 64342810   | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 50324610   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 50454710   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 50444710   | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 50855310   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 50925410   | 9       |
| Beiersdorf | Wool alcohol ointment DAB | 50815310   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 50935410   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 51946010   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 51015610   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 51125710   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 53437010   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 54127710   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 54147810   | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 54157810   | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 60419110   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 60539210   | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 6039210    | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 61079710   | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 62031710   | 2       |

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| Supplier   | Substance                 | Batch        | Spectra |
|------------|---------------------------|--------------|---------|
| Beiersdorf | Wool alcohol ointment DAB | 62041710     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 61149910     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 6922210      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 62932210     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 63052310     | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 64332810     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 64713510     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 16267201     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 64833610     | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 70314010     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 51115710     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 648336105291 | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 71114510     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 71274810     | 7       |
| Beiersdorf | Wool alcohol ointment DAB | 71124510     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 73035910     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 72915810     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 74017010     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 730035910    | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 74737410     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 74747510     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 740170010    | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 74727410     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 747577510    | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 74757510     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 81819410     | 6       |
| Beiersdorf | Wool alcohol ointment DAB | 81328810     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 81939510     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 82721410     | 4       |
| Beiersdorf | Wool alcohol ointment DAB | 82541010     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 82521010     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 83241810     | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 83031710     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 82350810     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 83742110     | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 83352010     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 84222410     | 6       |
| Beiersdorf | Wool alcohol ointment DAB | 84122310     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 84232410     | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 92125210     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 93436310     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 9212510      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 93246210     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 93556410     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 93456310     | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 91955110     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 94947710     | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 93917110     | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 93927110     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 829110       | 5       |
| Beiersdorf | Wool alcohol ointment DAB | 1710910      | 3       |
| Beiersdorf | Wool alcohol ointment DAB | 94957610     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 1821010      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 93330610     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 18121010     | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 2531310      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 1841110      | 2       |
| Beiersdorf | Wool alcohol ointment DAB | 1610810      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 2721410      | 1       |
| Beiersdorf | Wool alcohol ointment DAB | 4552510      | 1       |

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| Supplier                   | Substance                 | Batch    | Spectra |
|----------------------------|---------------------------|----------|---------|
| BEIERSDORF                 | Wool alcohol ointment DAB | 74017010 | 2       |
| BEIERSDORF                 | Wool alcohol ointment DAB | 74747510 | 1       |
| BEIERSDORF                 | Wool alcohol ointment DAB | 74757510 | 1       |
| Beiersdorf - Noweda        | Wool alcohol ointment DAB | 54157810 | 1       |
| Beiersdorf (DAB 2010)      | Wool alcohol ointment DAB | 13658410 | 1       |
| Beiersdorf (DAB 2010)      | Wool alcohol ointment DAB | 22412510 | 1       |
| Beiersdorf /               | Wool alcohol ointment DAB | 82521010 | 1       |
| Beiersdorf / AEP           | Wool alcohol ointment DAB | 81819410 | 1       |
| Beiersdorf / AHD           | Wool alcohol ointment DAB | 71214810 | 1       |
| beiersdorf / Alliance      | Wool alcohol ointment DAB | 93917110 | 2       |
| Beiersdorf / Alliance H... | Wool alcohol ointment DAB | 83031710 | 1       |
| Beiersdorf / E             | Wool alcohol ointment DAB | 41940610 | 1       |
| Beiersdorf / Fiebig        | Wool alcohol ointment DAB | 50815310 | 1       |
| Beiersdorf / G             | Wool alcohol ointment DAB | 71114510 | 1       |
| Beiersdorf / G             | Wool alcohol ointment DAB | 84232410 | 1       |
| Beiersdorf / Gehe          | Wool alcohol ointment DAB | 71114510 | 1       |
| Beiersdorf / Gehe          | Wool alcohol ointment DAB | 71274810 | 1       |
| Beiersdorf / Jenne         | Wool alcohol ointment DAB | 92125210 | 1       |
| Beiersdorf / K             | Wool alcohol ointment DAB | 22142410 | 1       |
| Beiersdorf / Kehr          | Wool alcohol ointment DAB | 61149910 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 24233910 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 33343310 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 34414610 | 2       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 414610   | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 41910710 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 50444710 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 50925410 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 50845210 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 51115710 | 2       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 54147810 | 2       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 54157810 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 74737410 | 2       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 74757510 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 80331710 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 84132310 | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 829110   | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 1710910  | 1       |
| Beiersdorf / Noweda        | Wool alcohol ointment DAB | 1841110  | 1       |
| Beiersdorf / Phoenix       | Wool alcohol ointment DAB | 50935410 | 1       |
| Beiersdorf / Phoenix       | Wool alcohol ointment DAB | 62031710 | 2       |
| Beiersdorf / Phoenix       | Wool alcohol ointment DAB | 71114510 | 1       |
| Beiersdorf / Phönix        | Wool alcohol ointment DAB | 74747510 | 1       |
| Beiersdorf / Phönix        | Wool alcohol ointment DAB | 83742110 | 1       |
| Beiersdorf / Sanacorp      | Wool alcohol ointment DAB | 53457110 | 1       |
| Beiersdorf / Sanacorp      | Wool alcohol ointment DAB | 94037210 | 1       |
| Beiersdorf /Alliance He... | Wool alcohol ointment DAB | 54127710 | 1       |
| Beiersdorf /Gehe           | Wool alcohol ointment DAB | 83241820 | 1       |
| Beiersdorf /Gehe           | Wool alcohol ointment DAB | 83241810 | 1       |
| Beiersdorf /Gehe           | Wool alcohol ointment DAB | 84232410 | 1       |
| Beiersdorf /Gehe           | Wool alcohol ointment DAB | 93556410 | 1       |
| Beiersdorf /Sanacorp       | Wool alcohol ointment DAB | 51025610 | 1       |
| Beiersdorf Ag              | Wool alcohol ointment DAB | 34554710 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 21111310 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 22532810 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 23223410 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 14549310 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 31231810 | 2       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 24254010 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 31251910 | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 30731210 | 3       |

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| Supplier                   | Substance                 | Batch              | Spectra |
|----------------------------|---------------------------|--------------------|---------|
| Beiersdorf AG              | Wool alcohol ointment DAB | 30721310           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 33323210           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 33343310           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 6022014A           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 34344210           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 11062014A          | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 33753710           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 41930610           | 2       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 10112014A          | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 60419110           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 51946010           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 50444710           | 3       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 13042015D          | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 11052015B          | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 50845210           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 51025610           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 15362002           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 60919510           | 2       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 61841610           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 61149910           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 63052310           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 64312910           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 64713510           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 71274810           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 81819410           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 82721410           | 2       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 84122310           | 2       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 83321910           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 93917110           | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 829110             | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 1710910            | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 2711410            | 1       |
| Beiersdorf AG              | Wool alcohol ointment DAB | 4012410            | 1       |
| Beiersdorf AG / Sanacorp   | Wool alcohol ointment DAB | 1821010            | 1       |
| Beiersdorf AG / Gotha      | Wool alcohol ointment DAB | 94947710           | 1       |
| Beiersdorf AG / Göttingen  | Wool alcohol ointment DAB | 70434110           | 1       |
| Beiersdorf AG / Noweda     | Wool alcohol ointment DAB | 33753710           | 1       |
| Beiersdorf AG / Phönix     | Wool alcohol ointment DAB | 40956810           | 1       |
| Beiersdorf AG / Phönix     | Wool alcohol ointment DAB | 41940610           | 1       |
| Beiersdorf AG/ GEHE        | Wool alcohol ointment DAB | 41829810           | 1       |
| Beiersdorf AG/Geilenkir... | Wool alcohol ointment DAB | 40726610           | 1       |
| Beiersdorf AG/Kehr         | Wool alcohol ointment DAB | 1710910            | 1       |
| Beiersdorf AG/Noweda       | Wool alcohol ointment DAB | 33323210           | 2       |
| Beiersdorf AG/Noweda       | Wool alcohol ointment DAB | 34414610           | 1       |
| Beiersdorf AG/Noweda       | Wool alcohol ointment DAB | 50815310           | 1       |
| Beiersdorf AG/NOWEDA       | Wool alcohol ointment DAB | 30831410           | 1       |
| Beiersdorf AG/NOWEDA       | Wool alcohol ointment DAB | 50845210           | 1       |
| Beiersdorf AG/Sanacorp     | Wool alcohol ointment DAB | 50444710           | 1       |
| Beiersdorf am 18.6.19      | Wool alcohol ointment DAB | 80658510P-190624-9 | 1       |
| Beiersdorf direkt          | Wool alcohol ointment DAB | 52056110           | 1       |
| Beiersdorf Gehe            | Wool alcohol ointment DAB | 3841               | 1       |
| Beiersdorf GmbH / Anzag    | Wool alcohol ointment DAB | 1821010            | 1       |
| Beiersdorf Manufacturing   | Wool alcohol ointment DAB | 30731210           | 1       |
| Beiersdorf Manufacturin... | Wool alcohol ointment DAB | 94037210           | 1       |
| Beiersdorf NO              | Wool alcohol ointment DAB | 74747510           | 1       |
| Beiersdorf NO              | Wool alcohol ointment DAB | 83241810           | 1       |
| Beiersdorf Noweda          | Wool alcohol ointment DAB | 83742110           | 1       |
| Beiersdorf Noweda          | Wool alcohol ointment DAB | 84132310           | 1       |
| Beiersdorf ph              | Wool alcohol ointment DAB | 94957610           | 1       |
| Beiersdorf SA              | Wool alcohol ointment DAB | 41950710           | 1       |

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| Supplier                   | Substance                 | Batch    | Spectra |
|----------------------------|---------------------------|----------|---------|
| Beiersdorf SA              | Wool alcohol ointment DAB | 44824310 | 1       |
| Beiersdorf Sanacorp        | Wool alcohol ointment DAB | 94947710 | 1       |
| Beiersdorf über Phoenix    | Wool alcohol ointment DAB | 53437010 | 1       |
| Beiersdorf über Sanacorp   | Wool alcohol ointment DAB | 50444710 | 1       |
| Beiersdorf, Phönix         | Wool alcohol ointment DAB | 30721310 | 1       |
| Beiersdorf, Phönix         | Wool alcohol ointment DAB | 31121710 | 1       |
| Beiersdorf, Phönix         | Wool alcohol ointment DAB | 82721410 | 1       |
| Beiersdorf/ AEP            | Wool alcohol ointment DAB | 74757510 | 1       |
| Beiersdorf/ AHC            | Wool alcohol ointment DAB | 71274810 | 1       |
| Beiersdorf/ Alliance       | Wool alcohol ointment DAB | 93436310 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 40916810 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 41930610 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 41950710 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 50414810 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 51125710 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 64312910 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 74017010 | 1       |
| Beiersdorf/ Gehe           | Wool alcohol ointment DAB | 82721410 | 1       |
| Beiersdorf/ Jenne          | Wool alcohol ointment DAB | 82721410 | 1       |
| Beiersdorf/ Krieger        | Wool alcohol ointment DAB | 93556410 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 45054410 | 1       |
| beiersdorf/ Noweda         | Wool alcohol ointment DAB | 71214810 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 31322010 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 33323210 | 2       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 43142910 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 50324610 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 64833610 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 84132310 | 1       |
| Beiersdorf/ Noweda         | Wool alcohol ointment DAB | 93556410 | 1       |
| Beiersdorf/ Phoenix        | Wool alcohol ointment DAB | 814Q1270 | 1       |
| Beiersdorf/ Phoenix        | Wool alcohol ointment DAB | 54127710 | 1       |
| Beiersdorf/ Phoenix        | Wool alcohol ointment DAB | 81819410 | 1       |
| Beiersdorf/ Phoenix        | Wool alcohol ointment DAB | 83241810 | 1       |
| Beiersdorf/ Phoenix        | Wool alcohol ointment DAB | 93436310 | 1       |
| Beiersdorf/ Phönix         | Wool alcohol ointment DAB | 93456310 | 1       |
| Beiersdorf/ Sanacorp       | Wool alcohol ointment DAB | 34344210 | 1       |
| Beiersdorf/ Sanacorp       | Wool alcohol ointment DAB | 44824310 | 1       |
| Beiersdorf/ Sanacorp       | Wool alcohol ointment DAB | 53457110 | 1       |
| Beiersdorf/ Sanacorp       | Wool alcohol ointment DAB | 82541010 | 1       |
| Beiersdorf/ Sanacorp       | Wool alcohol ointment DAB | 82721410 | 1       |
| Beiersdorf/2               | Wool alcohol ointment DAB | 94957610 | 1       |
| Beiersdorf/AEP             | Wool alcohol ointment DAB | 70434110 | 1       |
| Beiersdorf/AHC             | Wool alcohol ointment DAB | 62932210 | 1       |
| beiersdorf/AHD             | Wool alcohol ointment DAB | 348370   | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 22412510 | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 61149910 | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 84132310 | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 84232410 | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 93456310 | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 1710910  | 1       |
| Beiersdorf/AHD             | Wool alcohol ointment DAB | 2711410  | 1       |
| Beiersdorf/Alliance        | Wool alcohol ointment DAB | 92945910 | 1       |
| Beiersdorf/Alliance Hea... | Wool alcohol ointment DAB | 74737410 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 63052310 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 71114510 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 83742110 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 92125210 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 93436310 | 1       |
| Beiersdorf/Anzag           | Wool alcohol ointment DAB | 2831510  | 1       |
| Beiersdorf/Beiersdorf      | Wool alcohol ointment DAB | 50815310 | 1       |

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| Supplier                   | Substance                 | Batch         | Spectra |
|----------------------------|---------------------------|---------------|---------|
| Beiersdorf/Beiersdorf      | Wool alcohol ointment DAB | 50955510      | 1       |
| Beiersdorf/Beiersdorf      | Wool alcohol ointment DAB | 819210        | 1       |
| Beiersdorf/Beiersdorf      | Wool alcohol ointment DAB | 1610810       | 1       |
| Beiersdorf/E               | Wool alcohol ointment DAB | 60419110      | 1       |
| Beiersdorf/Ebert           | Wool alcohol ointment DAB | 72435610      | 1       |
| Beiersdorf/Ebert           | Wool alcohol ointment DAB | 83321910      | 1       |
| Beiersdorf/EJ              | Wool alcohol ointment DAB | 74737410      | 1       |
| Beiersdorf/Fiebig          | Wool alcohol ointment DAB | 64833610      | 1       |
| Beiersdorf/Fiebig          | Wool alcohol ointment DAB | 74017010      | 1       |
| Beiersdorf/Fiebig          | Wool alcohol ointment DAB | 83241810      | 1       |
| Beiersdorf/Fiebig          | Wool alcohol ointment DAB | 84122310      | 1       |
| Beiersdorf/Fiebig          | Wool alcohol ointment DAB | 84132310      | 1       |
| beiersdorf/gehe            | Wool alcohol ointment DAB | 71114510      | 1       |
| beiersdorf/Gehe            | Wool alcohol ointment DAB | 30721310      | 1       |
| Beiersdorf/gehe            | Wool alcohol ointment DAB | 74017010      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 22412510      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 23223410      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 30731210      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 30831410      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 32352710      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 24123810      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 33753710      | 2       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 34554710      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 41930610      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 41940610      | 2       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 43142910      | 2       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 40726610      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 50955510      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 53447010      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 60539210      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 62922210      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 64342810      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 71114510      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 74757510      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 747575410     | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 82721410      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 82541010      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 83031710      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 83241810      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 84222410      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 83352010      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 94957610      | 1       |
| Beiersdorf/Gehe            | Wool alcohol ointment DAB | 829110        | 1       |
| Beiersdorf/GEHE            | Wool alcohol ointment DAB | 72915810      | 1       |
| Beiersdorf/Gehe 11.04.17   | Wool alcohol ointment DAB | 62932210      | 1       |
| Beiersdorf/Gehe/26,99      | Wool alcohol ointment DAB | 84132310      | 1       |
| Beiersdorf/Geibo           | Wool alcohol ointment DAB | 50925410      | 1       |
| Beiersdorf/Geibo           | Wool alcohol ointment DAB | 71274810      | 1       |
| Beiersdorf/Gumo            | Wool alcohol ointment DAB | 33323210      | 1       |
| Beiersdorf/Holdermann      | Wool alcohol ointment DAB | 50845210      | 1       |
| Beiersdorf/Jenne           | Wool alcohol ointment DAB | 84222410      | 1       |
| Beiersdorf/Jenne/16.03.20  | Wool alcohol ointment DAB | 94957610      | 1       |
| Beiersdorf/Kehr            | Wool alcohol ointment DAB | 4104701008/16 | 1       |
| Beiersdorf/Kehr            | Wool alcohol ointment DAB | 64312910      | 1       |
| Beiersdorf/Kehr            | Wool alcohol ointment DAB | 82521010      | 1       |
| Beiersdorf/Kehr            | Wool alcohol ointment DAB | 8521010       | 1       |
| Beiersdorf/Krieger         | Wool alcohol ointment DAB | 81819410      | 1       |
| Beiersdorf/Krieger         | Wool alcohol ointment DAB | 1710910       | 1       |
| Beiersdorf/Krieger/06.1... | Wool alcohol ointment DAB | 33323210      | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 50845210      | 1       |

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| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| Beiersdorf/N               | Wool alcohol ointment DAB | 50925410         | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 51015610         | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 53437010         | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 54147810         | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 53457110         | 1       |
| Beiersdorf/N               | Wool alcohol ointment DAB | 60839310         | 1       |
| Beiersdorf/N/22.03.2013... | Wool alcohol ointment DAB | 24635410         | 1       |
| Beiersdorf/Nnoweda         | Wool alcohol ointment DAB | 71274810         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 31322010         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 34424610         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 41910710         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 50324610         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 45054410         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 50815310         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 53437010         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 54127710         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 54147810         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 54157810         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 60919510         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 50845210         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 62031710         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 62922210         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 62041710         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 64332810         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 72915810         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 64312910         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 7477510          | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 74737410         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 74747510         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 74757510         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 81819410         | 3       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 81328810         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 82721410         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 83241810         | 3       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 83031710         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 83742110         | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 8272141083352010 | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 84122310         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 84132310         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 93556410         | 3       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 94037210         | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 829110           | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 348370           | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 2711410          | 2       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 2081510          | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 2851610          | 1       |
| Beiersdorf/Noweda          | Wool alcohol ointment DAB | 11213110         | 1       |
| Beiersdorf/NOWEDA          | Wool alcohol ointment DAB | 93917110         | 1       |
| Beiersdorf/Otto            | Wool alcohol ointment DAB | 23033310         | 1       |
| Beiersdorf/Otto            | Wool alcohol ointment DAB | 31251910         | 1       |
| Beiersdorf/Otto            | Wool alcohol ointment DAB | 33753710         | 1       |
| Beiersdorf/Otto            | Wool alcohol ointment DAB | 41047010         | 1       |
| Beiersdorf/P               | Wool alcohol ointment DAB | 83241810         | 1       |
| Beiersdorf/Pheo            | Wool alcohol ointment DAB | 84222410         | 1       |
| beiersdorf/phoenix         | Wool alcohol ointment DAB | 82541010         | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 30711310         | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 33723610         | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 41930610         | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 41910710         | 1       |
| Beiersdorf/Phoenix         | Wool alcohol ointment DAB | 50845210         | 1       |

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| Supplier            | Substance                 | Batch    | Spectra |
|---------------------|---------------------------|----------|---------|
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 50935410 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 52656810 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 53447010 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 61149910 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 60539210 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 62932210 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 63052310 | 2       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 64713510 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 71114510 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 70314010 | 3       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 74017010 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 74057010 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 74747510 | 2       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 81819410 | 3       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 81859410 | 5       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 83321910 | 2       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 84132310 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 829110   | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 2851610  | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 28521610 | 1       |
| Beiersdorf/Phoenix  | Wool alcohol ointment DAB | 83742110 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 30841410 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 33723610 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 33343310 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 34554710 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 50935410 | 2       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 51015610 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 53437010 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 60429110 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 61149910 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 61079710 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 61841610 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 62031710 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 64312910 | 2       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 64342810 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 71214810 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 72915810 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 82721410 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 83241810 | 2       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 83321910 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 83742110 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 84222410 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 93436310 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 93246210 | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 93556410 | 2       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 829110   | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 1710910  | 2       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 2711410  | 1       |
| Beiersdorf/Phönix   | Wool alcohol ointment DAB | 2831510  | 1       |
| Beiersdorf/Sana     | Wool alcohol ointment DAB | 54137710 | 1       |
| Beiersdorf/Sanac.   | Wool alcohol ointment DAB | 84132310 | 1       |
| Beiersdorf/Sanac.   | Wool alcohol ointment DAB | 93456310 | 1       |
| Beiersdorf/sanacorp | Wool alcohol ointment DAB | 81819410 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 31231810 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 34254110 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 50815310 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 54157810 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 53437010 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 60539210 | 1       |
| Beiersdorf/Sanacorp | Wool alcohol ointment DAB | 62041710 | 1       |

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| Supplier               | Substance                 | Batch      | Spectra |
|------------------------|---------------------------|------------|---------|
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 62932210   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 64342810   | 3       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 70314010   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 71114510   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 73035910   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 74017010   | 2       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 74737410   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 74757510   | 2       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 74747510   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 81819410   | 2       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 82721410   | 4       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 82541010   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 83241810   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 84132310   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 83742110   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 83031710   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 84222410   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 92515310   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 92125210   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 93456310   | 2       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 94037210   | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 94947710   | 3       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 829110     | 1       |
| Beiersdorf/Sanacorp    | Wool alcohol ointment DAB | 171090     | 1       |
| Beiersdorf/Spangro     | Wool alcohol ointment DAB | 64833610   | 1       |
| Beiersdorf/V.d.L.      | Wool alcohol ointment DAB | 33723610   | 1       |
| BeiersdorfAG/Kehr      | Wool alcohol ointment DAB | 84232410   | 1       |
| Beiersorf              | Wool alcohol ointment DAB | 83742110   | 2       |
| Beiersorf              | Wool alcohol ointment DAB | 93456310   | 1       |
| Beierssdorf            | Wool alcohol ointment DAB | 81819410   | 1       |
| Beirdorf               | Wool alcohol ointment DAB | 74747510   | 1       |
| Beirdorf Manufacturing | Wool alcohol ointment DAB | 54147810   | 1       |
| Beisersdorf            | Wool alcohol ointment DAB | 74747510   | 1       |
| Beisersdorf / Gehe     | Wool alcohol ointment DAB | 1710910    | 1       |
| Berkel AHK             | Wool alcohol ointment DAB | 14067201   | 1       |
| Biersdorf              | Wool alcohol ointment DAB | 64342810   | 1       |
| Bomastus               | Wool alcohol ointment DAB | 293093     | 2       |
| Bomastus/Sanacorp      | Wool alcohol ointment DAB | 200002127  | 1       |
| Bomb./Gehe             | Wool alcohol ointment DAB | 71114510   | 1       |
| Bomb./Gehe             | Wool alcohol ointment DAB | 18001095   | 1       |
| Bombastus              | Wool alcohol ointment DAB | 291797     | 2       |
| Bombastus              | Wool alcohol ointment DAB | 270780     | 2       |
| Bombastus              | Wool alcohol ointment DAB | 1109210014 | 1       |
| Bombastus              | Wool alcohol ointment DAB | 269617     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 272171     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 274282     | 3       |
| Bombastus              | Wool alcohol ointment DAB | 262037     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 270640     | 2       |
| Bombastus              | Wool alcohol ointment DAB | 275999     | 3       |
| Bombastus              | Wool alcohol ointment DAB | 277191     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 277190     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 277192     | 3       |
| Bombastus              | Wool alcohol ointment DAB | 279927     | 4       |
| Bombastus              | Wool alcohol ointment DAB | 283619     | 3       |
| Bombastus              | Wool alcohol ointment DAB | 13255101   | 1       |
| Bombastus              | Wool alcohol ointment DAB | 287619     | 2       |
| Bombastus              | Wool alcohol ointment DAB | 287012     | 1       |
| Bombastus              | Wool alcohol ointment DAB | 288834     | 8       |
| Bombastus              | Wool alcohol ointment DAB | 1211018-01 | 1       |
| Bombastus              | Wool alcohol ointment DAB | 60080203   | 4       |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol ointment DAB | 289510   | 4       |
| Bombastus | Wool alcohol ointment DAB | 291796   | 3       |
| Bombastus | Wool alcohol ointment DAB | 293376   | 2       |
| Bombastus | Wool alcohol ointment DAB | 293956   | 14      |
| Bombastus | Wool alcohol ointment DAB | 296436   | 3       |
| Bombastus | Wool alcohol ointment DAB | 298578   | 4       |
| Bombastus | Wool alcohol ointment DAB | 300282   | 6       |
| Bombastus | Wool alcohol ointment DAB | 301199   | 1       |
| Bombastus | Wool alcohol ointment DAB | 30226    | 2       |
| Bombastus | Wool alcohol ointment DAB | 302207   | 3       |
| Bombastus | Wool alcohol ointment DAB | 302208   | 2       |
| Bombastus | Wool alcohol ointment DAB | 16198502 | 1       |
| Bombastus | Wool alcohol ointment DAB | 305880   | 5       |
| Bombastus | Wool alcohol ointment DAB | 307776   | 4       |
| Bombastus | Wool alcohol ointment DAB | 308843   | 8       |
| Bombastus | Wool alcohol ointment DAB | 113842   | 1       |
| Bombastus | Wool alcohol ointment DAB | 311387   | 4       |
| Bombastus | Wool alcohol ointment DAB | 310488   | 4       |
| Bombastus | Wool alcohol ointment DAB | 17001875 | 15      |
| Bombastus | Wool alcohol ointment DAB | 18001094 | 20      |
| Bombastus | Wool alcohol ointment DAB | 18002497 | 12      |
| Bombastus | Wool alcohol ointment DAB | 18002496 | 3       |
| Bombastus | Wool alcohol ointment DAB | 18004090 | 13      |
| Bombastus | Wool alcohol ointment DAB | 18004091 | 6       |
| Bombastus | Wool alcohol ointment DAB | 19003802 | 13      |
| Bombastus | Wool alcohol ointment DAB | 19005079 | 6       |
| Bombastus | Wool alcohol ointment DAB | 20000378 | 2       |
| Bombastus | Wool alcohol ointment DAB | 20002127 | 4       |
| Bombastus | Wool alcohol ointment DAB | 20003915 | 2       |
| Bombastus | Wool alcohol ointment DAB | 17001874 | 1       |
| Bombastus | Wool alcohol ointment DAB | 265502   | 1       |
| Bombastus | Wool alcohol ointment DAB | 20000379 | 8       |
| Bombastus | Wool alcohol ointment DAB | 305879   | 19      |
| Bombastus | Wool alcohol ointment DAB | 20002126 | 2       |
| Bombastus | Wool alcohol ointment DAB | 281690   | 5       |
| Bombastus | Wool alcohol ointment DAB | 283618   | 7       |
| Bombastus | Wool alcohol ointment DAB | 19001991 | 4       |
| Bombastus | Wool alcohol ointment DAB | 285423   | 1       |
| Bombastus | Wool alcohol ointment DAB | 116684   | 1       |
| Bombastus | Wool alcohol ointment DAB | 17001876 | 8       |
| Bombastus | Wool alcohol ointment DAB | 279934   | 4       |
| Bombastus | Wool alcohol ointment DAB | 278684   | 4       |
| Bombastus | Wool alcohol ointment DAB | 256518   | 1       |
| Bombastus | Wool alcohol ointment DAB | 293092   | 7       |
| Bombastus | Wool alcohol ointment DAB | 303848   | 2       |
| Bombastus | Wool alcohol ointment DAB | 307775   | 11      |
| Bombastus | Wool alcohol ointment DAB | 17001877 | 1       |
| Bombastus | Wool alcohol ointment DAB | 283175   | 1       |
| Bombastus | Wool alcohol ointment DAB | 18004092 | 4       |
| Bombastus | Wool alcohol ointment DAB | 18005547 | 13      |
| Bombastus | Wool alcohol ointment DAB | 19001790 | 1       |
| Bombastus | Wool alcohol ointment DAB | 289509   | 7       |
| Bombastus | Wool alcohol ointment DAB | 19001789 | 2       |
| Bombastus | Wool alcohol ointment DAB | 293091   | 3       |
| Bombastus | Wool alcohol ointment DAB | 296235   | 1       |
| Bombastus | Wool alcohol ointment DAB | 261436   | 1       |
| Bombastus | Wool alcohol ointment DAB | 267675   | 2       |
| Bombastus | Wool alcohol ointment DAB | 270643   | 5       |
| Bombastus | Wool alcohol ointment DAB | 293093   | 5       |
| Bombastus | Wool alcohol ointment DAB | 60080201 | 1       |

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| Supplier  | Substance                 | Batch       | Spectra |
|-----------|---------------------------|-------------|---------|
| Bombastus | Wool alcohol ointment DAB | 20003916    | 5       |
| Bombastus | Wool alcohol ointment DAB | 287013      | 4       |
| Bombastus | Wool alcohol ointment DAB | 279928      | 4       |
| Bombastus | Wool alcohol ointment DAB | 18005545    | 16      |
| Bombastus | Wool alcohol ointment DAB | 20000381    | 4       |
| Bombastus | Wool alcohol ointment DAB | 2000381     | 1       |
| Bombastus | Wool alcohol ointment DAB | 19002478    | 1       |
| Bombastus | Wool alcohol ointment DAB | 291795      | 4       |
| Bombastus | Wool alcohol ointment DAB | 301200      | 3       |
| Bombastus | Wool alcohol ointment DAB | 915M-01370  | 1       |
| Bombastus | Wool alcohol ointment DAB | 303846      | 13      |
| Bombastus | Wool alcohol ointment DAB | 1900191     | 1       |
| Bombastus | Wool alcohol ointment DAB | 298577      | 12      |
| Bombastus | Wool alcohol ointment DAB | 305878      | 2       |
| Bombastus | Wool alcohol ointment DAB | 307774      | 11      |
| Bombastus | Wool alcohol ointment DAB | 307773      | 1       |
| Bombastus | Wool alcohol ointment DAB | 311386      | 1       |
| Bombastus | Wool alcohol ointment DAB | 18002495    | 2       |
| Bombastus | Wool alcohol ointment DAB | 18005544    | 2       |
| Bombastus | Wool alcohol ointment DAB | 300283      | 4       |
| Bombastus | Wool alcohol ointment DAB | 305881      | 4       |
| Bombastus | Wool alcohol ointment DAB | 29309932ma1 | 1       |
| Bombastus | Wool alcohol ointment DAB | 302206      | 11      |
| Bombastus | Wool alcohol ointment DAB | 311389      | 3       |
| Bombastus | Wool alcohol ointment DAB | 18002498    | 6       |
| Bombastus | Wool alcohol ointment DAB | 19002479    | 2       |
| Bombastus | Wool alcohol ointment DAB | 18250402    | 2       |
| Bombastus | Wool alcohol ointment DAB | 20002128    | 2       |
| Bombastus | Wool alcohol ointment DAB | 298579      | 5       |
| Bombastus | Wool alcohol ointment DAB | 1211017-01  | 1       |
| Bombastus | Wool alcohol ointment DAB | 295357      | 1       |
| Bombastus | Wool alcohol ointment DAB | 104374      | 1       |
| Bombastus | Wool alcohol ointment DAB | 304998      | 3       |
| Bombastus | Wool alcohol ointment DAB | 72915810    | 1       |
| Bombastus | Wool alcohol ointment DAB | 74747510    | 1       |
| Bombastus | Wool alcohol ointment DAB | 288766      | 2       |
| Bombastus | Wool alcohol ointment DAB | 18005546    | 18      |
| Bombastus | Wool alcohol ointment DAB | 19002480    | 1       |
| Bombastus | Wool alcohol ointment DAB | 19003803    | 3       |
| Bombastus | Wool alcohol ointment DAB | 16007201    | 2       |
| Bombastus | Wool alcohol ointment DAB | 303996      | 4       |
| Bombastus | Wool alcohol ointment DAB | 303847      | 8       |
| Bombastus | Wool alcohol ointment DAB | 3516A-01370 | 1       |
| Bombastus | Wool alcohol ointment DAB | 18001095    | 7       |
| Bombastus | Wool alcohol ointment DAB | 19001792    | 4       |
| Bombastus | Wool alcohol ointment DAB | 20000380    | 10      |
| Bombastus | Wool alcohol ointment DAB | 17206001    | 1       |
| Bombastus | Wool alcohol ointment DAB | 19003801    | 7       |
| Bombastus | Wool alcohol ointment DAB | 291794      | 1       |
| Bombastus | Wool alcohol ointment DAB | 311388      | 5       |
| Bombastus | Wool alcohol ointment DAB | 19001791    | 6       |
| Bombastus | Wool alcohol ointment DAB | 263456      | 1       |
| Bombastus | Wool alcohol ointment DAB | 254685      | 1       |
| Bombastus | Wool alcohol ointment DAB | 265139      | 1       |
| Bombastus | Wool alcohol ointment DAB | 290735      | 2       |
| Bombastus | Wool alcohol ointment DAB | 295218      | 3       |
| Bombastus | Wool alcohol ointment DAB | 296437      | 2       |
| Bombastus | Wool alcohol ointment DAB | 301202      | 5       |
| Bombastus | Wool alcohol ointment DAB | 308845      | 2       |
| Bombastus | Wool alcohol ointment DAB | 18001096    | 3       |

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| Supplier  | Substance                 | Batch      | Spectra |
|-----------|---------------------------|------------|---------|
| Bombastus | Wool alcohol ointment DAB | 308844     | 1       |
| Bombastus | Wool alcohol ointment DAB | 300281     | 1       |
| Bombastus | Wool alcohol ointment DAB | 60080202   | 2       |
| Bombastus | Wool alcohol ointment DAB | 296435     | 12      |
| Bombastus | Wool alcohol ointment DAB | 18005546   | 1       |
| Caeanol   | Wool alcohol ointment DAB | 16198501   | 1       |
| Caelo     | Wool alcohol ointment DAB | 4061204    | 1       |
| Caelo     | Wool alcohol ointment DAB | 20061204   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13114102   | 8       |
| Caelo     | Wool alcohol ointment DAB | 14067101   | 5       |
| Caelo     | Wool alcohol ointment DAB | 305881     | 1       |
| Caelo     | Wool alcohol ointment DAB | 83321910   | 1       |
| Caelo     | Wool alcohol ointment DAB | 11335002   | 6       |
| Caelo     | Wool alcohol ointment DAB | 11335003   | 1       |
| Caelo     | Wool alcohol ointment DAB | 11185001   | 1       |
| Caelo     | Wool alcohol ointment DAB | 11185201   | 1       |
| Caelo     | Wool alcohol ointment DAB | 11335201   | 1       |
| Caelo     | Wool alcohol ointment DAB | 12151801   | 2       |
| Caelo     | Wool alcohol ointment DAB | 12151802   | 2       |
| Caelo     | Wool alcohol ointment DAB | 12076701   | 2       |
| Caelo     | Wool alcohol ointment DAB | 11184902   | 1       |
| Caelo     | Wool alcohol ointment DAB | 12151901   | 5       |
| Caelo     | Wool alcohol ointment DAB | 7121202    | 1       |
| Caelo     | Wool alcohol ointment DAB | 12152001   | 5       |
| Caelo     | Wool alcohol ointment DAB | 20271211-1 | 1       |
| Caelo     | Wool alcohol ointment DAB | 24243910   | 1       |
| Caelo     | Wool alcohol ointment DAB | 24233910   | 1       |
| Caelo     | Wool alcohol ointment DAB | 12339901   | 4       |
| Caelo     | Wool alcohol ointment DAB | 11184901   | 1       |
| Caelo     | Wool alcohol ointment DAB | 12340002   | 3       |
| Caelo     | Wool alcohol ointment DAB | 12076601   | 2       |
| Caelo     | Wool alcohol ointment DAB | 12340101   | 7       |
| Caelo     | Wool alcohol ointment DAB | 12340003   | 1       |
| Caelo     | Wool alcohol ointment DAB | 30731210   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13067102   | 13      |
| Caelo     | Wool alcohol ointment DAB | 1234002    | 1       |
| Caelo     | Wool alcohol ointment DAB | 13093202   | 1       |
| Caelo     | Wool alcohol ointment DAB | 10136901   | 1       |
| Caelo     | Wool alcohol ointment DAB | 25051306   | 1       |
| Caelo     | Wool alcohol ointment DAB | U-240513-3 | 1       |
| Caelo     | Wool alcohol ointment DAB | 13114001   | 8       |
| Caelo     | Wool alcohol ointment DAB | 30841410   | 1       |
| Caelo     | Wool alcohol ointment DAB | 11068001   | 1       |
| Caelo     | Wool alcohol ointment DAB | 30111302   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13126101   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13242901   | 5       |
| Caelo     | Wool alcohol ointment DAB | 13067101   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13242401   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13355202   | 1       |
| Caelo     | Wool alcohol ointment DAB | 13255201   | 11      |
| Caelo     | Wool alcohol ointment DAB | 14022902   | 1       |
| Caelo     | Wool alcohol ointment DAB | 14067301   | 1       |
| Caelo     | Wool alcohol ointment DAB | 41930610   | 1       |
| Caelo     | Wool alcohol ointment DAB | 14024701   | 15      |
| Caelo     | Wool alcohol ointment DAB | 9365602    | 1       |
| Caelo     | Wool alcohol ointment DAB | 41910710   | 1       |
| Caelo     | Wool alcohol ointment DAB | 286882     | 1       |
| Caelo     | Wool alcohol ointment DAB | 14282901   | 5       |
| Caelo     | Wool alcohol ointment DAB | 15228202   | 24      |
| Caelo     | Wool alcohol ointment DAB | 308844     | 2       |

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| Supplier | Substance                 | Batch        | Spectra |
|----------|---------------------------|--------------|---------|
| Caelo    | Wool alcohol ointment DAB | 14153602     | 3       |
| Caelo    | Wool alcohol ointment DAB | 45054410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 50324610     | 1       |
| Caelo    | Wool alcohol ointment DAB | 14283001     | 15      |
| Caelo    | Wool alcohol ointment DAB | 291175       | 1       |
| Caelo    | Wool alcohol ointment DAB | 14283102     | 11      |
| Caelo    | Wool alcohol ointment DAB | 15035503     | 3       |
| Caelo    | Wool alcohol ointment DAB | 21051510     | 1       |
| Caelo    | Wool alcohol ointment DAB | 4051505      | 1       |
| Caelo    | Wool alcohol ointment DAB | 15034901     | 5       |
| Caelo    | Wool alcohol ointment DAB | 293093       | 1       |
| Caelo    | Wool alcohol ointment DAB | 15225501     | 9       |
| Caelo    | Wool alcohol ointment DAB | 51015610     | 1       |
| Caelo    | Wool alcohol ointment DAB | 154035502    | 1       |
| Caelo    | Wool alcohol ointment DAB | 51025610     | 2       |
| Caelo    | Wool alcohol ointment DAB | 15362001     | 30      |
| Caelo    | Wool alcohol ointment DAB | 16007202     | 11      |
| Caelo    | Wool alcohol ointment DAB | 15361901     | 12      |
| Caelo    | Wool alcohol ointment DAB | 60429110     | 1       |
| Caelo    | Wool alcohol ointment DAB | 16066801     | 13      |
| Caelo    | Wool alcohol ointment DAB | 298578       | 1       |
| Caelo    | Wool alcohol ointment DAB | 16066701     | 5       |
| Caelo    | Wool alcohol ointment DAB | 2823         | 1       |
| Caelo    | Wool alcohol ointment DAB | 16198502     | 48      |
| Caelo    | Wool alcohol ointment DAB | 54157810     | 1       |
| Caelo    | Wool alcohol ointment DAB | 160905EA     | 1       |
| Caelo    | Wool alcohol ointment DAB | 16198101     | 21      |
| Caelo    | Wool alcohol ointment DAB | 16198501     | 25      |
| Caelo    | Wool alcohol ointment DAB | 62932210     | 2       |
| Caelo    | Wool alcohol ointment DAB | 62922210     | 1       |
| Caelo    | Wool alcohol ointment DAB | 16177603     | 1       |
| Caelo    | Wool alcohol ointment DAB | 16198601     | 30      |
| Caelo    | Wool alcohol ointment DAB | 16295101     | 15      |
| Caelo    | Wool alcohol ointment DAB | 16248802     | 3       |
| Caelo    | Wool alcohol ointment DAB | 16331701     | 13      |
| Caelo    | Wool alcohol ointment DAB | 307775       | 3       |
| Caelo    | Wool alcohol ointment DAB | 16331802     | 4       |
| Caelo    | Wool alcohol ointment DAB | 16331901     | 20      |
| Caelo    | Wool alcohol ointment DAB | 17104901     | 22      |
| Caelo    | Wool alcohol ointment DAB | 17105001     | 29      |
| Caelo    | Wool alcohol ointment DAB | 72915810     | 1       |
| Caelo    | Wool alcohol ointment DAB | 28101703     | 1       |
| Caelo    | Wool alcohol ointment DAB | 163317025398 | 1       |
| Caelo    | Wool alcohol ointment DAB | 17105401     | 32      |
| Caelo    | Wool alcohol ointment DAB | 17141401     | 33      |
| Caelo    | Wool alcohol ointment DAB | 1116756      | 1       |
| Caelo    | Wool alcohol ointment DAB | 17411202     | 1       |
| Caelo    | Wool alcohol ointment DAB | 17301101     | 29      |
| Caelo    | Wool alcohol ointment DAB | 171412035537 | 1       |
| Caelo    | Wool alcohol ointment DAB | 1726001      | 1       |
| Caelo    | Wool alcohol ointment DAB | 17300901     | 1       |
| Caelo    | Wool alcohol ointment DAB | 81819410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 18001095     | 1       |
| Caelo    | Wool alcohol ointment DAB | 83031710     | 1       |
| Caelo    | Wool alcohol ointment DAB | 27101806     | 1       |
| Caelo    | Wool alcohol ointment DAB | 82521010     | 1       |
| Caelo    | Wool alcohol ointment DAB | 181352501    | 1       |
| Caelo    | Wool alcohol ointment DAB | 1832501      | 1       |
| Caelo    | Wool alcohol ointment DAB | 81328810     | 1       |
| Caelo    | Wool alcohol ointment DAB | 18250701     | 14      |

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| Supplier | Substance                 | Batch                | Spectra |
|----------|---------------------------|----------------------|---------|
| Caelo    | Wool alcohol ointment DAB | 18250401             | 19      |
| Caelo    | Wool alcohol ointment DAB | 18250801             | 13      |
| Caelo    | Wool alcohol ointment DAB | 18250901             | 17      |
| Caelo    | Wool alcohol ointment DAB | 16331801             | 2       |
| Caelo    | Wool alcohol ointment DAB | 19007101             | 14      |
| Caelo    | Wool alcohol ointment DAB | 19006204             | 13      |
| Caelo    | Wool alcohol ointment DAB | 18250601             | 1       |
| Caelo    | Wool alcohol ointment DAB | 19007001             | 10      |
| Caelo    | Wool alcohol ointment DAB | 19041004             | 4       |
| Caelo    | Wool alcohol ointment DAB | 9215210              | 1       |
| Caelo    | Wool alcohol ointment DAB | 19209002             | 5       |
| Caelo    | Wool alcohol ointment DAB | 19000471001          | 5       |
| Caelo    | Wool alcohol ointment DAB | 2001901001           | 1       |
| Caelo    | Wool alcohol ointment DAB | 20003084001          | 4       |
| Caelo    | Wool alcohol ointment DAB | 143020402            | 1       |
| Caelo    | Wool alcohol ointment DAB | 19181801             | 1       |
| Caelo    | Wool alcohol ointment DAB | 11335101             | 5       |
| Caelo    | Wool alcohol ointment DAB | 15361801             | 19      |
| Caelo    | Wool alcohol ointment DAB | 15362002             | 12      |
| Caelo    | Wool alcohol ointment DAB | 16198401             | 17      |
| Caelo    | Wool alcohol ointment DAB | 82721410             | 1       |
| Caelo    | Wool alcohol ointment DAB | 31251910             | 1       |
| Caelo    | Wool alcohol ointment DAB | 14153603             | 9       |
| Caelo    | Wool alcohol ointment DAB | 17300902             | 21      |
| Caelo    | Wool alcohol ointment DAB | 18250403             | 7       |
| Caelo    | Wool alcohol ointment DAB | 20003085002          | 3       |
| Caelo    | Wool alcohol ointment DAB | 70444110             | 1       |
| Caelo    | Wool alcohol ointment DAB | 1483101              | 1       |
| Caelo    | Wool alcohol ointment DAB | 307776               | 1       |
| Caelo    | Wool alcohol ointment DAB | B19182201            | 1       |
| Caelo    | Wool alcohol ointment DAB | 11232902             | 1       |
| Caelo    | Wool alcohol ointment DAB | 13067201             | 10      |
| Caelo    | Wool alcohol ointment DAB | 13114103             | 4       |
| Caelo    | Wool alcohol ointment DAB | 13242902             | 7       |
| Caelo    | Wool alcohol ointment DAB | 14153101             | 14      |
| Caelo    | Wool alcohol ointment DAB | 1428801              | 1       |
| Caelo    | Wool alcohol ointment DAB | 19006301             | 2       |
| Caelo    | Wool alcohol ointment DAB | 20001900001          | 1       |
| Caelo    | Wool alcohol ointment DAB | 18250421             | 1       |
| Caelo    | Wool alcohol ointment DAB | 22532810             | 1       |
| Caelo    | Wool alcohol ointment DAB | 12076602             | 1       |
| Caelo    | Wool alcohol ointment DAB | 13066903             | 1       |
| Caelo    | Wool alcohol ointment DAB | 74057010             | 1       |
| Caelo    | Wool alcohol ointment DAB | 92515310P-200514-3   | 1       |
| Caelo    | Wool alcohol ointment DAB | 13242601             | 11      |
| Caelo    | Wool alcohol ointment DAB | 18132603-W20181115Ma | 1       |
| Caelo    | Wool alcohol ointment DAB | 190078103            | 1       |
| Caelo    | Wool alcohol ointment DAB | 19182101             | 1       |
| Caelo    | Wool alcohol ointment DAB | 20001899002          | 1       |
| Caelo    | Wool alcohol ointment DAB | 16331702             | 29      |
| Caelo    | Wool alcohol ointment DAB | 16295102             | 5       |
| Caelo    | Wool alcohol ointment DAB | 53(18132501)         | 1       |
| Caelo    | Wool alcohol ointment DAB | 74747510             | 2       |
| Caelo    | Wool alcohol ointment DAB | 54(18132501)         | 1       |
| Caelo    | Wool alcohol ointment DAB | 14283101             | 4       |
| Caelo    | Wool alcohol ointment DAB | 300283               | 1       |
| Caelo    | Wool alcohol ointment DAB | 63052310             | 2       |
| Caelo    | Wool alcohol ointment DAB | 19000472001          | 20      |
| Caelo    | Wool alcohol ointment DAB | 19000469001          | 4       |
| Caelo    | Wool alcohol ointment DAB | 74017010             | 1       |

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| Supplier | Substance                 | Batch        | Spectra |
|----------|---------------------------|--------------|---------|
| Caelo    | Wool alcohol ointment DAB | 50925410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 17141201     | 5       |
| Caelo    | Wool alcohol ointment DAB | 19182401     | 12      |
| Caelo    | Wool alcohol ointment DAB | 19000472002  | 35      |
| Caelo    | Wool alcohol ointment DAB | 11335001     | 1       |
| Caelo    | Wool alcohol ointment DAB | 13242603     | 5       |
| Caelo    | Wool alcohol ointment DAB | 33753710     | 1       |
| Caelo    | Wool alcohol ointment DAB | 50414810     | 1       |
| Caelo    | Wool alcohol ointment DAB | 53437010     | 1       |
| Caelo    | Wool alcohol ointment DAB | 17105101     | 4       |
| Caelo    | Wool alcohol ointment DAB | 19041002     | 22      |
| Caelo    | Wool alcohol ointment DAB | 19181902     | 24      |
| Caelo    | Wool alcohol ointment DAB | 20003638002  | 2       |
| Caelo    | Wool alcohol ointment DAB | 74727410     | 2       |
| Caelo    | Wool alcohol ointment DAB | 19000470001  | 10      |
| Caelo    | Wool alcohol ointment DAB | 70434110     | 1       |
| Caelo    | Wool alcohol ointment DAB | 30831410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 15407001     | 1       |
| Caelo    | Wool alcohol ointment DAB | 17141203     | 52      |
| Caelo    | Wool alcohol ointment DAB | 18251001     | 8       |
| Caelo    | Wool alcohol ointment DAB | 21000941001  | 1       |
| Caelo    | Wool alcohol ointment DAB | 18132606     | 2       |
| Caelo    | Wool alcohol ointment DAB | 16196401     | 1       |
| Caelo    | Wool alcohol ointment DAB | 23023210     | 1       |
| Caelo    | Wool alcohol ointment DAB | 1367101      | 1       |
| Caelo    | Wool alcohol ointment DAB | 13242602     | 16      |
| Caelo    | Wool alcohol ointment DAB | 13255001     | 9       |
| Caelo    | Wool alcohol ointment DAB | 41047010     | 1       |
| Caelo    | Wool alcohol ointment DAB | 14067002     | 5       |
| Caelo    | Wool alcohol ointment DAB | 41026910     | 1       |
| Caelo    | Wool alcohol ointment DAB | 1912M-01370  | 1       |
| Caelo    | Wool alcohol ointment DAB | 15034801     | 8       |
| Caelo    | Wool alcohol ointment DAB | 15225601     | 16      |
| Caelo    | Wool alcohol ointment DAB | 16198301     | 3       |
| Caelo    | Wool alcohol ointment DAB | 64342810     | 5       |
| Caelo    | Wool alcohol ointment DAB | 17104902     | 31      |
| Caelo    | Wool alcohol ointment DAB | 19006902     | 5       |
| Caelo    | Wool alcohol ointment DAB | 19182201     | 12      |
| Caelo    | Wool alcohol ointment DAB | 12151903     | 6       |
| Caelo    | Wool alcohol ointment DAB | 13067103     | 7       |
| Caelo    | Wool alcohol ointment DAB | 1325501      | 1       |
| Caelo    | Wool alcohol ointment DAB | 16298502     | 1       |
| Caelo    | Wool alcohol ointment DAB | 93556410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 22412510     | 1       |
| Caelo    | Wool alcohol ointment DAB | 41839810     | 1       |
| Caelo    | Wool alcohol ointment DAB | 16331704     | 4       |
| Caelo    | Wool alcohol ointment DAB | 20001901001  | 11      |
| Caelo    | Wool alcohol ointment DAB | 15225401     | 3       |
| Caelo    | Wool alcohol ointment DAB | 51(17104903) | 1       |
| Caelo    | Wool alcohol ointment DAB | 52(17141401) | 1       |
| Caelo    | Wool alcohol ointment DAB | 55(18250901) | 1       |
| Caelo    | Wool alcohol ointment DAB | 56(19007001) | 1       |
| Caelo    | Wool alcohol ointment DAB | 15035501     | 6       |
| Caelo    | Wool alcohol ointment DAB | 15228201     | 9       |
| Caelo    | Wool alcohol ointment DAB | 12016202     | 2       |
| Caelo    | Wool alcohol ointment DAB | 13126001     | 10      |
| Caelo    | Wool alcohol ointment DAB | 259166       | 1       |
| Caelo    | Wool alcohol ointment DAB | 41940610     | 1       |
| Caelo    | Wool alcohol ointment DAB | 14152901     | 1       |
| Caelo    | Wool alcohol ointment DAB | 50815310     | 1       |

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| Supplier | Substance                 | Batch       | Spectra |
|----------|---------------------------|-------------|---------|
| Caelo    | Wool alcohol ointment DAB | 293091      | 1       |
| Caelo    | Wool alcohol ointment DAB | 62041710    | 1       |
| Caelo    | Wool alcohol ointment DAB | 302207      | 2       |
| Caelo    | Wool alcohol ointment DAB | 16198503    | 8       |
| Caelo    | Wool alcohol ointment DAB | 70314010    | 3       |
| Caelo    | Wool alcohol ointment DAB | 170531811   | 1       |
| Caelo    | Wool alcohol ointment DAB | 17141202    | 37      |
| Caelo    | Wool alcohol ointment DAB | 17141404    | 1       |
| Caelo    | Wool alcohol ointment DAB | 17141601    | 3       |
| Caelo    | Wool alcohol ointment DAB | 17206001    | 29      |
| Caelo    | Wool alcohol ointment DAB | 18066901    | 1       |
| Caelo    | Wool alcohol ointment DAB | 81348810    | 2       |
| Caelo    | Wool alcohol ointment DAB | 17206202    | 5       |
| Caelo    | Wool alcohol ointment DAB | 17301001    | 33      |
| Caelo    | Wool alcohol ointment DAB | 64833610    | 1       |
| Caelo    | Wool alcohol ointment DAB | 18005546    | 2       |
| Caelo    | Wool alcohol ointment DAB | 19006302    | 4       |
| Caelo    | Wool alcohol ointment DAB | 19182103    | 1       |
| Caelo    | Wool alcohol ointment DAB | 24655410    | 1       |
| Caelo    | Wool alcohol ointment DAB | 1406701     | 1       |
| Caelo    | Wool alcohol ointment DAB | 14207702    | 1       |
| Caelo    | Wool alcohol ointment DAB | 1522802     | 1       |
| Caelo    | Wool alcohol ointment DAB | 15362003    | 10      |
| Caelo    | Wool alcohol ointment DAB | 302206      | 1       |
| Caelo    | Wool alcohol ointment DAB | 93917110    | 1       |
| Caelo    | Wool alcohol ointment DAB | 20001901002 | 9       |
| Caelo    | Wool alcohol ointment DAB | 19000766001 | 1       |
| Caelo    | Wool alcohol ointment DAB | 20003085003 | 3       |
| Caelo    | Wool alcohol ointment DAB | 15035502    | 15      |
| Caelo    | Wool alcohol ointment DAB | 16066501    | 10      |
| Caelo    | Wool alcohol ointment DAB | 305879      | 1       |
| Caelo    | Wool alcohol ointment DAB | 17104903    | 16      |
| Caelo    | Wool alcohol ointment DAB | 74737410    | 1       |
| Caelo    | Wool alcohol ointment DAB | 311388      | 1       |
| Caelo    | Wool alcohol ointment DAB | 84222410    | 2       |
| Caelo    | Wool alcohol ointment DAB | 93246210    | 1       |
| Caelo    | Wool alcohol ointment DAB | 19000468001 | 9       |
| Caelo    | Wool alcohol ointment DAB | 14067401    | 4       |
| Caelo    | Wool alcohol ointment DAB | 8422410     | 1       |
| Caelo    | Wool alcohol ointment DAB | 13255101    | 25      |
| Caelo    | Wool alcohol ointment DAB | 31121710    | 1       |
| Caelo    | Wool alcohol ointment DAB | 4067201     | 1       |
| Caelo    | Wool alcohol ointment DAB | 14152902    | 1       |
| Caelo    | Wool alcohol ointment DAB | 14282801    | 11      |
| Caelo    | Wool alcohol ointment DAB | 14153601    | 13      |
| Caelo    | Wool alcohol ointment DAB | 50835210    | 1       |
| Caelo    | Wool alcohol ointment DAB | 15035301    | 10      |
| Caelo    | Wool alcohol ointment DAB | 50/AKD7     | 1       |
| Caelo    | Wool alcohol ointment DAB | 53457110    | 1       |
| Caelo    | Wool alcohol ointment DAB | 16007201    | 13      |
| Caelo    | Wool alcohol ointment DAB | 60539210    | 1       |
| Caelo    | Wool alcohol ointment DAB | 16007203    | 1       |
| Caelo    | Wool alcohol ointment DAB | 303847      | 1       |
| Caelo    | Wool alcohol ointment DAB | 71124510    | 2       |
| Caelo    | Wool alcohol ointment DAB | 1704903     | 1       |
| Caelo    | Wool alcohol ointment DAB | 171054101   | 1       |
| Caelo    | Wool alcohol ointment DAB | 18132501    | 33      |
| Caelo    | Wool alcohol ointment DAB | 18132604    | 19      |
| Caelo    | Wool alcohol ointment DAB | 84132310    | 1       |
| Caelo    | Wool alcohol ointment DAB | 19041101    | 31      |

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| <b>Supplier</b>      | <b>Substance</b>          | <b>Batch</b> | <b>Spectra</b> |
|----------------------|---------------------------|--------------|----------------|
| Caelo                | Wool alcohol ointment DAB | 93436310     | 1              |
| Caelo                | Wool alcohol ointment DAB | 19041003     | 1              |
| Caelo                | Wool alcohol ointment DAB | 1212M-01370  | 1              |
| Caelo                | Wool alcohol ointment DAB | 2313E-01370  | 1              |
| Caerol/Phornix       | Wool alcohol ointment DAB | 16198502     | 1              |
| Caerolo              | Wool alcohol ointment DAB | 14067101     | 1              |
| Caerolo/Krieger      | Wool alcohol ointment DAB | 16331802     | 1              |
| Caerolo/Noweda       | Wool alcohol ointment DAB | 15361901     | 1              |
| Caesar & Loretz      | Wool alcohol ointment DAB | 16198401     | 1              |
| Caesar & Loretz      | Wool alcohol ointment DAB | 17141202     | 1              |
| Caesar & Loretz      | Wool alcohol ointment DAB | 18250402     | 1              |
| Caesar & Loretz      | Wool alcohol ointment DAB | 19007101     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 41930610     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 16198401     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 17301101     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 17300902     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250701     | 7              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250402     | 8              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250801     | 4              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18132501     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250403     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19007101     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250901     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18250401     | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19006301     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18251001     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19007102     | 6              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19006204     | 5              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 18132603     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19006302     | 4              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19006902     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19041004     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19041003     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19182101     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19181901     | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19041002     | 4              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19041101     | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19007001     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19182301     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19181902     | 6              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19181801     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19181903     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19182401     | 5              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19182201     | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19236801     | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19209002     | 2              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000472001  | 4              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19226402     | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000472002  | 6              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000470001  | 5              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000467001  | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000468001  | 4              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000469001  | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 2711410      | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 20001901001  | 6              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 20001901002  | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19000471001  | 3              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 20001900002  | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 20003084001  | 1              |
| Caesar & Loretz GmbH | Wool alcohol ointment DAB | 2831510      | 1              |

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| Supplier                   | Substance                 | Batch       | Spectra |
|----------------------------|---------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Wool alcohol ointment DAB | 20003085003 | 2       |
| Caesar & Loretz GmbH       | Wool alcohol ointment DAB | 20001900001 | 1       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 19006902    | 1       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 19041101    | 1       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 19000472002 | 2       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 19041002    | 2       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 17301001    | 1       |
| Caesar & Loretz GmbH / ... | Wool alcohol ointment DAB | 18250901    | 1       |
| Caesar & Loretz GmbH 40... | Wool alcohol ointment DAB | 11185101    | 1       |
| Caesar & Loretz GmbH Hi... | Wool alcohol ointment DAB | 14283001    | 1       |
| Caesar & Loretz GmbH, P... | Wool alcohol ointment DAB | 17141401    | 1       |
| Caesar & Loretz GmbH, P... | Wool alcohol ointment DAB | 17105001    | 1       |
| Caesar & Loretz GmbH, P... | Wool alcohol ointment DAB | 18251001    | 1       |
| Caesar & Loretz GmbH/ M... | Wool alcohol ointment DAB | 19007102    | 1       |
| Caesar & Loretz GmbH/An... | Wool alcohol ointment DAB | 19181902    | 1       |
| Caesar & Loretz GmbH/Gehe  | Wool alcohol ointment DAB | 18251001    | 1       |
| Caesar & Loretz GmbH/Gehe  | Wool alcohol ointment DAB | 19182301    | 1       |
| Caesar & Loretz GmbH/GEHE  | Wool alcohol ointment DAB | 18250603    | 1       |
| Caesar & Loretz GmbH/GEHE  | Wool alcohol ointment DAB | 19000470001 | 1       |
| Caesar & Loretz GmbH/Je... | Wool alcohol ointment DAB | 19000468001 | 1       |
| Caesar & Loretz GmbH/No... | Wool alcohol ointment DAB | 18250901    | 1       |
| Caesar & Loretz GmbH/No... | Wool alcohol ointment DAB | 19000472002 | 2       |
| Caesar & Loretz GmbH/No... | Wool alcohol ointment DAB | 19182401    | 1       |
| Caesar & Loretz GmbH/No... | Wool alcohol ointment DAB | 20001901001 | 1       |
| Caesar & Loretz GmbH/Ph... | Wool alcohol ointment DAB | 18250402    | 1       |
| Caesar & Loretz GmbH/Ph... | Wool alcohol ointment DAB | 19000472001 | 2       |
| Caesar & Loretz GmbH/Ph... | Wool alcohol ointment DAB | 419E-01370  | 1       |
| Caesar & Loretz GmbH/Ph... | Wool alcohol ointment DAB | 19182201    | 1       |
| Caesar & Loretz GmbH/Px    | Wool alcohol ointment DAB | 18250901    | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 94037210    | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 19182401    | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 19000470001 | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | T11-0734407 | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 19000471001 | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 19000766001 | 1       |
| Caesar & Loretz GmbH/Sa... | Wool alcohol ointment DAB | 11323310    | 1       |
| Caesar & Loretz Hilden     | Wool alcohol ointment DAB | 19041101    | 2       |
| Caesar & Loretz/AHD        | Wool alcohol ointment DAB | 18005544    | 1       |
| Caesar & Loretz/Noweda     | Wool alcohol ointment DAB | 16066601    | 1       |
| Caesar & Loretz/Noweda     | Wool alcohol ointment DAB | 16295102    | 1       |
| Caesar & Loretz GmbH       | Wool alcohol ointment DAB | 12340003    | 1       |
| Caesar und Loretz          | Wool alcohol ointment DAB | 293092      | 2       |
| caesar&lorenz              | Wool alcohol ointment DAB | 16331702    | 1       |
| caesar&Loretz GmbH         | Wool alcohol ointment DAB | 15362002    | 1       |
| caesar&lorenz,Phönix       | Wool alcohol ointment DAB | 15225601    | 1       |
| Caesar&Loretz/Gehe         | Wool alcohol ointment DAB | 19007102    | 1       |
| Caesar/Sanacorp            | Wool alcohol ointment DAB | 19000472002 | 4       |
| Caleo                      | Wool alcohol ointment DAB | 17104903    | 1       |
| Cealo                      | Wool alcohol ointment DAB | 17301001    | 1       |
| Cealo                      | Wool alcohol ointment DAB | 81939510    | 1       |
| Cealo/AHD                  | Wool alcohol ointment DAB | 16331701    | 1       |
| Cealo/Gehe                 | Wool alcohol ointment DAB | 16331704    | 2       |
| Cealo/GEHE                 | Wool alcohol ointment DAB | 19006902    | 1       |
| Cealo/Sanacorp             | Wool alcohol ointment DAB | 17300902    | 1       |
| DAB 2008                   | Wool alcohol ointment DAB | 13255101    | 1       |
| DAC 2011                   | Wool alcohol ointment DAB | 268471      | 1       |
| Defektur                   | Wool alcohol ointment DAB | 3812        | 1       |
| Defektur                   | Wool alcohol ointment DAB | 2/13        | 1       |
| Defektur                   | Wool alcohol ointment DAB | 40/13       | 1       |
| Defektur                   | Wool alcohol ointment DAB | 47/13       | 1       |

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| Supplier       | Substance                 | Batch            | Spectra |
|----------------|---------------------------|------------------|---------|
| Defektur       | Wool alcohol ointment DAB | 53/13            | 1       |
| Defektur       | Wool alcohol ointment DAB | 3/14             | 1       |
| Defektur       | Wool alcohol ointment DAB | 6/14             | 1       |
| Defektur       | Wool alcohol ointment DAB | 18/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 26/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 38/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 41/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 42/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 45/14            | 1       |
| Defektur       | Wool alcohol ointment DAB | 5/15             | 1       |
| Defektur       | Wool alcohol ointment DAB | 10/15            | 1       |
| Ebert          | Wool alcohol ointment DAB | 13242602         | 1       |
| Ebert 18.10.16 | Wool alcohol ointment DAB | 62031710         | 1       |
| eucerinum      | Wool alcohol ointment DAB | 33753710         | 1       |
| eucerinum      | Wool alcohol ointment DAB | 34554710         | 1       |
| Eurho/Noweda   | Wool alcohol ointment DAB | 1211017-01       | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 70434110         | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 1608040-01       | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 6550215          | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 270642           | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 1804013-01       | 2       |
| Euro OTC       | Wool alcohol ointment DAB | 16331901         | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 18250402         | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 17141202         | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 1204030-01       | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 1223768          | 1       |
| Euro OTC       | Wool alcohol ointment DAB | 1911030-01       | 1       |
| EuroOTV        | Wool alcohol ointment DAB | 1608040-01       | 1       |
| Fagron         | Wool alcohol ointment DAB | 13D09-T04-003308 | 4       |
| Fagron         | Wool alcohol ointment DAB | 281690           | 1       |
| Fagron         | Wool alcohol ointment DAB | 40956810         | 1       |
| Fagron         | Wool alcohol ointment DAB | 13D09-T04-007315 | 1       |
| Fagron         | Wool alcohol ointment DAB | 14H19T02018184   | 1       |
| Fagron         | Wool alcohol ointment DAB | 15225601         | 1       |
| Fagron         | Wool alcohol ointment DAB | 305881           | 1       |
| Fagron         | Wool alcohol ointment DAB | 17001877         | 2       |
| Fagron         | Wool alcohol ointment DAB | 18132604         | 1       |
| Fagron         | Wool alcohol ointment DAB | 84132310         | 1       |
| Fagron         | Wool alcohol ointment DAB | 84232410         | 2       |
| Fagron         | Wool alcohol ointment DAB | 18B09-T12-0002   | 1       |
| Fagron         | Wool alcohol ointment DAB | 13D09-T04        | 1       |
| Fagron         | Wool alcohol ointment DAB | 23033310         | 1       |
| Fagron         | Wool alcohol ointment DAB | 14819510         | 1       |
| Fagron         | Wool alcohol ointment DAB | 15E18-T20-021463 | 4       |
| Fagron         | Wool alcohol ointment DAB | 1234             | 1       |
| Fagron         | Wool alcohol ointment DAB | 51946010         | 3       |
| Fagron         | Wool alcohol ointment DAB | 18B09-T12-058739 | 1       |
| Fagron         | Wool alcohol ointment DAB | 19H30-T03-071439 | 1       |
| Fagron         | Wool alcohol ointment DAB | 16H03T01035269   | 1       |
| Fagron         | Wool alcohol ointment DAB | 19L19-T11-073447 | 5       |
| Fagron         | Wool alcohol ointment DAB | 101114a          | 1       |
| Fagron         | Wool alcohol ointment DAB | 53457110         | 2       |
| Fagron         | Wool alcohol ointment DAB | 16066601         | 1       |
| Fagron         | Wool alcohol ointment DAB | 16H03-T01-032569 | 1       |
| Fagron         | Wool alcohol ointment DAB | 13D09T04003308   | 2       |
| Fagron         | Wool alcohol ointment DAB | 14H19-T01-011354 | 1       |
| Fagron         | Wool alcohol ointment DAB | 14H19-T02-011354 | 1       |
| Fagron         | Wool alcohol ointment DAB | 14H19-T02-018184 | 2       |
| Fagron         | Wool alcohol ointment DAB | 53437010         | 1       |
| Fagron         | Wool alcohol ointment DAB | 16H3-T01-035269  | 1       |

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| Supplier          | Substance                 | Batch            | Spectra |
|-------------------|---------------------------|------------------|---------|
| Fagron            | Wool alcohol ointment DAB | 74017010         | 1       |
| Fagron            | Wool alcohol ointment DAB | 15E18-20-021463  | 1       |
| Fargon            | Wool alcohol ointment DAB | 16H03-T01-035270 | 1       |
| Fiebig            | Wool alcohol ointment DAB | 13Dog-T04-007315 | 1       |
| Fiebig            | Wool alcohol ointment DAB | 61149910         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 81819410         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 18001096         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 83241810         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 84132310         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 18005547         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 20002128         | 1       |
| Fiebig            | Wool alcohol ointment DAB | 2831510          | 1       |
| Fiebig            | Wool alcohol ointment DAB | 3712310          | 1       |
| Fiebig/Beiersdorf | Wool alcohol ointment DAB | 73035910         | 1       |
| fragon            | Wool alcohol ointment DAB | 12345            | 1       |
| Gehe              | Wool alcohol ointment DAB | 11335003         | 1       |
| Gehe              | Wool alcohol ointment DAB | 21241410         | 2       |
| Gehe              | Wool alcohol ointment DAB | 13357910         | 1       |
| Gehe              | Wool alcohol ointment DAB | 22412510         | 2       |
| Gehe              | Wool alcohol ointment DAB | 22532710         | 1       |
| Gehe              | Wool alcohol ointment DAB | 23033310         | 1       |
| Gehe              | Wool alcohol ointment DAB | 23753710         | 1       |
| Gehe              | Wool alcohol ointment DAB | 30711310         | 1       |
| Gehe              | Wool alcohol ointment DAB | 30831410         | 2       |
| Gehe              | Wool alcohol ointment DAB | 31231810         | 1       |
| Gehe              | Wool alcohol ointment DAB | 31322010         | 1       |
| Gehe              | Wool alcohol ointment DAB | 33323210         | 1       |
| Gehe              | Wool alcohol ointment DAB | 13126001         | 1       |
| Gehe              | Wool alcohol ointment DAB | 280061           | 1       |
| Gehe              | Wool alcohol ointment DAB | 33753710         | 3       |
| Gehe              | Wool alcohol ointment DAB | 30851510         | 1       |
| Gehe              | Wool alcohol ointment DAB | 41026910         | 1       |
| Gehe              | Wool alcohol ointment DAB | 41950710         | 1       |
| Gehe              | Wool alcohol ointment DAB | 14047010         | 1       |
| Gehe              | Wool alcohol ointment DAB | 43142910         | 1       |
| Gehe              | Wool alcohol ointment DAB | 50444710         | 1       |
| Gehe              | Wool alcohol ointment DAB | 289509           | 1       |
| Gehe              | Wool alcohol ointment DAB | 45054410         | 1       |
| Gehe              | Wool alcohol ointment DAB | 50414810         | 2       |
| Gehe              | Wool alcohol ointment DAB | 50815310         | 1       |
| Gehe              | Wool alcohol ointment DAB | 5095510          | 1       |
| Gehe              | Wool alcohol ointment DAB | 50925410         | 1       |
| Gehe              | Wool alcohol ointment DAB | 54127710         | 1       |
| Gehe              | Wool alcohol ointment DAB | 53457110         | 1       |
| Gehe              | Wool alcohol ointment DAB | 60419110         | 1       |
| Gehe              | Wool alcohol ointment DAB | 60539210         | 1       |
| Gehe              | Wool alcohol ointment DAB | 32932210         | 1       |
| Gehe              | Wool alcohol ointment DAB | 16198601         | 1       |
| Gehe              | Wool alcohol ointment DAB | 71214810         | 1       |
| Gehe              | Wool alcohol ointment DAB | 71124510         | 1       |
| Gehe              | Wool alcohol ointment DAB | 74747510         | 2       |
| Gehe              | Wool alcohol ointment DAB | 17001876         | 1       |
| Gehe              | Wool alcohol ointment DAB | 18005546         | 1       |
| Gehe              | Wool alcohol ointment DAB | 18004090         | 1       |
| GEHE              | Wool alcohol ointment DAB | 1633170          | 1       |
| GEHE              | Wool alcohol ointment DAB | 17141202         | 1       |
| GEHE              | Wool alcohol ointment DAB | 93556410         | 1       |
| Gehe / Beiersdorf | Wool alcohol ointment DAB | 63052310         | 1       |
| Caelo             | Wool alcohol ointment DAB | 83742110         | 3       |
| GEHE 17.06.2014   | Wool alcohol ointment DAB | 23033310         | 1       |

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| Supplier                  | Substance                 | Batch     | Spectra |
|---------------------------|---------------------------|-----------|---------|
| Gehe amax                 | Wool alcohol ointment DAB | 17301001  | 1       |
| Gehe/ Beiersdorf AG       | Wool alcohol ointment DAB | 41940610  | 1       |
| Gehe/ Beiersdorf AG       | Wool alcohol ointment DAB | 94947710  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 83241810  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 82541010  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 41930610  | 2       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 50414810  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 50815310  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 50444710  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 40726610  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 60429110  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 64342810  | 1       |
| Gehe/Beiersdorf           | Wool alcohol ointment DAB | 1710910   | 2       |
| Bombastus                 | Wool alcohol ointment DAB | 19005078  | 12      |
| Caelo                     | Wool alcohol ointment DAB | 50845210  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 16066601  | 8       |
| Caelo                     | Wool alcohol ointment DAB | 64713510  | 2       |
| GEHE/Caesar & Loretz GmbH | Wool alcohol ointment DAB | 19041002  | 1       |
| Gehe/medphano             | Wool alcohol ointment DAB | 20000019  | 1       |
| Henry Lamotte Oils GmbH   | Wool alcohol ointment DAB | 5860600   | 1       |
| Henry Lamotte/AHD         | Wool alcohol ointment DAB | 17141202  | 1       |
| Henry Lamotte/Phoenix1    | Wool alcohol ointment DAB | 1695101   | 1       |
| Holdermann/Beiersdorf     | Wool alcohol ointment DAB | 22532710  | 1       |
| Ichtyol / Noweda          | Wool alcohol ointment DAB | 82721410  | 1       |
| Infectopharm/ Sanacorp    | Wool alcohol ointment DAB | 50334610  | 1       |
| Jenne                     | Wool alcohol ointment DAB | 93456310  | 2       |
| Jenne                     | Wool alcohol ointment DAB | 94947710  | 1       |
| Jenne                     | Wool alcohol ointment DAB | 2851610   | 1       |
| JENNE                     | Wool alcohol ointment DAB | 82721410  | 1       |
| Jenne / Beiersdorf        | Wool alcohol ointment DAB | 94037210  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 14152803  | 1       |
| Kehr                      | Wool alcohol ointment DAB | 307775    | 1       |
| Kehr                      | Wool alcohol ointment DAB | 311387    | 1       |
| Kehr                      | Wool alcohol ointment DAB | 18002496  | 1       |
| Kehr/Beiersdorf           | Wool alcohol ointment DAB | 71114510  | 1       |
| Kehr/Beiersdorf           | Wool alcohol ointment DAB | 93456310  | 1       |
| Klosterring               | Wool alcohol ointment DAB | 18250801  | 1       |
| L10                       | Wool alcohol ointment DAB | 70314010  | 1       |
| L12                       | Wool alcohol ointment DAB | 64713510  | 2       |
| L12                       | Wool alcohol ointment DAB | 72915810  | 1       |
| L12                       | Wool alcohol ointment DAB | 17105401  | 1       |
| L12                       | Wool alcohol ointment DAB | 181232501 | 1       |
| L12/Beiersdorf            | Wool alcohol ointment DAB | 62041710  | 1       |
| L12/Beiersdorf            | Wool alcohol ointment DAB | 62932210  | 2       |
| L12/Beiersdorf            | Wool alcohol ointment DAB | 71124510  | 1       |
| Lamotte / Anzag           | Wool alcohol ointment DAB | 18005546  | 2       |
| medpharno/Sanacorp        | Wool alcohol ointment DAB | 6550115   | 1       |
| Midas                     | Wool alcohol ointment DAB | 71114510  | 1       |
| Midas                     | Wool alcohol ointment DAB | 17206001  | 1       |
| Midas                     | Wool alcohol ointment DAB | 17141401  | 2       |
| Midas                     | Wool alcohol ointment DAB | 17301011  | 1       |
| Midas                     | Wool alcohol ointment DAB | 17300902  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 22532710  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 23223410  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 12151901  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 270642    | 2       |
| Noweda                    | Wool alcohol ointment DAB | 24635410  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 34414610  | 1       |
| Noweda                    | Wool alcohol ointment DAB | 287013    | 1       |
| Noweda                    | Wool alcohol ointment DAB | 34554710  | 1       |

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| Supplier                 | Substance                 | Batch            | Spectra |
|--------------------------|---------------------------|------------------|---------|
| Noweda                   | Wool alcohol ointment DAB | 50845210         | 2       |
| Noweda                   | Wool alcohol ointment DAB | 15361801         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 62031710         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 15362002         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 16198502         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 17104902         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 74737410         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 1141203          | 1       |
| Noweda                   | Wool alcohol ointment DAB | 17141401         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 82541010         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 18002498         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 18B09-T12-058739 | 2       |
| Noweda                   | Wool alcohol ointment DAB | 17001877         | 3       |
| Noweda                   | Wool alcohol ointment DAB | 84122310         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 84132310         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 18251001         | 2       |
| Noweda                   | Wool alcohol ointment DAB | 93456310         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 19007102         | 2       |
| Noweda                   | Wool alcohol ointment DAB | 94037210         | 2       |
| Noweda                   | Wool alcohol ointment DAB | 19182301         | 1       |
| Noweda                   | Wool alcohol ointment DAB | 1710910          | 1       |
| Noweda                   | Wool alcohol ointment DAB | 19000468001      | 1       |
| Noweda                   | Wool alcohol ointment DAB | 1841110          | 1       |
| Noweda                   | Wool alcohol ointment DAB | 19000469001      | 1       |
| Noweda                   | Wool alcohol ointment DAB | 19000471001      | 1       |
| Noweda / Beiersdorf      | Wool alcohol ointment DAB | 82721410         | 1       |
| Noweda / Beiersdorf AG   | Wool alcohol ointment DAB | 34424610         | 1       |
| Noweda / Beiersdorf AG   | Wool alcohol ointment DAB | 41930610         | 1       |
| Noweda / Beiersdorf AG   | Wool alcohol ointment DAB | 45054410         | 1       |
| Noweda / Beiersdorf AG   | Wool alcohol ointment DAB | 50815310         | 1       |
| Caelo                    | Wool alcohol ointment DAB | 73035910         | 2       |
| Caelo                    | Wool alcohol ointment DAB | 18250402         | 33      |
| Noweda/beiersdorf        | Wool alcohol ointment DAB | 84132310         | 1       |
| Noweda/beiersdorf        | Wool alcohol ointment DAB | 829110           | 1       |
| Noweda/Beiersdorf        | Wool alcohol ointment DAB | 50324610         | 1       |
| Noweda/Beiersdorf        | Wool alcohol ointment DAB | 60539210         | 1       |
| Noweda/Beiersdorf        | Wool alcohol ointment DAB | 71214810         | 1       |
| Noweda/Beiersdorf        | Wool alcohol ointment DAB | 74747510         | 1       |
| Noweda/Beiersdorf        | Wool alcohol ointment DAB | 74757510         | 1       |
| Caelo                    | Wool alcohol ointment DAB | 1324602          | 1       |
| Caelo                    | Wool alcohol ointment DAB | 7457510          | 1       |
| Euro OTC                 | Wool alcohol ointment DAB | 1211018-01       | 2       |
| Euro OTC                 | Wool alcohol ointment DAB | 1811023-01       | 1       |
| P.W. Beyvers GmbH/Phönix | Wool alcohol ointment DAB | 15225501         | 3       |
| Ph/Beiersdorf            | Wool alcohol ointment DAB | 94957610         | 1       |
| Fagron                   | Wool alcohol ointment DAB | 17301001         | 1       |
| Pharmachem               | Wool alcohol ointment DAB | 18005546         | 1       |
| Pharmachem/Phönix        | Wool alcohol ointment DAB | 90812            | 1       |
| phoenix                  | Wool alcohol ointment DAB | 19007102         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 22532710         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 30831410         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 32344210         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 283619           | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 14153101         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 41940610         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 305880           | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 3126             | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 17105401         | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 16H03-T01-035269 | 1       |
| Phoenix                  | Wool alcohol ointment DAB | 80848610         | 1       |

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| Supplier                  | Substance                 | Batch     | Spectra |
|---------------------------|---------------------------|-----------|---------|
| Phoenix                   | Wool alcohol ointment DAB | 17001876  | 1       |
| Phoenix                   | Wool alcohol ointment DAB | 18002497  | 1       |
| Phoenix                   | Wool alcohol ointment DAB | 18132501  | 1       |
| Phoenix                   | Wool alcohol ointment DAB | 17149002  | 1       |
| Phoenix                   | Wool alcohol ointment DAB | 19003801  | 3       |
| Phoenix                   | Wool alcohol ointment DAB | 20000380  | 1       |
| Phoenix/Beiersdorf        | Wool alcohol ointment DAB | 74017010  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 19003801  | 1       |
| phönix                    | Wool alcohol ointment DAB | 16198501  | 1       |
| phönix                    | Wool alcohol ointment DAB | 16331701  | 2       |
| Phönix                    | Wool alcohol ointment DAB | 23733710  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 275999    | 1       |
| Phönix                    | Wool alcohol ointment DAB | 31322010  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 30821610  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 13114103  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 14067001  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 61149910  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 60429110  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 153620001 | 1       |
| Phönix                    | Wool alcohol ointment DAB | 64833610  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 71274810  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 60539210  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 17104901  | 2       |
| Phönix                    | Wool alcohol ointment DAB | 17141203  | 2       |
| Phönix                    | Wool alcohol ointment DAB | 18005545  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 19007001  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 19181902  | 2       |
| Phönix                    | Wool alcohol ointment DAB | 19005078  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 20003916  | 1       |
| Phönix                    | Wool alcohol ointment DAB | 4012410   | 1       |
| PHÖNIX                    | Wool alcohol ointment DAB | 63052310  | 1       |
| PHÖNIX                    | Wool alcohol ointment DAB | 74017010  | 1       |
| Caelo                     | Wool alcohol ointment DAB | 311387    | 1       |
| Caelo                     | Wool alcohol ointment DAB | 18001094  | 2       |
| Phönix Gotha              | Wool alcohol ointment DAB | 12152001  | 2       |
| Phönix Gotha              | Wool alcohol ointment DAB | 31231810  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 34554710  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 41930610  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 286884    | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 14282801  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 288688    | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 15225601  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 295206    | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 18001094  | 1       |
| Phönix Gotha              | Wool alcohol ointment DAB | 19003801  | 1       |
| Phönix/ Beiersdorf Werke  | Wool alcohol ointment DAB | 64833610  | 1       |
| Phönix/beiersdorf         | Wool alcohol ointment DAB | 84222410  | 1       |
| Phönix/Beiersdorf         | Wool alcohol ointment DAB | 71124510  | 1       |
| Phönix/Beiersdorf         | Wool alcohol ointment DAB | 81348810  | 1       |
| Phönix/Beiersdorf         | Wool alcohol ointment DAB | 82721410  | 1       |
| Phönix/Beiersdorf         | Wool alcohol ointment DAB | 94037210  | 2       |
| Phönix/Fagon              | Wool alcohol ointment DAB | 16007202  | 1       |
| Fagron                    | Wool alcohol ointment DAB | 14153601  | 1       |
| Sana 13.11.14 EK 8,96     | Wool alcohol ointment DAB | 14153101  | 1       |
| sanacorb                  | Wool alcohol ointment DAB | 54147810  | 3       |
| Sanacoro W.E:22.02.18 ... | Wool alcohol ointment DAB | 17104902  | 1       |
| Sanacorp                  | Wool alcohol ointment DAB | 274283    | 1       |
| Sanacorp                  | Wool alcohol ointment DAB | 12151801  | 1       |
| Sanacorp                  | Wool alcohol ointment DAB | 24254010  | 1       |
| Sanacorp                  | Wool alcohol ointment DAB | 277190    | 2       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Sanacorp                   | Wool alcohol ointment DAB       | 30851510         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 279927           | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 44/AKD10         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 13255001         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 41047010         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 289509           | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 43112910         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 28/AKD12         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 5414781          | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 62031710         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 16198401         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 73035910         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 74017010         | 2       |
| Sanacorp                   | Wool alcohol ointment DAB       | 74747510         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 17001876         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 17301101         | 2       |
| Sanacorp                   | Wool alcohol ointment DAB       | 82541010         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 17301001         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 18002497         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 181362604        | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 18132501         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 18250901         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 93456310         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 19041101         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 17141401         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 94037210         | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 829110           | 1       |
| Sanacorp                   | Wool alcohol ointment DAB       | 20C23-T26-081551 | 1       |
| SANACORP                   | Wool alcohol ointment DAB       | 84232410         | 1       |
| Sanacorp 31.10.15          | Wool alcohol ointment DAB       | 15228202         | 2       |
| Sanacorp/ Beiersdorf       | Wool alcohol ointment DAB       | 33723610         | 1       |
| Bombastus                  | Wool alcohol ointment DAB       | 270642           | 3       |
| Caelo                      | Wool alcohol ointment DAB       | 18B09-T12-058739 | 1       |
| Fagron                     | Wool alcohol ointment DAB       | 8576509          | 1       |
| Sanacorp/Beiersdorf        | Wool alcohol ointment DAB       | 71124510         | 2       |
| Sanacorp/Beiersdorf        | Wool alcohol ointment DAB       | 94037210         | 1       |
| Caelo                      | Wool alcohol ointment DAB       | 12016203         | 6       |
| Caelo                      | Wool alcohol ointment DAB       | 44/AKD9          | 1       |
| Caelo                      | Wool alcohol ointment DAB       | 46/AKD2          | 1       |
| Caelo                      | Wool alcohol ointment DAB       | 19181901         | 11      |
| Schärer & Schläpfer AG/... | Wool alcohol ointment DAB       | 50955510         | 1       |
| Sonnen-Apotheke Wefensl... | Wool alcohol ointment DAB       | 1/16             | 1       |
| Sonnen-Apotheke Wefensl... | Wool alcohol ointment DAB       | 9/17             | 1       |
| Spangro                    | Wool alcohol ointment DAB       | 17411203         | 1       |
| Stumpf                     | Wool alcohol ointment DAB       | 23223410         | 1       |
| Stumpf                     | Wool alcohol ointment DAB       | 30851510         | 1       |
| Stumpf/Beiersdorf Ag       | Wool alcohol ointment DAB       | 33323210         | 1       |
| Stumpf/Beiersdorf Ag       | Wool alcohol ointment DAB       | 33343310         | 1       |
| Stumpf/Beiersdorf Ag       | Wool alcohol ointment DAB       | 40956810         | 1       |
| Stumpf/Beiersdorf Ag       | Wool alcohol ointment DAB       | 41910710         | 1       |
| Caelo                      | Wool alcohol ointment DAB       | 14283103         | 14      |
| UNISAN                     | Wool alcohol ointment DAB       | 289509           | 1       |
| AHD                        | Wool alcohol ointment SR wit... | 19189901         | 2       |
| Bombastus                  | Wool alcohol ointment SR wit... | 295360           | 4       |
| Bombastus                  | Wool alcohol ointment SR wit... | 288688           | 2       |
| Apomix                     | Wool alcohol ointment SR wit... | 6A110912         | 1       |
| Apomix                     | Wool alcohol ointment SR wit... | 5231213          | 1       |
| Apomix                     | Wool alcohol ointment SR wit... | 6A290714         | 1       |
| Apomix                     | Wool alcohol ointment SR wit... | 2A070515         | 1       |
| Apomix/Noweda              | Wool alcohol ointment SR wit... | 2A080713         | 1       |

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| Supplier      | Substance                       | Batch    | Spectra |
|---------------|---------------------------------|----------|---------|
| Apomix/Noweda | Wool alcohol ointment SR wit... | 1A180215 | 1       |
| Apomix/Noweda | Wool alcohol ointment SR wit... | 1A110416 | 1       |
| Bomb./Gehe    | Wool alcohol ointment SR wit... | 305548   | 1       |
| Bomb./Gehe    | Wool alcohol ointment SR wit... | 308141   | 2       |
| Bomb./Gehe    | Wool alcohol ointment SR wit... | 308143   | 1       |
| Bomb./Gehe    | Wool alcohol ointment SR wit... | 310488   | 1       |
| Bomba/ Kehr   | Wool alcohol ointment SR wit... | 288689   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 284379   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 276135   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 270781   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 268467   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 277024   | 6       |
| Bombastus     | Wool alcohol ointment SR wit... | 274521   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 279105   | 4       |
| Bombastus     | Wool alcohol ointment SR wit... | 279103   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 280058   | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 280059   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 283176   | 5       |
| Bombastus     | Wool alcohol ointment SR wit... | 284378   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 286884   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 285952   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 291177   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 288686   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 293375   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 295358   | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 297129   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 30079    | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 300082   | 4       |
| Bombastus     | Wool alcohol ointment SR wit... | 17001147 | 5       |
| Bombastus     | Wool alcohol ointment SR wit... | 18000621 | 6       |
| Bombastus     | Wool alcohol ointment SR wit... | 302599   | 10      |
| Bombastus     | Wool alcohol ointment SR wit... | 106236   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 308145   | 10      |
| Bombastus     | Wool alcohol ointment SR wit... | 291176   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 295359   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 277022   | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 270784   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 277023   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 279104   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 283174   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 297125   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 297127   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 270776   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 297128   | 4       |
| Bombastus     | Wool alcohol ointment SR wit... | 280061   | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 291175   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 300083   | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 18003449 | 5       |
| Bombastus     | Wool alcohol ointment SR wit... | 19001994 | 2       |
| Bombastus     | Wool alcohol ointment SR wit... | 300084   | 4       |
| Bombastus     | Wool alcohol ointment SR wit... | 297130   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 293374   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 286880   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 18003446 | 7       |
| Bombastus     | Wool alcohol ointment SR wit... | 18003447 | 4       |
| Bombastus     | Wool alcohol ointment SR wit... | 274518   | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 18000625 | 3       |
| Bombastus     | Wool alcohol ointment SR wit... | 18003448 | 10      |
| Bombastus     | Wool alcohol ointment SR wit... | 280060   | 1       |
| Bombastus     | Wool alcohol ointment SR wit... | 19004361 | 6       |

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| Supplier                    | Substance                       | Batch       | Spectra |
|-----------------------------|---------------------------------|-------------|---------|
| Bombastus                   | Wool alcohol ointment SR wit... | 274517      | 2       |
| Caelo/ Jenne                | Wool alcohol ointment SR wit... | 13340003    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 15047101    | 8       |
| Caelo                       | Wool alcohol ointment SR wit... | 15047004    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 15047003    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 15269302    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 14251402    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 15334702    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 15269303    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 16251303    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 19004203    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 18189901    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 19226402    | 4       |
| Caelo                       | Wool alcohol ointment SR wit... | 19189901    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 13264102    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 19004202    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 19189904    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 20002124002 | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 12078201    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 16142802    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 18189903    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 15047002    | 3       |
| Caelo                       | Wool alcohol ointment SR wit... | 15334703    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 18074502    | 8       |
| Caelo                       | Wool alcohol ointment SR wit... | 17319102    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 14032502    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 16251302    | 7       |
| Caelo                       | Wool alcohol ointment SR wit... | 1625102     | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 16142803    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 19189902    | 2       |
| Caelo                       | Wool alcohol ointment SR wit... | 13077302    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 6550115     | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 13077301    | 1       |
| Caelo                       | Wool alcohol ointment SR wit... | 14067201    | 17      |
| Caelo                       | Wool alcohol ointment SR wit... | 19000657002 | 2       |
| Caesar & Loretz GmbH        | Wool alcohol ointment SR wit... | 19068902    | 1       |
| Caesar & Loretz GmbH        | Wool alcohol ointment SR wit... | 19000657002 | 1       |
| Caesar & Loretz GmbH / ...  | Wool alcohol ointment SR wit... | 19189902    | 2       |
| Caesar & Loretz Hilden      | Wool alcohol ointment SR wit... | 19004203    | 1       |
| Caesar & Loretz Hilden      | Wool alcohol ointment SR wit... | 19000657002 | 2       |
| Gehe                        | Wool alcohol ointment SR wit... | 276135      | 1       |
| GEHE                        | Wool alcohol ointment SR wit... | 310488      | 2       |
| Bombastus                   | Wool alcohol ointment SR wit... | 293378      | 1       |
| Henry Lamotte Oels GmbH     | Wool alcohol ointment SR wit... | 7A111214    | 2       |
| medphano                    | Wool alcohol ointment SR wit... | 6550115     | 1       |
| medphano                    | Wool alcohol ointment SR wit... | 6550118     | 1       |
| Medphano                    | Wool alcohol ointment SR wit... | 6550118     | 1       |
| medphano AM GmbH            | Wool alcohol ointment SR wit... | 6550115     | 1       |
| Medphano / Jenne            | Wool alcohol ointment SR wit... | 6550118     | 1       |
| Medphano Arzneimittel Gm... | Wool alcohol ointment SR wit... | 6550118     | 1       |
| medphano Arzneimittel       | Wool alcohol ointment SR wit... | 6550118     | 1       |
| Medphano Arzneimittel /...  | Wool alcohol ointment SR wit... | 6550115     | 1       |
| medphano Arzneimittel G...  | Wool alcohol ointment SR wit... | 6550118     | 7       |
| Medphano Arzneimittel G...  | Wool alcohol ointment SR wit... | 6550115     | 1       |
| medphano Arzneimittel G...  | Wool alcohol ointment SR wit... | 6550115     | 1       |
| medphano Arzneimittel G...  | Wool alcohol ointment SR wit... | 6550118     | 1       |
| medphano Arzneimittel G...  | Wool alcohol ointment SR wit... | 6550118     | 1       |
| medphano Arzneimittel/ ...  | Wool alcohol ointment SR wit... | 6550118     | 1       |
| medphano Arzneimittel/S...  | Wool alcohol ointment SR wit... | 6550115     | 1       |
| medphano/Anzag              | Wool alcohol ointment SR wit... | 6550118     | 1       |

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| Supplier                 | Substance                       | Batch      | Spectra |
|--------------------------|---------------------------------|------------|---------|
| Medphano/Anzag           | Wool alcohol ointment SR wit... | 6550115    | 1       |
| Medphano/Anzag           | Wool alcohol ointment SR wit... | 6550118    | 1       |
| medphano/Gehe            | Wool alcohol ointment SR wit... | 6550115    | 1       |
| medphano/Phoenix         | Wool alcohol ointment SR wit... | 6550115    | 1       |
| medphano/Phönix          | Wool alcohol ointment SR wit... | 6550118    | 1       |
| Medphano/Phönix          | Wool alcohol ointment SR wit... | 6550118    | 1       |
| medphano/Sanacorp        | Wool alcohol ointment SR wit... | 6550118    | 5       |
| Medphano/Sanacorp        | Wool alcohol ointment SR wit... | 6550118    | 1       |
| Medphano/VdL             | Wool alcohol ointment SR wit... | 6550115    | 1       |
| Noweda                   | Wool alcohol ointment SR wit... | 12078301   | 1       |
| Noweda                   | Wool alcohol ointment SR wit... | 12244302   | 1       |
| Noweda                   | Wool alcohol ointment SR wit... | 12078201   | 1       |
| Bombastus                | Wool alcohol ointment SR wit... | 284381     | 1       |
| Bombastus                | Wool alcohol ointment SR wit... | 280057     | 2       |
| Pharmachem               | Wool alcohol ointment SR wit... | 250116     | 2       |
| Phoenix 27.11.14 EK 6,08 | Wool alcohol ointment SR wit... | 288688     | 1       |
| Phönix                   | Wool alcohol ointment SR wit... | 270781     | 1       |
| Phönix Gotha             | Wool alcohol ointment SR wit... | 284381     | 1       |
| Sanacop                  | Wool alcohol ointment SR wit... | 288688     | 1       |
| Sanacorp                 | Wool alcohol ointment SR wit... | 6550118    | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 19001993   | 8       |
| AHD                      | Wool alcohol ointment SR/DAC    | 19006412   | 1       |
| apomix                   | Wool alcohol ointment SR/DAC    | 1B210519   | 1       |
| Apomix                   | Wool alcohol ointment SR/DAC    | 1B220120   | 1       |
| Apomix / Noweda          | Wool alcohol ointment SR/DAC    | 2A221117   | 1       |
| Apomix / Noweda          | Wool alcohol ointment SR/DAC    | 2A201118   | 1       |
| Bombastus/GEHE/06.11.19  | Wool alcohol ointment SR/DAC    | 19004361   | 1       |
| Bomb./Gehe               | Wool alcohol ointment SR/DAC    | 310489     | 1       |
| Bomb./Gehe               | Wool alcohol ointment SR/DAC    | 17001146   | 1       |
| Bomb./Gehe               | Wool alcohol ointment SR/DAC    | 18003447   | 1       |
| Bomb./Gehe               | Wool alcohol ointment SR/DAC    | 19001991   | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 302598     | 4       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 303995     | 4       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 300081     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 60089603   | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 305546     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 302600     | 2       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 17001149   | 7       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 17001148   | 4       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 17001146   | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 18000622   | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 1800433445 | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 8003445    | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 180055348  | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 19004359   | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 303993     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 308138     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 306218     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 308142     | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 308143     | 2       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 308144     | 3       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 20000788   | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 300080     | 1       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 18003445   | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 305548     | 4       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 18005349   | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 18005348   | 6       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 19004360   | 5       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 20000786   | 2       |
| Bombastus                | Wool alcohol ointment SR/DAC    | 19004358   | 2       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Bombastus                  | Wool alcohol ointment SR/DAC    | 301937           | 2       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 108187           | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 303994           | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 301935           | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 18005346         | 4       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 310489           | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 301940           | 2       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 19001992         | 5       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 19001990         | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 308146           | 2       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 20000785         | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 2A221117         | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 18000623         | 7       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 18005347         | 7       |
| Bombastus/Phönix           | Wool alcohol ointment SR/DAC    | 303995           | 1       |
| Caelo                      | Wool alcohol ointment SR/DAC    | 310488           | 1       |
| Caelo                      | Wool alcohol ointment SR/DAC    | 308141           | 1       |
| Caelo                      | Wool alcohol ointment SR/DAC    | 17133102         | 1       |
| Caesar & Loretz Hilden     | Wool alcohol ointment SR/DAC    | 18074502         | 1       |
| Euro OTC                   | Wool alcohol ointment SR/DAC    | 310489           | 1       |
| Euro OTC                   | Wool alcohol ointment SR/DAC    | 20000019         | 3       |
| Euro OTC                   | Wool alcohol ointment SR/DAC    | 18005347         | 1       |
| Fagron                     | Wool alcohol ointment SR/DAC    | 308145           | 1       |
| Gehe                       | Wool alcohol ointment SR/DAC    | 20000019         | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 301938           | 2       |
| medphano AN GmbH           | Wool alcohol ointment SR/DAC    | 20000019         | 1       |
| medphano Arzneimittel      | Wool alcohol ointment SR/DAC    | 6550115          | 1       |
| medphano Arzneimittel G... | Wool alcohol ointment SR/DAC    | 20000019         | 1       |
| medphano/AHD               | Wool alcohol ointment SR/DAC    | 6550115          | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 60089602         | 1       |
| Pharmachem                 | Wool alcohol ointment SR/DAC    | 220517           | 1       |
| Pharmachem GmbH/Pharmac... | Wool alcohol ointment SR/DAC    | 220517           | 1       |
| Pharmachem/ Phönix         | Wool alcohol ointment SR/DAC    | 220517           | 1       |
| Bombastus                  | Wool alcohol ointment SR/DAC    | 3505546          | 1       |
| Caelo                      | Emulsifying hydrophobic base... | 12229003         | 7       |
| Caelo                      | Emulsifying hydrophobic base... | 12343501         | 4       |
| Caelo                      | Emulsifying hydrophobic base... | 14276401         | 17      |
| Caelo                      | Emulsifying hydrophobic base... |                  | 33      |
|                            | Eye ointment, emulsifying DAC   | 4A010419         | 1       |
|                            | Eye ointment, emulsifying DAC   | 68150317         | 1       |
| apomix                     | Eye ointment, emulsifying DAC   | 10A041016        | 1       |
| Caelo                      | Eye paraffin                    | 13338711         | 5       |
| Caelo                      | Eye paraffin                    | 13338710         | 13      |
| Sanacorp                   | Eye paraffin                    |                  | 5       |
| Caelo                      | Hydrophilic ointment DAB        | 14024802         | 5       |
| Caelo                      | Hydrophilic ointment DAB        | 13245302         | 5       |
| Fagron                     | Hydrophilic ointment DAB        |                  | 4       |
| Fagron                     | Hydrophilic ointment DAB        | 14G08-T08-013954 | 5       |
| Fagron                     | Hydrophilic ointment DAB        | 19D25-T11-066650 | 2       |
| Caelo                      | Hydrophobic base gel DAC        | 13299604         | 10      |
| Caelo                      | Hydrophobic base gel DAC        | 14044601         | 13      |
|                            | Hydrophobic base gel DAC        | 18240307         | 1       |
| Caesar & Loretz GmbH       | Paraffin, liquid                |                  | 1       |
| Euro OTC                   | Paraffin, white                 | 1405014-01       | 9       |
| Euro OTC                   | Paraffin, white                 | 1401017-01       | 4       |
|                            | Paraffin, white                 | 279969           | 2       |
| Bombastus                  | Paraffin, white                 | 290271           | 6       |
| Bombastus                  | Paraffin, white                 | 19001675         | 32      |
| Bombastus                  | Paraffin, white                 |                  | 5       |
|                            | Paraffin, white                 | 162720105299     | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Caelo                      | Paraffin, white                 | 12374502         | 12      |
| Caelo                      | Paraffin, white                 | 12032413         | 21      |
| Caelo                      | Paraffin, white                 | 13268421         | 15      |
| Caelo                      | Paraffin, white                 | 12321908         | 4       |
| EuRho/Gehe                 | Paraffin, white                 |                  | 1       |
| Fagron                     | Paraffin, white                 | 17E02-T01-049359 | 1       |
| Lamotte/Kehr               | Paraffin, white                 |                  | 1       |
|                            | Paraffin, white                 | 18174305         | 1       |
| Phagron                    | Paraffin, white                 |                  | 1       |
| Phoenix                    | Paraffin, white                 |                  | 1       |
|                            | Paraffin, white                 | 13341606         | 1       |
| Euro OTC                   | Paraffin, yellow                | 1811024-01       | 6       |
| ichthyol                   | Unguentum Cordes®               |                  | 1       |
| Ichthyol                   | Unguentum Cordes®               | 13A067           | 1       |
| Ichthyol                   | Unguentum Cordes®               | 15A137           | 1       |
| Ichthyol                   | Unguentum Cordes®               | 15A150           | 1       |
| Ichthyol                   | Unguentum Cordes®               | 20A0049          | 3       |
| Ichthyol Gesellschaft /... | Unguentum Cordes®               |                  | 1       |
| Ichthyol/Otto              | Unguentum Cordes®               |                  | 1       |
|                            | Unguentum Cordes®               | 13A034           | 1       |
|                            | Unguentum Cordes®               | 16A099           | 2       |
| Apotheke/Defekturabfüll... | Wool alcohol ointment DAB       |                  | 1       |
| Caelo                      | Wool alcohol ointment DAB       | 14067001         | 6       |
| Euro OTC                   | Wool alcohol ointment DAB       | 1211017-01       | 3       |
| phönix                     | Wool alcohol ointment DAB       |                  | 1       |
|                            | Wool alcohol ointment SR wit... | 291175           | 2       |
| Caelo                      | Wool alcohol ointment SR wit... | 16251301         | 2       |
| Caelo                      | Wool alcohol ointment SR wit... | 14032501         | 1       |

- 218 994 spectra from 1120 *Apo-Ident* customers from a total of 43 261 batches from a further 331 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Paraffin classification* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Paraffin classification* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 4400          | 0              | 59 539        |
| <b>Type B</b> | 0              | 6121          | 0              | 85 260        |
| <b>Type C</b> | 0              | 22 266        | 103            | 215 620       |

The substance/substance group *Paraffin classification* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9796 %) | 100.0000 % (> 99.8636 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 99.9020 %) |
| <b>Type C</b> | 100.0000 % (> 99.6822 %) | 99.5395 % (> 99.5261 %)  |



In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Paraffin classification* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Wool fat                                  | 9.88                      | —                                 |
| Squalane                                  | 12.13                     | —                                 |
| Softisan <sup>®</sup> 378                 | 17.33                     | —                                 |
| Softisan <sup>®</sup> 649                 | 19.14                     | —                                 |
| Decyl oleate                              | 19.55                     | —                                 |
| Macrogol 8 stearate type I                | 19.69                     | —                                 |
| Triglycerides, medium-chain               | 22.33                     | —                                 |
| Salicylic acid concentrate 5%, white p... | 22.78                     | —                                 |
| Olive oil, native                         | 23.81                     | —                                 |
| Pasta Cordes <sup>®</sup>                 | 24.31                     | —                                 |
| Apricot kernel oil, refined               | 24.66                     | —                                 |
| Peanut oil, refined                       | 25.37                     | —                                 |
| Shea butter, refined                      | 25.39                     | —                                 |
| Avocado oil, refined                      | 26.81                     | —                                 |
| 2-ethylhexyl laurate                      | 27.54                     | —                                 |
| Jobba oil, native                         | 30.89                     | —                                 |
| Laurel oil                                | 31.04                     | —                                 |
| Oleyl oleate (stabilised)                 | 31.63                     | —                                 |
| Triglycerol diisostearate                 | 32.36                     | —                                 |
| Sorbitan trioleate                        | 32.76                     | —                                 |
| Camphor ointment                          | 33.37                     | —                                 |
| Permethrin 25% solution                   | 33.66                     | —                                 |
| Almond oil, refined                       | 37.90                     | —                                 |
| Isopropyl palmitate                       | 38.05                     | —                                 |
| Lauromacrogol 400                         | 42.15                     | —                                 |
| Polysorbate 60                            | 43.94                     | —                                 |
| Macroglycerol hydroxystearate 40          | 45.66                     | —                                 |
| Guaiazulene 25%, water-soluble            | 45.71                     | —                                 |
| Sesame oil, refined                       | 46.96                     | —                                 |
| Sunflower oil, refined                    | 52.00                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Paraffin classification* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested



reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30932     | 30932               | 0.00                         | 17.35                           |
| 30933     | 30933               | 0.00                         | 16.24                           |
| 31009     | 31941               | 3.40                         | 25.17                           |
| 31010     | 31940               | 3.89                         | 25.92                           |
| 31168     | 31446               | 3.00                         | 25.39                           |
| 31174     | 31174               | 0.00                         | 29.83                           |
| 31228     | 31228               | 0.00                         | 32.05                           |
| 31272     | 31272               | 0.00                         | 33.47                           |
| 31437     | 31916               | 1.86                         | 26.72                           |
| 31441     | 32017               | 7.19                         | 30.85                           |
| 31445     | 31610               | 3.39                         | 27.66                           |
| 31446     | 31446               | 0.00                         | 24.42                           |
| 31456     | 31456               | 0.00                         | 38.88                           |
| 31468     | 31916               | 3.54                         | 25.82                           |
| 31473     | 31473               | 0.00                         | 20.95                           |
| 31522     | 31522               | 0.00                         | 26.73                           |
| 31541     | 31736               | 9.34                         | 28.11                           |
| 31567     | 31909               | 7.35                         | 39.05                           |
| 31570     | 31570               | 0.00                         | 20.40                           |
| 31586     | 31736               | 9.93                         | 28.68                           |
| 31590     | 31736               | 8.44                         | 28.91                           |
| 31601     | 32495               | 3.16                         | 24.54                           |
| 31602     | 31602               | 0.00                         | 32.55                           |
| 31610     | 31610               | 0.00                         | 28.95                           |
| 31611     | 31909               | 5.38                         | 39.87                           |
| 31612     | 31456               | 5.83                         | 39.82                           |
| 31736     | 31736               | 0.00                         | 25.71                           |
| 31744     | 31744               | 0.00                         | 26.60                           |
| 31807     | 31602               | 4.42                         | 33.45                           |
| 31909     | 31909               | 0.00                         | 39.41                           |
| 31910     | 31910               | 0.00                         | 40.27                           |
| 31916     | 31916               | 0.00                         | 25.17                           |
| 31917     | 31917               | 0.00                         | 26.58                           |
| 31918     | 31918               | 0.00                         | 26.59                           |
| 31920     | 31920               | 0.00                         | 17.21                           |
| 31921     | 31921               | 0.00                         | 34.17                           |
| 31940     | 31940               | 0.00                         | 22.57                           |
| 31941     | 31941               | 0.00                         | 22.67                           |
| 31949     | 31744               | 1.48                         | 25.50                           |
| 31954     | 31602               | 2.43                         | 32.24                           |
| 31999     | 31999               | 0.00                         | 26.29                           |
| 32017     | 32017               | 0.00                         | 32.54                           |
| 32495     | 32495               | 0.00                         | 31.20                           |
| 32517     | 32517               | 0.00                         | 29.97                           |
| 32518     | 32518               | 0.00                         | 27.02                           |
| 32519     | 32519               | 0.00                         | 26.37                           |
| 32777     | 32777               | 0.00                         | 26.76                           |
| 32900     | 32900               | 0.00                         | 27.49                           |
| 32946     | 31174               | 6.48                         | 26.87                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 32947            | 31999                      | 8.91                                | 24.32                                  |
| 33124            | 33124                      | 0.00                                | 28.12                                  |
| 33132            | 33132                      | 0.00                                | 26.28                                  |
| 33133            | 33133                      | 0.00                                | 25.43                                  |
| 33396            | 33396                      | 0.00                                | 17.25                                  |
| 33398            | 33398                      | 0.00                                | 18.12                                  |
| 33399            | 33399                      | 0.00                                | 17.72                                  |
| 33545            | 33545                      | 0.00                                | 23.46                                  |
| 33614            | 34799                      | 5.14                                | 33.93                                  |
| 34160            | 34160                      | 0.00                                | 18.68                                  |
| 34433            | 31736                      | 12.88                               | 30.12                                  |
| 34498            | 34498                      | 0.00                                | 31.97                                  |
| 34509            | 31917                      | 4.14                                | 33.32                                  |
| 34510            | 34498                      | 8.92                                | 31.71                                  |
| 34511            | 31744                      | 3.78                                | 28.48                                  |
| 34542            | 34542                      | 0.00                                | 34.73                                  |
| 34545            | 34545                      | 0.00                                | 23.02                                  |
| 34550            | 34550                      | 0.00                                | 21.63                                  |
| 34551            | 34552                      | 2.97                                | 25.16                                  |
| 34552            | 34552                      | 0.00                                | 23.23                                  |
| 34553            | 34553                      | 0.00                                | 16.61                                  |
| 34555            | 34555                      | 0.00                                | 20.71                                  |
| 34559            | 34552                      | 3.69                                | 23.17                                  |
| 34675            | 31456                      | 7.45                                | 42.15                                  |
| 34678            | 31921                      | 8.66                                | 28.40                                  |
| 34679            | 34498                      | 5.12                                | 31.60                                  |
| 34799            | 34799                      | 0.00                                | 37.10                                  |
| 34813            | 34813                      | 0.00                                | 32.56                                  |
| 34838            | 32517                      | 4.37                                | 28.57                                  |
| 34844            | 32517                      | 4.89                                | 28.01                                  |
| 34858            | 34859                      | 4.68                                | 23.72                                  |
| 34859            | 34859                      | 0.00                                | 24.82                                  |
| 34860            | 34860                      | 0.00                                | 28.48                                  |
| 34861            | 34861                      | 0.00                                | 27.03                                  |
| 34865            | 34865                      | 0.00                                | 27.06                                  |
| 34867            | 34861                      | 4.06                                | 26.30                                  |
| 34980            | 34980                      | 0.00                                | 19.84                                  |
| 35103            | 31918                      | 4.56                                | 33.87                                  |
| 35324            | 35324                      | 0.00                                | 29.50                                  |
| 35362            | 35362                      | 0.00                                | 34.41                                  |
| 35378            | 35378                      | 0.00                                | 19.47                                  |
| 35518            | 35518                      | 0.00                                | 18.06                                  |
| 35607            | 35607                      | 0.00                                | 17.92                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Pasta Cordes®**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30633-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Pasta Cordes®

### Special notes

When selecting the *Pasta Cordes®* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Pasta Cordes®             | 6      | 3      | 41     |

## Second-stage model

For differentiation of the substance/substance group *Pasta Cordes*<sup>®</sup> the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Pasta Cordes*<sup>®</sup>:

| Supplier | Substance                 | Batch   | Sample ID | Spectra | Certificate |
|----------|---------------------------|---------|-----------|---------|-------------|
| Ichthyol | Pasta Cordes <sup>®</sup> | 12A008  | 30633     | 40      | 20121017    |
| Ichthyol | Pasta Cordes <sup>®</sup> | 13A056  | 31084     | 40      | 1406053     |
| Ichthyol | Pasta Cordes <sup>®</sup> | 13A056  | 31673     | 60      | 20130411    |
| Ichthyol | Pasta Cordes <sup>®</sup> | 16A063  | 33285     | 40      | 20160427    |
| Ichthyol | Pasta Cordes <sup>®</sup> | 18A129  | 34484     | 40      | 20180816    |
| Ichthyol | Pasta Cordes <sup>®</sup> | 20A0187 | 35104     | 40      | 20200925    |
| Ichthyol | Pasta Cordes <sup>®</sup> | 20A0050 | 35105     | 40      | 20200313    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 300 spectra of 7 reference samples from the substance/substance group *Pasta Cordes*<sup>®</sup>. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 639 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Pasta Cordes*<sup>®</sup>.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                 | Batch   | Sample ID | Spectra |
|----------|---------------------------|---------|-----------|---------|
| Ichthyol | Pasta Cordes <sup>®</sup> | 17A173  | 34046     | 40      |
| Ichthyol | Pasta Cordes <sup>®</sup> | 17A021  | 34321     | 40      |
| Ichthyol | Pasta Cordes <sup>®</sup> | 19A0101 | 34841     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 504 spectra from 166 *Apo-Ident* customers from 49 batches from the substance/substance group *Pasta Cordes<sup>®</sup>*.
- Among them are spectra of independent samples from 41 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                      | Substance                 | Batch   | Spectra |
|-------------------------------|---------------------------|---------|---------|
| AEP                           | Pasta Cordes <sup>®</sup> | 19A0101 | 1       |
| Euro OTC                      | Pasta Cordes <sup>®</sup> | 16A098  | 1       |
| Euro OTC                      | Pasta Cordes <sup>®</sup> | 15A173  | 1       |
| AHL                           | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Alliance/ICHTHYOL             | Pasta Cordes <sup>®</sup> | 17A173  | 1       |
| Anzag/Ichthyol                | Pasta Cordes <sup>®</sup> | 17A173  | 2       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 12A182  | 2       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 12AD43  | 1       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 15a173  | 1       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 15A173  | 5       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 13A056  | 1       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 11A206  | 2       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 16A063  | 3       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 13A098  | 3       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 17A021  | 6       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 16A098  | 4       |
| Caelo                         | Pasta Cordes <sup>®</sup> | 17A058  | 5       |
| Cordes                        | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Cordes                        | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Cordes / Phönix               | Pasta Cordes <sup>®</sup> | 15A173  | 1       |
| cordes hermann & co           | Pasta Cordes <sup>®</sup> | 18A129  | 1       |
| Cordes Noweda                 | Pasta Cordes <sup>®</sup> | 17A021  | 2       |
| Cordes/AHD                    | Pasta Cordes <sup>®</sup> | 13A056  | 1       |
| Cordes/Gehe                   | Pasta Cordes <sup>®</sup> | 14A025  | 1       |
| Cordes/Gehe                   | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Ebert & Jacobi                | Pasta Cordes <sup>®</sup> | 17A172  | 1       |
| Ebert & Jacobi                | Pasta Cordes <sup>®</sup> | 19A0101 | 1       |
| Euro OTC                      | Pasta Cordes <sup>®</sup> | 17A172  | 1       |
| Fagron                        | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Fischer/Gehe                  | Pasta Cordes <sup>®</sup> | 14A142  | 3       |
| GEHE                          | Pasta Cordes <sup>®</sup> | 17A173  | 1       |
| Gehe/Ichthyol                 | Pasta Cordes <sup>®</sup> | 15A173  | 1       |
| Gehe/Phönix                   | Pasta Cordes <sup>®</sup> | 17A173  | 1       |
| Geibo/Ichthyol-Gesellsch. ... | Pasta Cordes <sup>®</sup> | 17A058  | 1       |
| Ichthol/ Noweda               | Pasta Cordes <sup>®</sup> | 16A098  | 1       |

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| Supplier                   | Substance     | Batch           | Spectra |
|----------------------------|---------------|-----------------|---------|
| ichthyol                   | Pasta Cordes® | 15A1735338      | 1       |
| ichthyol                   | Pasta Cordes® | 17A0215503      | 1       |
| ichthyol                   | Pasta Cordes® | 19A115          | 1       |
| Ichthyol                   | Pasta Cordes® | 12a182          | 1       |
| Ichthyol                   | Pasta Cordes® | 13A098          | 2       |
| Ichthyol                   | Pasta Cordes® | 14A025          | 3       |
| Ichthyol                   | Pasta Cordes® | 14A124          | 5       |
| Ichthyol                   | Pasta Cordes® | 14A142          | 1       |
| Ichthyol                   | Pasta Cordes® | 15A121          | 5       |
| Ichthyol                   | Pasta Cordes® | 15A173          | 2       |
| Ichthyol                   | Pasta Cordes® | 14A199          | 1       |
| Ichthyol                   | Pasta Cordes® | 16A064          | 1       |
| Ichthyol                   | Pasta Cordes® | 17A173          | 8       |
| Ichthyol                   | Pasta Cordes® | 17A021          | 4       |
| Ichthyol                   | Pasta Cordes® | 17A172          | 1       |
| Ichthyol                   | Pasta Cordes® | 19A115          | 5       |
| Ichthyol                   | Pasta Cordes® | 19A0101         | 1       |
| ICHTHYOL                   | Pasta Cordes® | 10A187          | 1       |
| ICHTHYOL                   | Pasta Cordes® | 15A121          | 1       |
| Ichthyol / AHD             | Pasta Cordes® | 14A142          | 1       |
| Ichthyol / Gehe            | Pasta Cordes® | 12A182          | 1       |
| Ichthyol / Gehe            | Pasta Cordes® | 18A129          | 1       |
| Ichthyol / Noweda          | Pasta Cordes® | 14A142          | 1       |
| Ichthyol / Noweda          | Pasta Cordes® | 18A129          | 2       |
| Ichthyol / Phönix 20.07... | Pasta Cordes® | 17A173          | 1       |
| ichthyol /AHD              | Pasta Cordes® | 17A0215744      | 1       |
| Ichthyol /Gehe             | Pasta Cordes® | 12A182          | 1       |
| Ichthyol /Noweda           | Pasta Cordes® | 12A182          | 1       |
| Ichthyol /Noweda           | Pasta Cordes® | 13A056          | 3       |
| Ichthyol Cordes/Phoenix    | Pasta Cordes® | 15A173          | 3       |
| Ichthyol- G.               | Pasta Cordes® | 19A0101         | 1       |
| ichthyol gesellschaft      | Pasta Cordes® | 13A098          | 1       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 13A056          | 2       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 16A063          | 2       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 17A021          | 1       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 17A173          | 1       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 18A129          | 3       |
| Ichthyol- Gesellschaft     | Pasta Cordes® | 15A173          | 2       |
| Ichthyol- Gesellschaft     | Pasta Cordes® | 16A098          | 2       |
| Ichthyol Gesellschaft /... | Pasta Cordes® | 17A173          | 1       |
| Ichthyol Gesellschaft /... | Pasta Cordes® | 180308PC/16A064 | 1       |
| Ichthyol Gesellschaft C... | Pasta Cordes® | 16A098          | 1       |
| Ichthyol Gesellschaft C... | Pasta Cordes® | 14A124          | 1       |
| Ichthyol Gesellschaft C... | Pasta Cordes® | 17A058          | 1       |
| Ichthyol Gesellschaft/ ... | Pasta Cordes® | 19A1152x        | 1       |
| Ichthyol Gesellschaft/ ... | Pasta Cordes® | 16A098          | 1       |
| Ichthyol Gesellschaft/C... | Pasta Cordes® | 18A129          | 1       |
| Ichthyol Gesellschaft/G... | Pasta Cordes® | 16A063          | 1       |
| Ichthyol Gesellschaft/K... | Pasta Cordes® | 15A121          | 1       |
| Ichthyol Gesellschaft/N... | Pasta Cordes® | 17A173          | 1       |
| Ichthyol Gesellschaft/P... | Pasta Cordes® | 19A115          | 1       |
| Ichthyol Gesellschaft/P... | Pasta Cordes® | 17A058          | 1       |
| Ichthyol Gesellschaft/P... | Pasta Cordes® | 20A0050         | 1       |
| Ichthyol Gesellschaft      | Pasta Cordes® | 17A173          | 1       |
| Ichthyol GmbH              | Pasta Cordes® | 16A098          | 1       |
| Ichthyol/ AHD              | Pasta Cordes® | 17A173          | 3       |
| Ichthyol/ Gehe             | Pasta Cordes® | 19A115          | 1       |
| Ichthyol/ Krieger          | Pasta Cordes® | 15A173          | 1       |
| Ichthyol/ Krieger          | Pasta Cordes® | 17A021          | 1       |
| Ichthyol/ Krieger          | Pasta Cordes® | 18A129          | 2       |

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| Supplier                   | Substance                 | Batch   | Spectra |
|----------------------------|---------------------------|---------|---------|
| Ichthyol/ Noweda           | Pasta Cordes <sup>®</sup> | 14A025  | 1       |
| Ichthyol/ Noweda           | Pasta Cordes <sup>®</sup> | 18A129  | 1       |
| Ichthyol/ Phönix           | Pasta Cordes <sup>®</sup> | 14A142  | 1       |
| Ichthyol/AHD               | Pasta Cordes <sup>®</sup> | 16A063  | 1       |
| Ichthyol/AHD               | Pasta Cordes <sup>®</sup> | 19A0101 | 1       |
| Ichthyol/Alliance          | Pasta Cordes <sup>®</sup> | 16A063  | 2       |
| Ichthyol/Alliance          | Pasta Cordes <sup>®</sup> | 19A115  | 1       |
| Ichthyol/Alliance Healt... | Pasta Cordes <sup>®</sup> | 17A058  | 1       |
| Ichthyol/E&J               | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Ichthyol/Ebert             | Pasta Cordes <sup>®</sup> | 13A098  | 1       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 14A124  | 2       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 14A142  | 2       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 13A056  | 1       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 16A098  | 1       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 17A021  | 2       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 17A173  | 2       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 18A129  | 2       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 19A0101 | 1       |
| Ichthyol/Fiebig            | Pasta Cordes <sup>®</sup> | 19A115  | 1       |
| ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 12A182  | 2       |
| ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 13A146  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 12A043  | 2       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 11A206  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 13A098  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 14A025  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 14A124  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 14A199  | 14      |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 16A064  | 21      |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 17A021  | 2       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 17A058  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 17A173  | 1       |
| Ichthyol/Gehe              | Pasta Cordes <sup>®</sup> | 18A129  | 2       |
| Ichthyol/Krieger           | Pasta Cordes <sup>®</sup> | 17A172  | 1       |
| Ichthyol/Noedea            | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Ichthyol/Now               | Pasta Cordes <sup>®</sup> | 17A021  | 1       |
| Ichthyol/Now               | Pasta Cordes <sup>®</sup> | 18A129  | 1       |
| ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 18A129  | 1       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 13A098  | 3       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 14A025  | 1       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 15A173  | 1       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 16A098  | 1       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 17A021  | 5       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 17A173  | 4       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 17A058  | 1       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 18A129  | 3       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 19A115  | 2       |
| Ichthyol/Noweda            | Pasta Cordes <sup>®</sup> | 19A0101 | 1       |
| ICHTHYOL/Noweda            | Pasta Cordes <sup>®</sup> | 16A098  | 2       |
| Ichthyol/OG                | Pasta Cordes <sup>®</sup> | 15A173  | 1       |
| Ichthyol/P                 | Pasta Cordes <sup>®</sup> | 17A058  | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 12A182  | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 13A056  | 3       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 14A025  | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 14A124  | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 15A121  | 5       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 16A063  | 4       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 16A064  | 3       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 16A098  | 3       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 17A021  | 2       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 17A058  | 4       |

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| Supplier                   | Substance                 | Batch           | Spectra |
|----------------------------|---------------------------|-----------------|---------|
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 18A129          | 3       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 3A172           | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| Ichthyol/Phoenix           | Pasta Cordes <sup>®</sup> | 19A0101         | 1       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 14A025          | 1       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 14A124          | 1       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 14A142          | 10      |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 16A063          | 1       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 17A173          | 7       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 19A0101         | 2       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 19A115          | 4       |
| Ichthyol/Phönix            | Pasta Cordes <sup>®</sup> | 19A0101         | 1       |
| Ichthyol/Phönix WE:2804... | Pasta Cordes <sup>®</sup> | 15A121          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 12A138          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 12A182          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 14A142          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 15A121          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 15A173          | 3       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 16A098          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 17A058          | 1       |
| Ichthyol/Sanacorp          | Pasta Cordes <sup>®</sup> | 19A115          | 1       |
| Ichthyol/Virchow           | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| ICHTHYOL_GESELLSCHAFT      | Pasta Cordes <sup>®</sup> | 20A0050         | 1       |
| Ichthyol-Ges./Phönix       | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| Ichthyol-Ges./Phönix       | Pasta Cordes <sup>®</sup> | 19A0101         | 1       |
| Ichthyol-Ges./Sanac.       | Pasta Cordes <sup>®</sup> | 16A063          | 1       |
| Ichthyol-Ges./Sanac.       | Pasta Cordes <sup>®</sup> | 17A173          | 2       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 19A0101         | 1       |
| ICHTHYOL-GESELLSCHAFT      | Pasta Cordes <sup>®</sup> | 15A121          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 13A056          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 14A025          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 15A121          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 160822PC        | 2       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 170102PC/15A173 | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 14A124          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 16A063          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 15A173          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 17A021          | 2       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 17A173          | 2       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 17A058          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 18A129          | 7       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 19A129          | 1       |
| Ichthyol-Gesellschaft      | Pasta Cordes <sup>®</sup> | 130819B         | 1       |
| ICHTHYOL-GESELLSCHAFT      | Pasta Cordes <sup>®</sup> | 19A115          | 1       |
| Ichthyol-Gesellschaft /... | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| Ichthyol-Gesellschaft /... | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| ICHTHYOL-Gesellschaft /... | Pasta Cordes <sup>®</sup> | 17A173          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 18A129          | 2       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 14A124          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 13A098          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 13A146          | 3       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 14A025          | 2       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 14A199          | 4       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 14A124          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 14A124          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 15A173          | 2       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 16A064          | 2       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 17A021          | 1       |
| Ichthyol-Gesellschaft C... | Pasta Cordes <sup>®</sup> | 20A0050         | 2       |

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| Supplier                    | Substance                 | Batch      | Spectra |
|-----------------------------|---------------------------|------------|---------|
| Ichthyol-Gesellschaft C...  | Pasta Cordes <sup>®</sup> | 17A173     | 1       |
| Ichthyolgesellschaft/ K...  | Pasta Cordes <sup>®</sup> | 19A115     | 4       |
| ICHTHYOL-Gesellschaft/P...  | Pasta Cordes <sup>®</sup> | 18A129     | 2       |
| ICHTHYOL-Gesellschaft/P...  | Pasta Cordes <sup>®</sup> | 20A0050    | 1       |
| ICHTHYOL-GESELLSCHAFT/P...  | Pasta Cordes <sup>®</sup> | 17A173     | 1       |
| Ichthyol-Gesellschaft/s...  | Pasta Cordes <sup>®</sup> | 16A063     | 5       |
| Ichthyol-Gesellschaft/S...  | Pasta Cordes <sup>®</sup> | 16A098     | 1       |
| Ichthyol-Gesellschaft/S...  | Pasta Cordes <sup>®</sup> | 17A021     | 2       |
| Ichthyol-Gesellschaft/AHD   | Pasta Cordes <sup>®</sup> | 17A058     | 1       |
| Ichthyol-Gesellschaft/Ph... | Pasta Cordes <sup>®</sup> | 17A173     | 1       |
| Ichthyol Gesellschaft       | Pasta Cordes <sup>®</sup> | 14A142     | 1       |
| Ichthyol Gesellschaft       | Pasta Cordes <sup>®</sup> | 16A063     | 1       |
| Ichthyol/AHD                | Pasta Cordes <sup>®</sup> | 15A173     | 1       |
| Ichthyol/Phoenix            | Pasta Cordes <sup>®</sup> | 19A115     | 2       |
| ICHTYOL GESELLSCHAFT Co...  | Pasta Cordes <sup>®</sup> | 15A121     | 1       |
| Ichtyol- Gesellschaft C...  | Pasta Cordes <sup>®</sup> | 17A021     | 1       |
| Ichtyol Gesellschaft/ N...  | Pasta Cordes <sup>®</sup> | 17A173     | 4       |
| Ichtyol Gesellschaft/ N...  | Pasta Cordes <sup>®</sup> | 19A115     | 1       |
| Ichtyol Noweda              | Pasta Cordes <sup>®</sup> | 19A0101    | 1       |
| Ichtyol/Gehe                | Pasta Cordes <sup>®</sup> | 17A173     | 2       |
| Ichtyol/Gehe                | Pasta Cordes <sup>®</sup> | 19A115     | 1       |
| Ichtyol/Noweda              | Pasta Cordes <sup>®</sup> | 16A063     | 1       |
| Ichtyol/Noweda              | Pasta Cordes <sup>®</sup> | 19A0101    | 1       |
| Ichtyol/Phoenix             | Pasta Cordes <sup>®</sup> | 15A173     | 1       |
| Ichtyol/Phoenix             | Pasta Cordes <sup>®</sup> | 17A021     | 4       |
| Ichtyol/Phoenix             | Pasta Cordes <sup>®</sup> | 19A115     | 2       |
| Ichtyol/Sanacorp            | Pasta Cordes <sup>®</sup> | 18A129     | 1       |
| Ichtyol-Gesellschaft        | Pasta Cordes <sup>®</sup> | 14A124     | 1       |
| Ichtyol-Gesellschaft        | Pasta Cordes <sup>®</sup> | 14A142     | 1       |
| Ichtyol-Gesellschaft        | Pasta Cordes <sup>®</sup> | 17A021     | 2       |
| Ichtyol-Gesellschaft        | Pasta Cordes <sup>®</sup> | 17A173     | 5       |
| Ichtyol-Gesellschaft        | Pasta Cordes <sup>®</sup> | 17A172     | 1       |
| ichthyol-gesellschaft co... | Pasta Cordes <sup>®</sup> | 17A021     | 3       |
| jchthyol / Ahd              | Pasta Cordes <sup>®</sup> | 17A0215656 | 1       |
| Noweda                      | Pasta Cordes <sup>®</sup> | 13A056     | 1       |
| Noweda                      | Pasta Cordes <sup>®</sup> | 17A021     | 1       |
| Noweda                      | Pasta Cordes <sup>®</sup> | 18A129     | 1       |
| Noweda                      | Pasta Cordes <sup>®</sup> | 17A173     | 2       |
| Noweda                      | Pasta Cordes <sup>®</sup> | 19A115     | 2       |
| Noweda/Ichthyol             | Pasta Cordes <sup>®</sup> | 17A021     | 2       |
| Noweda/Ichthyol             | Pasta Cordes <sup>®</sup> | 15A173     | 1       |
| Noweda/Ichthyol             | Pasta Cordes <sup>®</sup> | 17A058     | 1       |
| Noweda/Ichthyol             | Pasta Cordes <sup>®</sup> | 20A0050    | 1       |
| Noweda-Ichthyol             | Pasta Cordes <sup>®</sup> | 15A121     | 1       |
| Ph/Cordes                   | Pasta Cordes <sup>®</sup> | 16A129     | 1       |
| Ph/Ichthyol                 | Pasta Cordes <sup>®</sup> | 17A021     | 1       |
| Phoenix                     | Pasta Cordes <sup>®</sup> | 12A043     | 1       |
| Phoenix                     | Pasta Cordes <sup>®</sup> | 3386       | 1       |
| Phönix                      | Pasta Cordes <sup>®</sup> | 12A182     | 1       |
| Phönix                      | Pasta Cordes <sup>®</sup> | 17A021     | 1       |
| Phönix                      | Pasta Cordes <sup>®</sup> | 3146       | 1       |
| Phönix                      | Pasta Cordes <sup>®</sup> | 17A173     | 1       |
| Caelo                       | Pasta Cordes <sup>®</sup> | 17A172     | 1       |
| phönix/ Ichthyol            | Pasta Cordes <sup>®</sup> | 15A129     | 1       |
| Phönix/Ichthyol             | Pasta Cordes <sup>®</sup> | 15A121     | 2       |
| Phönix/Ichthyol             | Pasta Cordes <sup>®</sup> | 16A098     | 1       |
| Phönix/Ichthyol             | Pasta Cordes <sup>®</sup> | 17A021     | 2       |
| Phönix/Ichthyol             | Pasta Cordes <sup>®</sup> | 1817129    | 1       |
| Römerapo.                   | Pasta Cordes <sup>®</sup> | 14A124     | 4       |
| Sanacorp                    | Pasta Cordes <sup>®</sup> | 16A063     | 1       |

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| Supplier                    | Substance     | Batch   | Spectra |
|-----------------------------|---------------|---------|---------|
| Sanacorp                    | Pasta Cordes® | 19A0101 | 1       |
| Sanacorp / Ichthyolgesse... | Pasta Cordes® | 14A124  | 1       |
| Sanacorp/ Ichthyol          | Pasta Cordes® | 9A1151  | 1       |
| WE 28.11.16 Cordes/Phoe...  | Pasta Cordes® | 15A173  | 1       |
| Ichthyol                    | Pasta Cordes® | 12A008  | 1       |
| Ichthyol                    | Pasta Cordes® | 13A056  | 1       |
| Ichthyol                    | Pasta Cordes® | 16A063  | 4       |
| Ichthyol                    | Pasta Cordes® | 18A129  | 4       |

- 240 859 spectra from 1121 *Apo-Ident* customers from a total of 46 958 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Pasta Cordes*® can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Pasta Cordes*® and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 300           | 0              | 63 639        |
| <b>Type B</b> | 0              | 120           | 0              | 91 349        |
| <b>Type C</b> | 0              | 493           | 11             | 240 487       |

The substance/substance group *Pasta Cordes*® can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6808 %) | 97.8175 % (> 97.2222 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Pasta Cordes*® in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                      | Distance in<br>main model | Distance in<br>second-stage model |
|--------------------------------|---------------------------|-----------------------------------|
| Guaiazulene 25%, water-soluble | 30.19                     | —                                 |
| Softisan <sup>®</sup> 649      | 43.38                     | —                                 |
| Permethrin 25% solution        | 48.94                     | —                                 |
| Macrogol 8 stearate type I     | 49.40                     | —                                 |
| Polysorbate 60                 | 54.66                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Pasta Cordes*<sup>®</sup> is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30633     | 31084                  | 4.42                            | 34.08                              |
| 31084     | 31084                  | 0.00                            | 35.34                              |
| 31673     | 31084                  | 6.87                            | 35.72                              |
| 33285     | 31084                  | 4.86                            | 35.15                              |
| 34484     | 31084                  | 4.85                            | 36.89                              |
| 35104     | 31084                  | 10.87                           | 39.69                              |
| 35105     | 31084                  | 8.36                            | 39.37                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Permethrin 25% solution**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31177-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Permethrin 25% solution

### Special notes

When selecting the *Permethrin 25% solution* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Permethrin 25% solution   | 6      | 2      | 85     |

## Second-stage model

For differentiation of the substance/substance group *Permethrin 25% solution* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Permethrin 25% solution*:

| Supplier     | Substance           | Batch     | Sample ID | Spectra | Certificate |
|--------------|---------------------|-----------|-----------|---------|-------------|
| Infectopharm | Permethrin 25% s... | S031301.1 | 31177     | 40      | 1405128     |
| Infectopharm | Permethrin 25% s... | S061401.1 | 31563     | 60      | 1508108     |
| Infectopharm | Permethrin 25% s... | S021601.1 | 32262     | 40      | 20160310    |
| Infectopharm | Permethrin 25% s... | S021601.1 | 32263     | 40      | 20160310    |
| Infectopharm | Permethrin 25% s... | S071602.1 | 33246     | 40      | 20160728    |
| Infectopharm | Permethrin 25% s... | S071602.1 | 33247     | 40      | 20160728    |
| Infectopharm | Permethrin 25% s... | S071602.1 | 33301     | 40      | 20160728    |
| Infectopharm | Permethrin 25% s... | S071602.1 | 33302     | 40      | 20160728    |
| Infectopharm | Permethrin 25% s... | S071602.1 | 33328     | 40      | 20160728    |
| Infectopharm | Permethrin 25% s... | S021801.1 | 34120     | 40      | 20180301    |
| Infectopharm | Permethrin 25% s... | S021801.1 | 34121     | 40      | 20180301    |
| Infectopharm | Permethrin 25% s... | S041901.1 | 34692     | 40      | 20190426    |
| Infectopharm | Permethrin 25% s... | S041901.1 | 34693     | 40      | 20190426    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 540 spectra of 13 reference samples from the substance/substance group *Permethrin 25% solution*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 399 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 160 spectra of 4 reference samples from the substance/substance group *Permethrin 25% solution*.



- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier     | Substance               | Batch     | Sample ID | Spectra |
|--------------|-------------------------|-----------|-----------|---------|
| Infectopharm | Permethrin 25% solution | S041701.2 | 33940     | 40      |
| Infectopharm | Permethrin 25% solution | S122001.1 | 35454     | 40      |
| Infectopharm | Permethrin 25% solution | S041701.2 | 33941     | 40      |
| Infectopharm | Permethrin 25% solution | S122001.1 | 35455     | 40      |

- 91 331 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 589 spectra from 195 *Apo-Ident* customers from 102 batches from the substance/substance group *Permethrin 25% solution*.
- Among them are spectra of independent samples from 48 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance               | Batch    | Spectra |
|----------------------|-------------------------|----------|---------|
| AHD / Infectopharm   | Permethrin 25% solution | S0216011 | 1       |
| biomo                | Permethrin 25% solution | 171201   | 1       |
| Biomo                | Permethrin 25% solution | 170503   | 2       |
| Biomo                | Permethrin 25% solution | 170504   | 1       |
| Biomo                | Permethrin 25% solution | 190602   | 2       |
| Biomo                | Permethrin 25% solution | 190603   | 1       |
| Biomo                | Permethrin 25% solution | 200404   | 1       |
| biomo / Noweda       | Permethrin 25% solution | 160202   | 1       |
| biomo / Noweda       | Permethrin 25% solution | 171201   | 1       |
| Biomo /Noweda        | Permethrin 25% solution | 170504   | 1       |
| Biomo /Noweda        | Permethrin 25% solution | 171201   | 3       |
| Biomo /Noweda        | Permethrin 25% solution | 190602   | 1       |
| biomo pharma         | Permethrin 25% solution | 171201   | 1       |
| biomo pharma         | Permethrin 25% solution | 1906002  | 1       |
| Biomo Pharma GmbH    | Permethrin 25% solution | 160202   | 1       |
| Biomo Pharma GmbH    | Permethrin 25% solution | 170503   | 1       |
| Biomo Pharma/ Noweda | Permethrin 25% solution | 200404   | 1       |
| biomo pharma/Phönix  | Permethrin 25% solution | 170504   | 1       |
| Biomo pharma/Phönix  | Permethrin 25% solution | 190602   | 2       |
| Biomo/AHD            | Permethrin 25% solution | 171201   | 2       |
| Biomo/Geibo          | Permethrin 25% solution | 160202   | 1       |
| Biomo/Noweda         | Permethrin 25% solution | 150901   | 1       |
| Biomo/Noweda         | Permethrin 25% solution | 160202   | 2       |
| Biomo/Phönix         | Permethrin 25% solution | 171201   | 1       |
| Caelo                | Permethrin 25% solution | 12091811 | 1       |
| Caelo                | Permethrin 25% solution | 3279     | 1       |
| Caelo                | Permethrin 25% solution | S0216011 | 1       |
| Caelo                | Permethrin 25% solution | S071802  | 1       |
| infecto pharm        | Permethrin 25% solution | s121402  | 1       |

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| Supplier                      | Substance               | Batch         | Spectra |
|-------------------------------|-------------------------|---------------|---------|
| Infecto Pharm / Phönix        | Permethrin 25% solution | S072018       | 1       |
| Infectoph./Gehe               | Permethrin 25% solution | S0313011      | 1       |
| Infectoph./Sanac.             | Permethrin 25% solution | 170504        | 1       |
| infectopharm                  | Permethrin 25% solution | 23071414      | 1       |
| Infectopharm                  | Permethrin 25% solution | S081202       | 1       |
| Infectopharm                  | Permethrin 25% solution | S0313011      | 1       |
| Infectopharm                  | Permethrin 25% solution | S0614011      | 1       |
| Infectopharm                  | Permethrin 25% solution | S1214021      | 1       |
| Infectopharm                  | Permethrin 25% solution | S0218011      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 2510210212011 | 1       |
| InfectoPharm                  | Permethrin 25% solution | 23111205      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 21121202      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 25021307      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 11061302      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 6011407       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 8011424       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 14041401      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 31071402      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 20081401      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 2091402       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 11091403      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 9101406       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 25111401      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 5011501       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 17121403      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 28011504      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 4071506       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 1072015A      | 1       |
| InfectoPharm                  | Permethrin 25% solution | S0216011      | 1       |
| InfectoPharm                  | Permethrin 25% solution | 23021717      | 1       |
| InfectoPharm                  | Permethrin 25% solution | S021601       | 1       |
| InfectoPharm                  | Permethrin 25% solution | 28041708      | 1       |
| Infectopharm Arzneimittel     | Permethrin 25% solution | S0216011      | 1       |
| Infectopharm/Gehe             | Permethrin 25% solution | S0313011      | 1       |
| Infectopharm/Gehe             | Permethrin 25% solution | Infectopharm  | 1       |
| INFECTOPHARM/GEHE 30.06. ...  | Permethrin 25% solution | s071602-1     | 2       |
| InfectoPharm/Kehr             | Permethrin 25% solution | S0417012      | 4       |
| Infectopharm/Phönix           | Permethrin 25% solution | S0313011      | 1       |
| Phoenix                       | Permethrin 25% solution | So4701        | 1       |
| Phoenix                       | Permethrin 25% solution | 170504        | 1       |
| sanacorp                      | Permethrin 25% solution | 171201        | 1       |
| Sanacorp                      | Permethrin 25% solution | S0216011      | 1       |
| SANACORP                      | Permethrin 25% solution | 171201        | 1       |
| AHD / Infectopharm            | Permethrin 25% solution |               | 1       |
| Anzag                         | Permethrin 25% solution |               | 1       |
| Anzag (Hersteller: Infe. ...) | Permethrin 25% solution |               | 1       |
| Bombastus                     | Permethrin 25% solution |               | 3       |
| Caelo                         | Permethrin 25% solution |               | 16      |
| Caesar & Loretz GmbH          | Permethrin 25% solution |               | 1       |
| Dermapharm                    | Permethrin 25% solution |               | 2       |
| Euro OTC                      | Permethrin 25% solution |               | 1       |
| Fagron                        | Permethrin 25% solution |               | 12      |
| gehe                          | Permethrin 25% solution |               | 1       |
| Gehe                          | Permethrin 25% solution |               | 5       |
| GEHE                          | Permethrin 25% solution |               | 3       |
| Gehe Infectopharma            | Permethrin 25% solution |               | 1       |
| Ichthyol/Phönix               | Permethrin 25% solution |               | 2       |
| Infec. Ph./Alli. HC           | Permethrin 25% solution |               | 1       |
| Infect Pharm                  | Permethrin 25% solution |               | 2       |
| infecto                       | Permethrin 25% solution |               | 3       |

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| <b>Supplier</b>            | <b>Substance</b>        | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------------|--------------|----------------|
| Infecto Pharm              | Permethrin 25% solution |              | 2              |
| Infecto Pharm / Noweda     | Permethrin 25% solution |              | 10             |
| infecto Pharma             | Permethrin 25% solution |              | 4              |
| Infecto Pharma/ Noweda     | Permethrin 25% solution |              | 1              |
| Infecto/Ebert              | Permethrin 25% solution |              | 1              |
| Infecto/Phönix             | Permethrin 25% solution |              | 1              |
| InfectomPharm              | Permethrin 25% solution |              | 1              |
| Infectopahrm/Phoenix       | Permethrin 25% solution |              | 2              |
| Infectoph./                | Permethrin 25% solution |              | 1              |
| infectopharm               | Permethrin 25% solution |              | 6              |
| Infectopharm               | Permethrin 25% solution |              | 74             |
| InfectoPharm               | Permethrin 25% solution |              | 18             |
| INFECTOPHARM               | Permethrin 25% solution |              | 4              |
| infectopharm ADH           | Permethrin 25% solution |              | 1              |
| Infectopharm / 20          | Permethrin 25% solution |              | 1              |
| Infectopharm / Alliance... | Permethrin 25% solution |              | 1              |
| InfectoPharm / Anzag       | Permethrin 25% solution |              | 1              |
| Infectopharm / Gehe        | Permethrin 25% solution |              | 3              |
| InfectoPharm / Gehe        | Permethrin 25% solution |              | 17             |
| Infectopharm / Jenne       | Permethrin 25% solution |              | 1              |
| Infectopharm / Kehr        | Permethrin 25% solution |              | 2              |
| Infectopharm / Noweda      | Permethrin 25% solution |              | 3              |
| InfectoPharm / Phönix      | Permethrin 25% solution |              | 2              |
| infectopharm / Sanacorp    | Permethrin 25% solution |              | 1              |
| InfectoPharm / Sanacorp    | Permethrin 25% solution |              | 3              |
| Infectopharm AM / Allia... | Permethrin 25% solution |              | 2              |
| Infectopharm Arzneimittel  | Permethrin 25% solution |              | 6              |
| Infectopharm Heppenheim    | Permethrin 25% solution |              | 1              |
| Infectopharm Sanacorp      | Permethrin 25% solution |              | 3              |
| InfectoPharm, Heppenheim   | Permethrin 25% solution |              | 6              |
| Infectopharm, von Humbo... | Permethrin 25% solution |              | 3              |
| infectopharm„Kehr/ 19...   | Permethrin 25% solution |              | 1              |
| Infectopharm/              | Permethrin 25% solution |              | 1              |
| InfectoPharm/ AHD/ 12.0... | Permethrin 25% solution |              | 1              |
| InfectoPharm/ AHD/ 19.1... | Permethrin 25% solution |              | 6              |
| Infectopharm/ Alliance     | Permethrin 25% solution |              | 2              |
| InfectoPharm/ Alliance ... | Permethrin 25% solution |              | 1              |
| InfectoPharm/ Anzag        | Permethrin 25% solution |              | 3              |
| InfectoPharm/ G            | Permethrin 25% solution |              | 1              |
| Infectopharm/ Gehe         | Permethrin 25% solution |              | 2              |
| Infectopharm/ Gotha        | Permethrin 25% solution |              | 1              |
| Infectopharm/ Now          | Permethrin 25% solution |              | 1              |
| Infectopharm/ Noweda       | Permethrin 25% solution |              | 16             |
| InfectoPharm/ Phoenix/ ... | Permethrin 25% solution |              | 1              |
| Infectopharm/ Phönix       | Permethrin 25% solution |              | 2              |
| InfectoPharm/ Phönix       | Permethrin 25% solution |              | 3              |
| Infectopharm/ Sanacorp     | Permethrin 25% solution |              | 2              |
| INFECTOPHARM/1             | Permethrin 25% solution |              | 2              |
| Infectopharm/AHD           | Permethrin 25% solution |              | 12             |
| InfectoPharm/AHD           | Permethrin 25% solution |              | 6              |
| Infectopharm/Alliance      | Permethrin 25% solution |              | 3              |
| Infectopharm/Allianz       | Permethrin 25% solution |              | 10             |
| Infectopharm/Anzag         | Permethrin 25% solution |              | 4              |
| InfectoPharm/Anzag         | Permethrin 25% solution |              | 2              |
| Infectopharm/APEG          | Permethrin 25% solution |              | 1              |
| Infectopharm/Ebert         | Permethrin 25% solution |              | 4              |
| InfectoPharm/Ebert         | Permethrin 25% solution |              | 1              |
| Infectopharm/Fiebig        | Permethrin 25% solution |              | 7              |
| Infectopharm/Gehe          | Permethrin 25% solution |              | 8              |
| InfectoPharm/gehe          | Permethrin 25% solution |              | 2              |

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| Supplier                   | Substance               | Batch | Spectra |
|----------------------------|-------------------------|-------|---------|
| InfectoPharm/Gehe          | Permethrin 25% solution |       | 8       |
| INFECTOPHARM/GEHE 22.09... | Permethrin 25% solution |       | 1       |
| Infectopharm/gehe/28,20    | Permethrin 25% solution |       | 1       |
| infectopharm/Jenne         | Permethrin 25% solution |       | 1       |
| Infectopharm/Jenne         | Permethrin 25% solution |       | 4       |
| InfectoPharm/Kehr          | Permethrin 25% solution |       | 1       |
| Infectopharm/Kehr 10.07... | Permethrin 25% solution |       | 1       |
| Infectopharm/noweda        | Permethrin 25% solution |       | 1       |
| Infectopharm/Noweda        | Permethrin 25% solution |       | 19      |
| InfectoPharm/Noweda        | Permethrin 25% solution |       | 1       |
| INFECTOPHARM/NOWEDA 11...  | Permethrin 25% solution |       | 1       |
| InfectoPharm/Ohönix        | Permethrin 25% solution |       | 1       |
| Infectopharm/Phoenix       | Permethrin 25% solution |       | 25      |
| InfectoPharm/Phoenix       | Permethrin 25% solution |       | 1       |
| infectopharm/phönix        | Permethrin 25% solution |       | 1       |
| infectopharm/Phönix        | Permethrin 25% solution |       | 2       |
| Infectopharm/Phönix        | Permethrin 25% solution |       | 27      |
| InfectoPharm/Phönix        | Permethrin 25% solution |       | 5       |
| Infectopharm/Phönix (19... | Permethrin 25% solution |       | 1       |
| Infectopharm/Sana          | Permethrin 25% solution |       | 3       |
| Infectopharm/Sanacorp      | Permethrin 25% solution |       | 1       |
| Infectopharm/Sanacorp      | Permethrin 25% solution |       | 10      |
| INFECTOPHARM/Sanacorp      | Permethrin 25% solution |       | 1       |
| Infectopharm-Gehe          | Permethrin 25% solution |       | 1       |
| Infvctopharm/Fiebig        | Permethrin 25% solution |       | 2       |
| Jenne                      | Permethrin 25% solution |       | 1       |
| JENNE                      | Permethrin 25% solution |       | 1       |
| Jenne / Infectopharm       | Permethrin 25% solution |       | 2       |
| Kehr /Infecto Pharm        | Permethrin 25% solution |       | 2       |
| Krieger                    | Permethrin 25% solution |       | 2       |
| Löwen City-Apotheke Bar... | Permethrin 25% solution |       | 1       |
|                            | Permethrin 25% solution |       | 1       |
| Noweda                     | Permethrin 25% solution |       | 1       |
| Noweda/ Infectopharm       | Permethrin 25% solution |       | 1       |
| Noweda/Infecto Pharma      | Permethrin 25% solution |       | 1       |
| Noweda/Infectopharm        | Permethrin 25% solution |       | 1       |
| Noweda/InfectoPharm        | Permethrin 25% solution |       | 1       |
| Phoenix                    | Permethrin 25% solution |       | 4       |
| Phoenix/InfectoPharm       | Permethrin 25% solution |       | 5       |
| Phönix / Infectopharm      | Permethrin 25% solution |       | 1       |
| Phönix /Infectopharm       | Permethrin 25% solution |       | 8       |
| Phönix/Infectopharm        | Permethrin 25% solution |       | 3       |
| Sanacorp                   | Permethrin 25% solution |       | 4       |
| Sanacorp/Apomix            | Permethrin 25% solution |       | 2       |

- 240 774 spectra from 1121 *Apo-Ident* customers from a total of 46 909 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Permethrin 25% solution* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Permethrin 25% solution* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect.

The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 538           | 2              | 63 399        |
| <b>Type B</b> | 0              | 160           | 0              | 91 331        |
| <b>Type C</b> | 0              | 589           | 0              | 240 774       |

The substance/substance group *Permethrin 25% solution* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 99.6296 % (> 99.0741 %)  |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 96.2500 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 100.0000 % (> 98.9813 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Permethrin 25% solution* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in main model | Distance in second-stage model |
|---------------------------------------|------------------------|--------------------------------|
| Metronidazole 25% in white petrolatum | 60.36                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Permethrin 25% solution* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31177     | 31177               | 0.00                         | 87.45                           |
| 31563     | 31563               | 0.00                         | 76.48                           |
| 32262     | 31563               | 6.20                         | 99.71                           |
| 32263     | 31563               | 3.91                         | 93.75                           |
| 33246     | 31563               | 16.59                        | 103.95                          |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 33247            | 31177                      | 8.48                                | 89.36                                  |
| 33301            | 31177                      | 19.04                               | 87.48                                  |
| 33302            | 31177                      | 16.89                               | 92.47                                  |
| 33328            | 31563                      | 9.52                                | 101.38                                 |
| 34120            | 31177                      | 20.16                               | 95.12                                  |
| 34121            | 31177                      | 14.27                               | 98.53                                  |
| 34692            | 31563                      | 4.40                                | 91.23                                  |
| 34693            | 31177                      | 17.99                               | 92.38                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Petroleum ether DAB**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30899-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Petroleum ether DAB; Benzinum DAB

### Special notes

When selecting the *Petroleum ether DAB* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Petroleum ether DAB       | 3      | 3      | 381    |



## Second-stage model

For differentiation of the substance/substance group *Petroleum ether DAB* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Petroleum ether DAB*:

| Supplier     | Substance           | Batch    | Sample ID | Spectra | Certificate |
|--------------|---------------------|----------|-----------|---------|-------------|
| Caelo        | Petroleum ether ... | 12279604 | 30899     | 60      | 1503677     |
| Caelo        | Petroleum ether ... | 13141304 | 31283     | 40      | 1412255     |
| Otto Fischar | Petroleum ether ... | 6323042  | 31253     | 40      | 1505436     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Petroleum ether DAB*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 799 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Petroleum ether DAB*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance           | Batch   | Sample ID | Spectra |
|----------|---------------------|---------|-----------|---------|
| Caelo    | Petroleum ether DAB | 171715  | 33329     | 40      |
| Hedinger | Petroleum ether DAB | 028175B | 32955     | 40      |
| Hedinger | Petroleum ether DAB | 028186B | 35260     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1887 spectra from 552 *Apo-Ident* customers from 389 batches from the substance/substance group *Petroleum ether DAB*.
- Among them are spectra of independent samples from 378 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                    | Substance           | Batch      | Spectra |
|-----------------------------|---------------------|------------|---------|
| A. Hedinger / Noweda        | Petroleum ether DAB | 281728     | 1       |
| A.H.Hedinger vdL            | Petroleum ether DAB | 28172B     | 1       |
| A.Hedinger / Kehr           | Petroleum ether DAB | 281708     | 1       |
| Aallianc. Healthc. / Fis... | Petroleum ether DAB | 6327105    | 1       |
| ACM                         | Petroleum ether DAB | KNC0833J15 | 1       |
| AEP/ Fischar                | Petroleum ether DAB | 6325105    | 1       |
| AEP/Fischar                 | Petroleum ether DAB | 6326092    | 1       |
| AHC/Fischar                 | Petroleum ether DAB | 6328064    | 1       |
| AHD                         | Petroleum ether DAB | 28176B     | 1       |
| AHD                         | Petroleum ether DAB | 28178B     | 1       |
| AHD/Fischar                 | Petroleum ether DAB | 6329091    | 1       |
| AHD/Hedinger                | Petroleum ether DAB | 28181B     | 1       |
| ALH/Hedinger                | Petroleum ether DAB | 28177B     | 1       |
| Alliance                    | Petroleum ether DAB | 6326027    | 1       |
| Alliance                    | Petroleum ether DAB | 6328016    | 1       |
| Alliance Healthcare         | Petroleum ether DAB | 28180B     | 1       |
| Alliance Healthcare         | Petroleum ether DAB | 28181B     | 1       |
| Alliance Healthcare         | Petroleum ether DAB | 28183B     | 1       |
| Alliance Healthcare/Fis...  | Petroleum ether DAB | 6324025    | 1       |
| Alliance Healthcare/Ott...  | Petroleum ether DAB | 6328122    | 1       |
| Caelo                       | Petroleum ether DAB | 6328103    | 1       |
| AllianceHealthcare          | Petroleum ether DAB | 28172b     | 1       |
| anzag                       | Petroleum ether DAB | 6324063    | 1       |
| Anzag                       | Petroleum ether DAB | 6324092    | 1       |
| Anzag                       | Petroleum ether DAB | 6329023    | 1       |
| Euro OTC                    | Petroleum ether DAB | 6328104    | 1       |
| Anzag / Fischar             | Petroleum ether DAB | 6328015    | 1       |
| Anzag / Fischar             | Petroleum ether DAB | 6328112    | 1       |
| Anzag / Fischer             | Petroleum ether DAB | 6329091    | 1       |
| Anzag / Fischer             | Petroleum ether DAB | 6320032    | 1       |
| Anzag / Fischer             | Petroleum ether DAB | 6320075    | 1       |
| Anzag / Fischer             | Petroleum ether DAB | 6320105    | 1       |
| anzag 15.11.12              | Petroleum ether DAB | 28167B     | 1       |
| Anzag 16.10.14              | Petroleum ether DAB | 28171B     | 1       |
| Anzag/Fischar               | Petroleum ether DAB | 6323017    | 1       |
| Anzag/Fischar               | Petroleum ether DAB | 6324064    | 1       |
| Anzag/Hedinger              | Petroleum ether DAB | 28167B     | 2       |
| Anzag/Hedinger              | Petroleum ether DAB | 28172B     | 1       |
| Apomix /AHD                 | Petroleum ether DAB | 6324082    | 1       |
| Apoth. Dr. P. Hünerbei      | Petroleum ether DAB | 28176B     | 1       |
| Aug. Hedinger gmbH          | Petroleum ether DAB | 28184B     | 1       |

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| <b>Supplier</b>      | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------|---------------------|--------------|----------------|
| Aug.Hedinger         | Petroleum ether DAB | 28179B       | 1              |
| Aug.Hedinger         | Petroleum ether DAB | 28180B       | 1              |
| AUG.HEDINGER GMBH    | Petroleum ether DAB | 28180B       | 1              |
| Aug.Hedinger/Noweda  | Petroleum ether DAB | 28184B       | 1              |
| Aug.Hedinger/Phoenix | Petroleum ether DAB | 281738       | 2              |
| August Hedinger      | Petroleum ether DAB | 28178B       | 2              |
| August Hedinger      | Petroleum ether DAB | 28179B       | 1              |
| August Hedinger      | Petroleum ether DAB | 281818       | 1              |
| Bären Apotheke       | Petroleum ether DAB | 6327019      | 1              |
| Bären Apotheke       | Petroleum ether DAB | 6327018      | 1              |
| Barthel              | Petroleum ether DAB | 28171B       | 2              |
| Bionorica/Krieger    | Petroleum ether DAB | 6329023      | 1              |
| Bombastus            | Petroleum ether DAB | 6326063      | 1              |
| Caelo                | Petroleum ether DAB | 6322097      | 1              |
| Caelo                | Petroleum ether DAB | 4031404      | 1              |
| Caelo                | Petroleum ether DAB | 28172B       | 4              |
| Caelo                | Petroleum ether DAB | 11357104     | 1              |
| Caelo                | Petroleum ether DAB | 6325109      | 1              |
| Caelo                | Petroleum ether DAB | 6326055      | 1              |
| Caelo                | Petroleum ether DAB | 28176B       | 4              |
| Caelo                | Petroleum ether DAB | 6327114      | 2              |
| Caelo                | Petroleum ether DAB | 28177b       | 2              |
| Caelo                | Petroleum ether DAB | 1611106      | 1              |
| Caelo                | Petroleum ether DAB | 632711A      | 1              |
| Caelo                | Petroleum ether DAB | 6328112      | 1              |
| Caelo                | Petroleum ether DAB | 17171505     | 1              |
| Caelo                | Petroleum ether DAB | 171715002    | 1              |
| Caelo                | Petroleum ether DAB | 16111008     | 1              |
| Caelo                | Petroleum ether DAB | 6328075      | 1              |
| Caelo                | Petroleum ether DAB | 28175B       | 8              |
| Caelo                | Petroleum ether DAB | 28170B       | 1              |
| Caelo                | Petroleum ether DAB | 16111005     | 1              |
| Caelo                | Petroleum ether DAB | 6326031      | 2              |
| Caelo                | Petroleum ether DAB | 28178B       | 6              |
| Caelo                | Petroleum ether DAB | 28180B       | 3              |
| Caelo                | Petroleum ether DAB | 5013J-01170  | 1              |
| Caelo                | Petroleum ether DAB | 281728       | 1              |
| Caelo                | Petroleum ether DAB | 28183B       | 1              |
| Caelo                | Petroleum ether DAB | 6326063      | 1              |
| Caelo                | Petroleum ether DAB | 6327016      | 1              |
| Caelo                | Petroleum ether DAB | 6325119      | 1              |
| Caelo                | Petroleum ether DAB | 6324018      | 1              |
| Caelo                | Petroleum ether DAB | 28168B       | 4              |
| Caelo                | Petroleum ether DAB | 28177B       | 1              |
| Caelo                | Petroleum ether DAB | 281698       | 1              |
| Caelo                | Petroleum ether DAB | 28171B       | 4              |
| Caelo                | Petroleum ether DAB | 28173B       | 5              |
| Caelo                | Petroleum ether DAB | 28174B       | 5              |
| Caelo                | Petroleum ether DAB | 6327054      | 2              |
| Caelo                | Petroleum ether DAB | 281778       | 1              |
| Caelo                | Petroleum ether DAB | 2816B        | 1              |
| Caelo                | Petroleum ether DAB | 6327115      | 1              |
| Caelo                | Petroleum ether DAB | 16111007     | 2              |
| Caelo                | Petroleum ether DAB | 6326027      | 1              |
| Caelo                | Petroleum ether DAB | 6326061      | 1              |
| Caelo                | Petroleum ether DAB | 6325021      | 1              |
| Caelo                | Petroleum ether DAB | 28167B       | 4              |
| Caelo                | Petroleum ether DAB | 13141302     | 1              |
| Caelo                | Petroleum ether DAB | 6324082      | 2              |
| Caelo                | Petroleum ether DAB | 6324113      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Caelo                      | Petroleum ether DAB | 6325055      | 2              |
| Caelo                      | Petroleum ether DAB | 6325111      | 2              |
| Caelo                      | Petroleum ether DAB | 6326014      | 1              |
| Caelo                      | Petroleum ether DAB | 6326104      | 1              |
| Caelo                      | Petroleum ether DAB | 6328113      | 3              |
| Caelo                      | Petroleum ether DAB | 6328104      | 1              |
| Caelo                      | Petroleum ether DAB | 6323033      | 2              |
| Caelo                      | Petroleum ether DAB | 6324025      | 1              |
| Caelo                      | Petroleum ether DAB | 6324044      | 1              |
| Caelo                      | Petroleum ether DAB | 6326015      | 1              |
| Caelo                      | Petroleum ether DAB | 16111002     | 2              |
| Caelo                      | Petroleum ether DAB | 6328111      | 1              |
| Caelo                      | Petroleum ether DAB | 28179B       | 3              |
| Caelo                      | Petroleum ether DAB | 6327013      | 1              |
| Caelo                      | Petroleum ether DAB | 281748       | 1              |
| Caesar & Loretz GmbH       | Petroleum ether DAB | 28179B       | 1              |
| Caesar & Loretz GmbH       | Petroleum ether DAB | 17171507     | 1              |
| Caesar & Loretz GmbH       | Petroleum ether DAB | 18174317     | 1              |
| Caesar & Loretz GmbH / ... | Petroleum ether DAB | 6320043      | 1              |
| Calo/AHD                   | Petroleum ether DAB | 28175B       | 1              |
| DAB 1999                   | Petroleum ether DAB | 28176B       | 1              |
| Delta                      | Petroleum ether DAB | 28176B       | 2              |
| Dr. Seeger/ Phönix         | Petroleum ether DAB | 28169B       | 1              |
| Ebert/Fischar              | Petroleum ether DAB | 6323093      | 1              |
| Euro OTC                   | Petroleum ether DAB | 23o4123      | 1              |
| Euro OTC                   | Petroleum ether DAB | 6326104      | 1              |
| Euro OTC                   | Petroleum ether DAB | 6327102      | 2              |
| Euro OTC                   | Petroleum ether DAB | 6325087      | 1              |
| FA.Hedinger                | Petroleum ether DAB | 28174B       | 3              |
| Fagron                     | Petroleum ether DAB | 6326024      | 2              |
| Fagron                     | Petroleum ether DAB | 28178B       | 2              |
| Fiebig                     | Petroleum ether DAB | 6324123      | 1              |
| Fiebig                     | Petroleum ether DAB | 28175B       | 1              |
| Fiebig                     | Petroleum ether DAB | 6327017      | 2              |
| Fiebig                     | Petroleum ether DAB | 6327116      | 1              |
| Fiebig                     | Petroleum ether DAB | 28177B       | 1              |
| Fiebig                     | Petroleum ether DAB | 28178B       | 2              |
| Fiebig                     | Petroleum ether DAB | 6328105      | 1              |
| Fiebig                     | Petroleum ether DAB | 28179B       | 1              |
| Fiebig                     | Petroleum ether DAB | 28180B       | 1              |
| Fiebig                     | Petroleum ether DAB | 28184B       | 1              |
| Fiebig/Fischer             | Petroleum ether DAB | 6328014      | 1              |
| Fiebig/Hedinger            | Petroleum ether DAB | 28177B       | 2              |
| Fiebig/Hedinger            | Petroleum ether DAB | 28180B       | 1              |
| Fiebig-Hedinger            | Petroleum ether DAB | 28176B       | 1              |
| fischar                    | Petroleum ether DAB | 6324035      | 1              |
| fischar                    | Petroleum ether DAB | 6324065      | 1              |
| fischar                    | Petroleum ether DAB | 6326021      | 2              |
| fischar                    | Petroleum ether DAB | 6325023      | 1              |
| fischar                    | Petroleum ether DAB | 6325024      | 1              |
| fischar                    | Petroleum ether DAB | 6325109      | 1              |
| fischar                    | Petroleum ether DAB | 616331022    | 1              |
| fischar                    | Petroleum ether DAB | 6327055      | 1              |
| fischar                    | Petroleum ether DAB | 6328041      | 1              |
| fischar                    | Petroleum ether DAB | 6329101      | 1              |
| Fischar                    | Petroleum ether DAB | 6322061      | 1              |
| Fischar                    | Petroleum ether DAB | 6322079      | 1              |
| Fischar                    | Petroleum ether DAB | 6321111      | 1              |
| Fischar                    | Petroleum ether DAB | 6322074      | 2              |
| Fischar                    | Petroleum ether DAB | 6322076      | 1              |

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| <b>Supplier</b> | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------|--------------|----------------|
| Fischar         | Petroleum ether DAB | 6322051      | 1              |
| Fischar         | Petroleum ether DAB | 632207A      | 1              |
| Fischar         | Petroleum ether DAB | 6322073      | 1              |
| Fischar         | Petroleum ether DAB | 6323016      | 1              |
| Fischar         | Petroleum ether DAB | 6322113      | 1              |
| Fischar         | Petroleum ether DAB | 6322114      | 1              |
| Fischar         | Petroleum ether DAB | 6323017      | 1              |
| Fischar         | Petroleum ether DAB | 6323033      | 1              |
| Fischar         | Petroleum ether DAB | 6323063      | 3              |
| Fischar         | Petroleum ether DAB | 6322119      | 1              |
| Fischar         | Petroleum ether DAB | 6323066      | 1              |
| Fischar         | Petroleum ether DAB | 6323068      | 1              |
| Fischar         | Petroleum ether DAB | 412062-2-P   | 1              |
| Fischar         | Petroleum ether DAB | 6323111      | 1              |
| Fischar         | Petroleum ether DAB | 6324016      | 1              |
| Fischar         | Petroleum ether DAB | 632401A      | 1              |
| Fischar         | Petroleum ether DAB | 6323099      | 1              |
| Fischar         | Petroleum ether DAB | 6323097      | 1              |
| Fischar         | Petroleum ether DAB | 6324041      | 3              |
| Fischar         | Petroleum ether DAB | 6324064      | 1              |
| Fischar         | Petroleum ether DAB | 6324082      | 15             |
| Fischar         | Petroleum ether DAB | 6324034      | 2              |
| Fischar         | Petroleum ether DAB | 6324074      | 1              |
| Fischar         | Petroleum ether DAB | 6324091      | 1              |
| Fischar         | Petroleum ether DAB | 6324075      | 1              |
| Fischar         | Petroleum ether DAB | 6324092      | 1              |
| Fischar         | Petroleum ether DAB | 6324055      | 1              |
| Fischar         | Petroleum ether DAB | 6323015      | 1              |
| Fischar         | Petroleum ether DAB | 6324114      | 2              |
| Fischar         | Petroleum ether DAB | 6324103      | 2              |
| Fischar         | Petroleum ether DAB | 6324013      | 1              |
| Fischar         | Petroleum ether DAB | 6324115      | 1              |
| Fischar         | Petroleum ether DAB | 6325025      | 1              |
| Fischar         | Petroleum ether DAB | 6326012      | 1              |
| Fischar         | Petroleum ether DAB | 6324072      | 2              |
| Fischar         | Petroleum ether DAB | 6324105      | 4              |
| Fischar         | Petroleum ether DAB | 6324083      | 1              |
| Fischar         | Petroleum ether DAB | 6325012      | 3              |
| Fischar         | Petroleum ether DAB | 6325022      | 2              |
| Fischar         | Petroleum ether DAB | 6325024      | 2              |
| Fischar         | Petroleum ether DAB | 6325023      | 3              |
| Fischar         | Petroleum ether DAB | 24061501     | 1              |
| Fischar         | Petroleum ether DAB | 6324123      | 1              |
| Fischar         | Petroleum ether DAB | 6325034      | 1              |
| Fischar         | Petroleum ether DAB | 6325063      | 3              |
| Fischar         | Petroleum ether DAB | 6325042      | 1              |
| Fischar         | Petroleum ether DAB | 6325052      | 3              |
| Fischar         | Petroleum ether DAB | 6325081      | 3              |
| Fischar         | Petroleum ether DAB | 6325051      | 2              |
| Fischar         | Petroleum ether DAB | 6325065      | 1              |
| Fischar         | Petroleum ether DAB | 6325101      | 2              |
| Fischar         | Petroleum ether DAB | 6325106      | 1              |
| Fischar         | Petroleum ether DAB | 6326011      | 4              |
| Fischar         | Petroleum ether DAB | 6325119      | 1              |
| Fischar         | Petroleum ether DAB | 6325109      | 2              |
| Fischar         | Petroleum ether DAB | 6326026      | 1              |
| Fischar         | Petroleum ether DAB | 6326027      | 1              |
| Fischar         | Petroleum ether DAB | 55780        | 1              |
| Fischar         | Petroleum ether DAB | 6326031      | 2              |
| Fischar         | Petroleum ether DAB | 6326032      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Fischar                    | Petroleum ether DAB | 6326047      | 2              |
| Fischar                    | Petroleum ether DAB | 6326071      | 3              |
| Fischar                    | Petroleum ether DAB | 6326061      | 2              |
| Fischar                    | Petroleum ether DAB | 6326084      | 2              |
| Fischar                    | Petroleum ether DAB | 6326072      | 1              |
| Fischar                    | Petroleum ether DAB | 6326092      | 1              |
| Fischar                    | Petroleum ether DAB | 6326075      | 1              |
| Fischar                    | Petroleum ether DAB | 6326095      | 1              |
| Fischar                    | Petroleum ether DAB | 632701       | 1              |
| Fischar                    | Petroleum ether DAB | 6327017      | 2              |
| Fischar                    | Petroleum ether DAB | 6327013      | 1              |
| Fischar                    | Petroleum ether DAB | 6327034      | 2              |
| Fischar                    | Petroleum ether DAB | 6327024      | 1              |
| Fischar                    | Petroleum ether DAB | 6327054      | 2              |
| Fischar                    | Petroleum ether DAB | 6327019      | 1              |
| Fischar                    | Petroleum ether DAB | 6327072      | 1              |
| Fischar                    | Petroleum ether DAB | 6327053      | 1              |
| Fischar                    | Petroleum ether DAB | 6327074      | 2              |
| Fischar                    | Petroleum ether DAB | 6327102      | 2              |
| Fischar                    | Petroleum ether DAB | 6327101      | 1              |
| Fischar                    | Petroleum ether DAB | 6327091      | 1              |
| Fischar                    | Petroleum ether DAB | 6327105      | 1              |
| Fischar                    | Petroleum ether DAB | 6328014      | 1              |
| Fischar                    | Petroleum ether DAB | 6327115      | 1              |
| Fischar                    | Petroleum ether DAB | 6328016      | 1              |
| Fischar                    | Petroleum ether DAB | 632801A      | 1              |
| Fischar                    | Petroleum ether DAB | 6327112      | 1              |
| Fischar                    | Petroleum ether DAB | 9658104      | 1              |
| Fischar                    | Petroleum ether DAB | 6328105      | 1              |
| Fischar                    | Petroleum ether DAB | 6329014      | 2              |
| Fischar                    | Petroleum ether DAB | 6328122      | 1              |
| Fischar                    | Petroleum ether DAB | 6328112      | 2              |
| Fischar                    | Petroleum ether DAB | 6329012      | 1              |
| Fischar                    | Petroleum ether DAB | 6329033      | 2              |
| Fischar                    | Petroleum ether DAB | 6329045      | 2              |
| Fischar                    | Petroleum ether DAB | 6328072      | 2              |
| Fischar                    | Petroleum ether DAB | 6329015      | 2              |
| Fischar                    | Petroleum ether DAB | 6329051      | 1              |
| Fischar                    | Petroleum ether DAB | 6329053      | 2              |
| Fischar                    | Petroleum ether DAB | 6329075      | 1              |
| Fischar                    | Petroleum ether DAB | 6329095      | 1              |
| Fischar                    | Petroleum ether DAB | 6328113      | 1              |
| Fischar                    | Petroleum ether DAB | 6239123      | 1              |
| Fischar                    | Petroleum ether DAB | 6320012      | 2              |
| Fischar                    | Petroleum ether DAB | 6320011      | 1              |
| Fischar                    | Petroleum ether DAB | 6329101      | 1              |
| Fischar                    | Petroleum ether DAB | 6320014      | 1              |
| Fischar                    | Petroleum ether DAB | 6320041      | 1              |
| Fischar                    | Petroleum ether DAB | 7031588      | 1              |
| Fischar                    | Petroleum ether DAB | 6328019      | 3              |
| Fischar                    | Petroleum ether DAB | 6320054      | 1              |
| Fischar / Alliance Heal... | Petroleum ether DAB | 6326033      | 1              |
| Fischar / Anzag            | Petroleum ether DAB | 6322095      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6325055      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6326014      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6326075      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6326061      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6327033      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6327021      | 1              |
| Fischar / Gehe             | Petroleum ether DAB | 6327114      | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Fischar / GEHE             | Petroleum ether DAB | 6327074      | 1              |
| Fischar / GEHE             | Petroleum ether DAB | 6327115      | 1              |
| Fischar / GEHE             | Petroleum ether DAB | 6328123      | 1              |
| Fischar / GEHE             | Petroleum ether DAB | 6320014      | 1              |
| Fischar / GEHE             | Petroleum ether DAB | 6320043      | 1              |
| Fischar / Krieger          | Petroleum ether DAB | 6325105      | 1              |
| Fischar / Noweda           | Petroleum ether DAB | 6322112      | 1              |
| Fischar / Noweda           | Petroleum ether DAB | 6323069      | 1              |
| Fischar / Noweda           | Petroleum ether DAB | 6326105      | 1              |
| Fischar / Noweda           | Petroleum ether DAB | 6329094      | 1              |
| Fischar / Phönix           | Petroleum ether DAB | 3412I-01170  | 1              |
| Fischar / Phönix           | Petroleum ether DAB | 3413J-01170  | 1              |
| Fischar / Phönix           | Petroleum ether DAB | 6329034      | 1              |
| Fischar / Phönix           | Petroleum ether DAB | 6320032      | 1              |
| Fischar / Sanacorp         | Petroleum ether DAB | 6323062      | 1              |
| Fischar /VDL               | Petroleum ether DAB | 6328032      | 1              |
| Fischar /VDL               | Petroleum ether DAB | 6329101      | 1              |
| Fischar AHD 05.09.17 Ek... | Petroleum ether DAB | 6327023      | 1              |
| Fischar Anzag              | Petroleum ether DAB | 6327102      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6323066      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6325044      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6328035      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6328122      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6328124      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6325119      | 1              |
| Fischar GmbH               | Petroleum ether DAB | 6329014      | 1              |
| Fischar GmbH/Krieger       | Petroleum ether DAB | 6327024      | 1              |
| Fischar GmbH/Krieger       | Petroleum ether DAB | 6327101      | 1              |
| Fischar GmbH/Krieger       | Petroleum ether DAB | 6328014      | 1              |
| Fischar Otto / Fischar ... | Petroleum ether DAB | 6325117      | 1              |
| Fischar Otto / Fischar ... | Petroleum ether DAB | 6326052      | 1              |
| Fischar Otto / Fischar ... | Petroleum ether DAB | 6326113      | 1              |
| Fischar Otto / Fischar ... | Petroleum ether DAB | 6327051      | 1              |
| Fischar Phönix             | Petroleum ether DAB | 6323094      | 1              |
| Fischar Phönix             | Petroleum ether DAB | 6324018      | 1              |
| Fischar Phönix             | Petroleum ether DAB | 6323112      | 1              |
| Fischar Phönix             | Petroleum ether DAB | 6328014      | 1              |
| Fischar Phönix             | Petroleum ether DAB | 6328064      | 1              |
| Fischar/ AHD               | Petroleum ether DAB | 6327093      | 1              |
| Fischar/ Alliance          | Petroleum ether DAB | 632801A      | 1              |
| Fischar/ anzag             | Petroleum ether DAB | 6329014      | 1              |
| Fischar/ anzag             | Petroleum ether DAB | 6329124      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6327034      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6327091      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6328014      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6328091      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6328111      | 1              |
| Fischar/ Krieger           | Petroleum ether DAB | 6329034      | 2              |
| Fischar/ Krieger           | Petroleum ether DAB | 6329102      | 1              |
| Fischar/ Now               | Petroleum ether DAB | 6323064      | 1              |
| Fischar/ Now               | Petroleum ether DAB | 6328123      | 1              |
| Fischar/ Now               | Petroleum ether DAB | 6329033      | 1              |
| Fischar/ Now               | Petroleum ether DAB | 6329051      | 1              |
| fischar/ Noweda            | Petroleum ether DAB | 6326101      | 1              |
| Fischar/ Noweda            | Petroleum ether DAB | 6324104      | 1              |
| Fischar/ Noweda            | Petroleum ether DAB | 632704       | 1              |
| Fischar/ Noweda            | Petroleum ether DAB | 6328091      | 1              |
| Fischar/ Noweda            | Petroleum ether DAB | 6328112      | 1              |
| Fischar/ Phönix            | Petroleum ether DAB | 6325106      | 1              |
| Fischar/ Phönix            | Petroleum ether DAB | 6326093      | 1              |

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| Supplier                   | Substance           | Batch    | Spectra |
|----------------------------|---------------------|----------|---------|
| Fischar/ Phönix            | Petroleum ether DAB | 630024   | 1       |
| Fischar/ Sanacorp          | Petroleum ether DAB | 6325108  | 1       |
| Fischar/AEP                | Petroleum ether DAB | 6329051  | 1       |
| Fischar/AHD                | Petroleum ether DAB | 6329013  | 1       |
| Fischar/Alliance           | Petroleum ether DAB | 6328016  | 1       |
| Fischar/Alliance           | Petroleum ether DAB | 6329091  | 1       |
| Fischar/Alliance           | Petroleum ether DAB | 6320103  | 1       |
| Fischar/Alliance H.        | Petroleum ether DAB | 6325104  | 1       |
| Fischar/Alliance Health... | Petroleum ether DAB | 6326027  | 2       |
| Fischar/Alliance Health... | Petroleum ether DAB | 6328064  | 1       |
| Fischar/Alliance Heathc... | Petroleum ether DAB | 6324064  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6323016  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6323024  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6323099  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6323095  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6323062  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6324063  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6325053  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6326073  | 1       |
| Fischar/Anzag              | Petroleum ether DAB | 6329034  | 1       |
| Caelo                      | Petroleum ether DAB | 6329053  | 3       |
| Fischar/E&J                | Petroleum ether DAB | 6328064  | 1       |
| Fischar/Fiebig             | Petroleum ether DAB | 6325065  | 1       |
| Fischar/Fiebig             | Petroleum ether DAB | 6325109  | 2       |
| fischar/gehe               | Petroleum ether DAB | 6327053  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6322117  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6322061  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6322053  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6323093  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 632309A  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6323113  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 3623111  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6324062  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6325089  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6326092  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 632711A  | 2       |
| Fischar/Gehe               | Petroleum ether DAB | 632801A  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6328123  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6329014  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6320032  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6320064  | 1       |
| Fischar/Gehe               | Petroleum ether DAB | 6320065  | 1       |
| Fischar/GEHE               | Petroleum ether DAB | 63209034 | 1       |
| Fischar/GEHE               | Petroleum ether DAB | 6320043  | 1       |
| Fischar/Gerx               | Petroleum ether DAB | 6327053  | 1       |
| Fischar/Jenne              | Petroleum ether DAB | 6327114  | 1       |
| Fischar/Kehr               | Petroleum ether DAB | 6328122  | 1       |
| Fischar/Kehr               | Petroleum ether DAB | 6320033  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6323017  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6323065  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6323069  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326011  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326012  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326095  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326081  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326112  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326105  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6326049  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6327072  | 1       |
| Fischar/Noweda             | Petroleum ether DAB | 6328014  | 1       |

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| <b>Supplier</b> | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------|--------------|----------------|
| Fischar/Noweda  | Petroleum ether DAB | 6327115      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 632711A      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6328073      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6328035      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6328093      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6329023      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6328123      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6329015      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6328111      | 1              |
| Fischar/Noweda  | Petroleum ether DAB | 6329123      | 1              |
| Fischar/Nowenda | Petroleum ether DAB | 6323112      | 1              |
| Fischar/Pala    | Petroleum ether DAB | 6324101      | 2              |
| Fischar/Phoen   | Petroleum ether DAB | 6328113      | 1              |
| Fischar/Phoen   | Petroleum ether DAB | 6328074      | 1              |
| Fischar/Phoen   | Petroleum ether DAB | 6328045      | 1              |
| fishar/phoenix  | Petroleum ether DAB | 6323064      | 1              |
| Fischar/phoenix | Petroleum ether DAB | 6326061      | 5              |
| Fischar/phoenix | Petroleum ether DAB | 6326095      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6323069      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6324018      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6324103      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6325051      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6325108      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6326047      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6326071      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6326085      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328051      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328075      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328044      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328112      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328074      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6328105      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6329015      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6320054      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6320053      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6321011      | 1              |
| Fischar/Phoenix | Petroleum ether DAB | 6320105      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6323063      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6324105      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6324123      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6325081      | 3              |
| Fischar/Phönix  | Petroleum ether DAB | 6325086      | 2              |
| Fischar/Phönix  | Petroleum ether DAB | 6326011      | 2              |
| Fischar/Phönix  | Petroleum ether DAB | 6325105      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6326092      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6327024      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6326083      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6327093      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6327102      | 2              |
| Fischar/Phönix  | Petroleum ether DAB | 6328014      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6328063      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6328104      | 2              |
| Fischar/Phönix  | Petroleum ether DAB | 6328105      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6328074      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6328112      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6329023      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6329025      | 1              |
| Fischar/Phönix  | Petroleum ether DAB | 6320015      | 1              |
| Fischar/PX      | Petroleum ether DAB | 6328075      | 1              |
| Fischar/PX      | Petroleum ether DAB | 6329123      | 1              |

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| <b>Supplier</b>          | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|---------------------|--------------|----------------|
| fischar/Sanacorp         | Petroleum ether DAB | 6325021      | 1              |
| fischar/Sanacorp         | Petroleum ether DAB | 6326026      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6322116      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6324033      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6324065      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6324103      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6326047      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6326081      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6327018      | 2              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6327072      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6328013      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6327013      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6327102      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6328045      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6328051      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6328065      | 1              |
| Fischar/Sanacorp         | Petroleum ether DAB | 6328104      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 6326026      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 6326095      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 6327012      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 6327034      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 632711A      | 1              |
| Fischar/Spangro          | Petroleum ether DAB | 6329012      | 1              |
| fischar/vdl              | Petroleum ether DAB | 6323097      | 1              |
| Fischbar                 | Petroleum ether DAB | 6324103      | 1              |
| Fischbar                 | Petroleum ether DAB | 6326112      | 1              |
| fischer                  | Petroleum ether DAB | 6325087      | 1              |
| fischer                  | Petroleum ether DAB | 6329091      | 2              |
| fischer                  | Petroleum ether DAB | 6320043      | 1              |
| Fischer                  | Petroleum ether DAB | 6233033      | 1              |
| Fischer                  | Petroleum ether DAB | 6323064      | 1              |
| Fischer                  | Petroleum ether DAB | 6324062      | 1              |
| Fischer                  | Petroleum ether DAB | 6324102      | 1              |
| Fischer                  | Petroleum ether DAB | 6324103      | 1              |
| Fischer                  | Petroleum ether DAB | 6324095      | 1              |
| Fischer                  | Petroleum ether DAB | 6325081      | 1              |
| Fischer                  | Petroleum ether DAB | 6325107      | 1              |
| Fischer                  | Petroleum ether DAB | 6325105      | 1              |
| Fischer                  | Petroleum ether DAB | 6327024      | 1              |
| Fischer                  | Petroleum ether DAB | 6326092      | 1              |
| Fischer                  | Petroleum ether DAB | 6328093      | 1              |
| Fischer                  | Petroleum ether DAB | 6323066      | 1              |
| Fischer                  | Petroleum ether DAB | 6320074      | 1              |
| Fischer                  | Petroleum ether DAB | 6321011      | 1              |
| Fischer / Anzag          | Petroleum ether DAB | 6328035      | 1              |
| FISCHER GMBH / GEHE      | Petroleum ether DAB | 6323094      | 1              |
| FISCHER GMBH / GEHE      | Petroleum ether DAB | 6324091      | 1              |
| FISCHER GMBH / GEHE      | Petroleum ether DAB | 6324104      | 1              |
| Fischer GmbH/Phönix      | Petroleum ether DAB | 6328035      | 1              |
| Fischer Saarbrücken/GEHE | Petroleum ether DAB | 6323043      | 1              |
| Fischer Saarbrücken/GEHE | Petroleum ether DAB | 6322041      | 1              |
| fischer/Alkun            | Petroleum ether DAB | 6327094      | 1              |
| Fischer/Ebert&Jacobi     | Petroleum ether DAB | 6324022      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6323111      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6324103      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6325052      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6325053      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6326084      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6325024      | 1              |
| Fischer/Gehe             | Petroleum ether DAB | 6328122      | 1              |

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| <b>Supplier</b>  | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|------------------|---------------------|--------------|----------------|
| Fischer/Noweda   | Petroleum ether DAB | 6328013      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6325014      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6325034      | 3              |
| Fischer/Phönix   | Petroleum ether DAB | 6326027      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6327018      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6327034      | 2              |
| Fischer/Phönix   | Petroleum ether DAB | 6327061      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6329063      | 1              |
| Fischer/Phönix   | Petroleum ether DAB | 6327102      | 1              |
| Fischer/Sanacorp | Petroleum ether DAB | 6323099      | 1              |
| Fischer/Sanacorp | Petroleum ether DAB | 6325105      | 1              |
| Fischer/Sanacorp | Petroleum ether DAB | 637013       | 1              |
| Fishar           | Petroleum ether DAB | 6328105      | 1              |
| fishar/noweda    | Petroleum ether DAB | 6328122      | 1              |
| fishar/Noweda    | Petroleum ether DAB | 6326113      | 1              |
| Frau Brinn-Holtz | Petroleum ether DAB | 6325109      | 1              |
| Gehe             | Petroleum ether DAB | 28166B       | 1              |
| Gehe             | Petroleum ether DAB | 6322061      | 1              |
| Gehe             | Petroleum ether DAB | 6322095      | 1              |
| Gehe             | Petroleum ether DAB | 6325024      | 1              |
| Gehe             | Petroleum ether DAB | 6325051      | 1              |
| Gehe             | Petroleum ether DAB | 6325044      | 1              |
| Gehe             | Petroleum ether DAB | 6325065      | 1              |
| Gehe             | Petroleum ether DAB | 28173b       | 1              |
| Gehe             | Petroleum ether DAB | 6325109      | 1              |
| Gehe             | Petroleum ether DAB | 6326027      | 1              |
| Gehe             | Petroleum ether DAB | 6326055      | 1              |
| Gehe             | Petroleum ether DAB | 6326063      | 1              |
| Gehe             | Petroleum ether DAB | 6326093      | 1              |
| Gehe             | Petroleum ether DAB | 6326092      | 1              |
| Gehe             | Petroleum ether DAB | 6327017      | 1              |
| Gehe             | Petroleum ether DAB | 28176B       | 2              |
| Gehe             | Petroleum ether DAB | 6327034      | 1              |
| Gehe             | Petroleum ether DAB | 6327114      | 1              |
| Gehe             | Petroleum ether DAB | 28177B       | 2              |
| Gehe             | Petroleum ether DAB | 6328064      | 1              |
| Gehe             | Petroleum ether DAB | 6328104      | 1              |
| Gehe             | Petroleum ether DAB | 28178B       | 1              |
| Gehe             | Petroleum ether DAB | 6328112      | 1              |
| Gehe             | Petroleum ether DAB | 28179B       | 2              |
| Gehe             | Petroleum ether DAB | 6329105      | 1              |
| Gehe             | Petroleum ether DAB | 6329072      | 1              |
| Gehe             | Petroleum ether DAB | 28181B       | 1              |
| Gehe             | Petroleum ether DAB | 28185B       | 1              |
| Gehe             | Petroleum ether DAB | 28184B       | 1              |
| GEHE             | Petroleum ether DAB | 6322119      | 1              |
| GEHE             | Petroleum ether DAB | 28176B       | 1              |
| GEHE             | Petroleum ether DAB | 6328044      | 1              |
| Gehe - Hedinger  | Petroleum ether DAB | 28171B       | 1              |
| Gehe/ Hedinger   | Petroleum ether DAB | 28167B       | 1              |
| GEHE/ Hedinger   | Petroleum ether DAB | 28180B       | 1              |
| Caelo            | Petroleum ether DAB | 1110516      | 1              |
| Euro OTC         | Petroleum ether DAB | 28174B       | 1              |
| Gehe/Fischar     | Petroleum ether DAB | 13373701     | 1              |
| Gehe/Fischar     | Petroleum ether DAB | 6327062      | 3              |
| Gehe/Fischar     | Petroleum ether DAB | 6328075      | 1              |
| Gehe/Hedinger    | Petroleum ether DAB | 28175B       | 1              |
| Gehe/Hedinger    | Petroleum ether DAB | 28176B       | 1              |
| Gehe/Hedinger    | Petroleum ether DAB | 28177B       | 1              |
| Gehe/Hedinger    | Petroleum ether DAB | 28181B       | 1              |

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| <b>Supplier</b>        | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|------------------------|---------------------|--------------|----------------|
| Gehe/Otto Fischer GmbH | Petroleum ether DAB | 632711A      | 1              |
| Gehe/Otto Fischer GmbH | Petroleum ether DAB | 6329072      | 1              |
| Gehe-Hedinger          | Petroleum ether DAB | 28167B       | 1              |
| Gehe-Hedinger          | Petroleum ether DAB | 28172B       | 1              |
| Haerdinger/Sanacorp    | Petroleum ether DAB | 281778       | 1              |
| Hedinger/Noweda        | Petroleum ether DAB | 28177B       | 2              |
| hedinger               | Petroleum ether DAB | 28167B       | 2              |
| hedinger               | Petroleum ether DAB | 28168B       | 1              |
| hedinger               | Petroleum ether DAB | 298171B      | 1              |
| hedinger               | Petroleum ether DAB | 6326011      | 1              |
| hedinger               | Petroleum ether DAB | 28175        | 1              |
| hedinger               | Petroleum ether DAB | 28176B       | 1              |
| hedinger               | Petroleum ether DAB | 28178B       | 2              |
| Hedinger               | Petroleum ether DAB | 28165B       | 5              |
| Hedinger               | Petroleum ether DAB | 2071202      | 1              |
| Hedinger               | Petroleum ether DAB | 28166B       | 9              |
| Hedinger               | Petroleum ether DAB | 31101203     | 1              |
| Hedinger               | Petroleum ether DAB | 2411Q-01170  | 1              |
| Hedinger               | Petroleum ether DAB | 28167B       | 16             |
| Hedinger               | Petroleum ether DAB | 25021302     | 1              |
| Hedinger               | Petroleum ether DAB | 204311170    | 1              |
| Hedinger               | Petroleum ether DAB | 28168B       | 20             |
| Hedinger               | Petroleum ether DAB | 281658       | 1              |
| Hedinger               | Petroleum ether DAB | 3071304      | 1              |
| Hedinger               | Petroleum ether DAB | 281688       | 3              |
| Hedinger               | Petroleum ether DAB | 13081309     | 1              |
| Hedinger               | Petroleum ether DAB | 28169B       | 14             |
| Hedinger               | Petroleum ether DAB | 30101310     | 1              |
| Hedinger               | Petroleum ether DAB | 281698       | 2              |
| Hedinger               | Petroleum ether DAB | 28170B       | 15             |
| Hedinger               | Petroleum ether DAB | 28171B       | 28             |
| Hedinger               | Petroleum ether DAB | 3071401      | 1              |
| Hedinger               | Petroleum ether DAB | 281718       | 1              |
| Hedinger               | Petroleum ether DAB | 6324041      | 2              |
| Hedinger               | Petroleum ether DAB | 15091402     | 1              |
| Hedinger               | Petroleum ether DAB | 28172B       | 40             |
| Hedinger               | Petroleum ether DAB | 12121401     | 1              |
| Hedinger               | Petroleum ether DAB | 28011506     | 1              |
| Hedinger               | Petroleum ether DAB | 281748       | 5              |
| Hedinger               | Petroleum ether DAB | 2817SB       | 1              |
| Hedinger               | Petroleum ether DAB | 29041501     | 1              |
| Hedinger               | Petroleum ether DAB | 28173B       | 21             |
| Hedinger               | Petroleum ether DAB | 281738       | 6              |
| Hedinger               | Petroleum ether DAB | 28172b       | 1              |
| Hedinger               | Petroleum ether DAB | 28174B       | 31             |
| Hedinger               | Petroleum ether DAB | 28174        | 1              |
| Hedinger               | Petroleum ether DAB | 28174b       | 2              |
| Hedinger               | Petroleum ether DAB | 28175B       | 30             |
| Hedinger               | Petroleum ether DAB | 281758       | 3              |
| Hedinger               | Petroleum ether DAB | 2B175B       | 1              |
| Hedinger               | Petroleum ether DAB | 28176B       | 34             |
| Hedinger               | Petroleum ether DAB | 11051703     | 1              |
| Hedinger               | Petroleum ether DAB | (028)028     | 1              |
| Hedinger               | Petroleum ether DAB | 281768       | 3              |
| Hedinger               | Petroleum ether DAB | 7091707      | 1              |
| Hedinger               | Petroleum ether DAB | 170323184    | 1              |
| Hedinger               | Petroleum ether DAB | 28176B5395   | 1              |
| Hedinger               | Petroleum ether DAB | 18111701     | 1              |
| Hedinger               | Petroleum ether DAB | 28177B       | 20             |
| Hedinger               | Petroleum ether DAB | 281778       | 3              |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Hedinger                   | Petroleum ether DAB | 14051804    | 1       |
| Hedinger                   | Petroleum ether DAB | 9071803     | 1       |
| Hedinger                   | Petroleum ether DAB | 7081801     | 1       |
| Hedinger                   | Petroleum ether DAB | 28178B      | 26      |
| Hedinger                   | Petroleum ether DAB | 5121815     | 1       |
| Hedinger                   | Petroleum ether DAB | 28179B      | 11      |
| Hedinger                   | Petroleum ether DAB | 28180B      | 11      |
| Hedinger                   | Petroleum ether DAB | 28181B      | 9       |
| Hedinger                   | Petroleum ether DAB | 28182B      | 3       |
| Hedinger                   | Petroleum ether DAB | 28183B      | 1       |
| Hedinger                   | Petroleum ether DAB | 28184B      | 4       |
| Hedinger                   | Petroleum ether DAB | 28187B      | 1       |
| HEDINGER                   | Petroleum ether DAB | 28166B      | 2       |
| HEDINGER                   | Petroleum ether DAB | 28167B      | 1       |
| HEDINGER                   | Petroleum ether DAB | 281688      | 2       |
| HEDINGER                   | Petroleum ether DAB | 28173B      | 1       |
| HEDINGER                   | Petroleum ether DAB | 28183B      | 1       |
| Hedinger vDL               | Petroleum ether DAB | 28171B      | 2       |
| Hedinger , Stuttgart       | Petroleum ether DAB | 28170B      | 1       |
| HEDINGER / 20              | Petroleum ether DAB | 28168B      | 1       |
| HEDINGER / 20              | Petroleum ether DAB | 28170B      | 1       |
| HEDINGER / 30              | Petroleum ether DAB | 28172B      | 2       |
| Hedinger / 41              | Petroleum ether DAB | 28182B      | 1       |
| Hedinger / AHD 01.08.2017  | Petroleum ether DAB | 28176B      | 1       |
| Hedinger / AHD 08.03.2017  | Petroleum ether DAB | 28175B      | 1       |
| Hedinger / AHD 23.08.2018  | Petroleum ether DAB | 28177B      | 1       |
| Hedinger / Alliance HC     | Petroleum ether DAB | 28171B      | 1       |
| Hedinger / Alliance Hea... | Petroleum ether DAB | 28174B      | 1       |
| Hedinger / Alliance Hea... | Petroleum ether DAB | 28175B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28163B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28168B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28177B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28176B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28178B      | 1       |
| Hedinger / Anzag           | Petroleum ether DAB | 28181B      | 1       |
| Hedinger / Gehe            | Petroleum ether DAB | 28167B      | 1       |
| Hedinger / Gehe            | Petroleum ether DAB | 28169B      | 6       |
| Hedinger / Gehe            | Petroleum ether DAB | 1301401     | 1       |
| Hedinger / Gehe            | Petroleum ether DAB | 28170B      | 5       |
| Hedinger / Gehe            | Petroleum ether DAB | 28171B      | 1       |
| Hedinger / Gehe            | Petroleum ether DAB | 28174B      | 2       |
| Hedinger / Gehe            | Petroleum ether DAB | 28176B      | 1       |
| Hedinger / Gehe            | Petroleum ether DAB | 28178B      | 4       |
| Hedinger / Gehe            | Petroleum ether DAB | 28177B      | 1       |
| Hedinger / Noveda          | Petroleum ether DAB | 28176B      | 1       |
| Hedinger / NOW             | Petroleum ether DAB | 28170B      | 1       |
| Hedinger / Noweda          | Petroleum ether DAB | 28169B      | 1       |
| Hedinger / Noweda          | Petroleum ether DAB | 28172B      | 2       |
| Hedinger / Noweda          | Petroleum ether DAB | 28174B      | 2       |
| Hedinger / Noweda          | Petroleum ether DAB | 28175B      | 2       |
| Hedinger / Noweda          | Petroleum ether DAB | 28178B      | 1       |
| Hedinger / Noweda          | Petroleum ether DAB | 28179B      | 1       |
| Hedinger / Noweda          | Petroleum ether DAB | 28180B      | 1       |
| Hedinger / Noweda          | Petroleum ether DAB | 2818B       | 1       |
| HEDINGER / NOWEDA          | Petroleum ether DAB | 28175B      | 1       |
| Hedinger / Phoenix         | Petroleum ether DAB | 3966/V02/17 | 1       |
| Hedinger / Phoenix         | Petroleum ether DAB | 28180B      | 1       |
| Hedinger / Phönix          | Petroleum ether DAB | 28172B      | 1       |
| Hedinger / Sanacorp        | Petroleum ether DAB | 28183B      | 1       |
| hedinger /AHD              | Petroleum ether DAB | 28176B5449  | 1       |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Hedinger /Sanacorp         | Petroleum ether DAB | 28173B       | 1              |
| Hedinger GmbH              | Petroleum ether DAB | 28173B       | 1              |
| Hedinger GmbH              | Petroleum ether DAB | 28174B       | 1              |
| Hedinger GmbH              | Petroleum ether DAB | 28175B       | 1              |
| Hedinger GmbH &Co KG       | Petroleum ether DAB | 28176B       | 2              |
| Hedinger GmbH &Co KG       | Petroleum ether DAB | 28177B       | 1              |
| Hedinger GmbH &Co KG       | Petroleum ether DAB | 28178B       | 1              |
| Hedinger GmbH&Co.KG        | Petroleum ether DAB | 28181B       | 1              |
| Hedinger GmbH/ NOWEDA      | Petroleum ether DAB | 28174B       | 1              |
| Hedinger GmbH/ NOWEDA      | Petroleum ether DAB | 28175B       | 1              |
| Hedinger GmbH/ NOWEDA      | Petroleum ether DAB | 28179B       | 1              |
| Hedinger Phönix            | Petroleum ether DAB | 28167B       | 1              |
| Hedinger Phönix            | Petroleum ether DAB | 28168B       | 2              |
| Hedinger Phönix            | Petroleum ether DAB | 28174B       | 1              |
| Hedinger Sanacorp          | Petroleum ether DAB | 28179B       | 1              |
| Hedinger Sanacorp          | Petroleum ether DAB | 28180B       | 1              |
| Hedinger über Sanacorp     | Petroleum ether DAB | 28173B       | 1              |
| Hedinger(Gehe)             | Petroleum ether DAB | 28170B       | 3              |
| Hedinger, Heiligenwiese... | Petroleum ether DAB | 28166B       | 2              |
| Hedinger, Noweda           | Petroleum ether DAB | 28166B       | 2              |
| Hedinger, Noweda           | Petroleum ether DAB | 28167B       | 3              |
| Hedinger, Noweda           | Petroleum ether DAB | 28168B       | 2              |
| Hedinger/                  | Petroleum ether DAB | 28181B       | 1              |
| Hedinger/ Alliance Heal... | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/ Anzag EK 6,48    | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/ Fiebig           | Petroleum ether DAB | 28028        | 1              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28168B       | 1              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28173B       | 3              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28178B       | 2              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28178B       | 1              |
| Hedinger/ Gehe             | Petroleum ether DAB | 28180B       | 2              |
| Hedinger/ Jenne            | Petroleum ether DAB | 28171B       | 4              |
| Hedinger/ Jenne            | Petroleum ether DAB | 28176B       | 2              |
| Hedinger/ Kehr             | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/ Kehr             | Petroleum ether DAB | 28181B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28172B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28177B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28178B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28182B       | 1              |
| Hedinger/ Noweda           | Petroleum ether DAB | 28184B       | 2              |
| Hedinger/ NOWEDA           | Petroleum ether DAB | 28176B       | 3              |
| Hedinger/ Phoenix          | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/ Phoenix WE...    | Petroleum ether DAB | 28172B       | 1              |
| Hedinger/ Phönix           | Petroleum ether DAB | (028)028     | 1              |
| Hedinger/ Phönix           | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/ Phönix           | Petroleum ether DAB | 28178B       | 2              |
| Hedinger/ Phönix           | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/ Sanacorp         | Petroleum ether DAB | 28173B       | 2              |
| Hedinger/ Sanacorp         | Petroleum ether DAB | 28178B       | 2              |
| Hedinger/ Sanacorp         | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/ Sanacorp         | Petroleum ether DAB | 28181B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28169B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28173B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28177B       | 2              |
| Hedinger/AHD               | Petroleum ether DAB | 28178B       | 3              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Hedinger/AHD               | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/AHD               | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/Alliance          | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/Alliance          | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/Alliance          | Petroleum ether DAB | 28176B       | 3              |
| Hedinger/Alliance          | Petroleum ether DAB | 28177B       | 1              |
| Hedinger/Alliance          | Petroleum ether DAB | 28183B       | 1              |
| Hedinger/Alliance Healt... | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/Alliance Healt... | Petroleum ether DAB | 28177B       | 4              |
| Hedinger/AllianceHC        | Petroleum ether DAB | 28172B       | 1              |
| Hedinger/AllianceHC        | Petroleum ether DAB | 28173B       | 1              |
| hedinger/anzag             | Petroleum ether DAB | 28169B       | 1              |
| Hedinger/Anzag             | Petroleum ether DAB | 28167B       | 2              |
| Hedinger/Anzag             | Petroleum ether DAB | 28171B       | 2              |
| Hedinger/Anzag             | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/Anzag 11.06.2012  | Petroleum ether DAB | 28166B       | 1              |
| Hedinger/Anzag 20.11.2012  | Petroleum ether DAB | 28167B       | 2              |
| Hedinger/Ebert             | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/Ebert             | Petroleum ether DAB | 28176B       | 2              |
| Hedinger/Ebert             | Petroleum ether DAB | 28177B       | 1              |
| Hedinger/Fiebig            | Petroleum ether DAB | 28178B       | 1              |
| Hedinger/Fiebig            | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/Fiebig            | Petroleum ether DAB | 28181B       | 1              |
| Hedinger/Fiebig            | Petroleum ether DAB | 6320074      | 1              |
| hedinger/gehe              | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28167B       | 2              |
| Hedinger/Gehe              | Petroleum ether DAB | 28168B       | 2              |
| Hedinger/Gehe              | Petroleum ether DAB | 28169B       | 3              |
| Hedinger/Gehe              | Petroleum ether DAB | 1231234      | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28170B       | 2              |
| Hedinger/Gehe              | Petroleum ether DAB | 28171B       | 6              |
| Hedinger/Gehe              | Petroleum ether DAB | 28172B       | 10             |
| Hedinger/Gehe              | Petroleum ether DAB | 28173B       | 6              |
| Hedinger/Gehe              | Petroleum ether DAB | 28173B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28172b       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28175B       | 4              |
| Hedinger/Gehe              | Petroleum ether DAB | 28176B       | 3              |
| Hedinger/Gehe              | Petroleum ether DAB | 28178B       | 6              |
| Hedinger/Gehe              | Petroleum ether DAB | 28177B       | 4              |
| Hedinger/Gehe              | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28180B       | 3              |
| Hedinger/Gehe              | Petroleum ether DAB | 28181B       | 3              |
| Hedinger/Gehe              | Petroleum ether DAB | 28182B       | 2              |
| Hedinger/Gehe              | Petroleum ether DAB | 28183B       | 1              |
| Hedinger/Gehe              | Petroleum ether DAB | 28186B       | 1              |
| Hedinger/GEHE              | Petroleum ether DAB | 1914M1170    | 1              |
| Hedinger/GEHE              | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/GEHE              | Petroleum ether DAB | 28178B       | 2              |
| Hedinger/GEHE              | Petroleum ether DAB | 28180B       | 1              |
| HEDINGER/Gehe              | Petroleum ether DAB | 28178B       | 1              |
| hedinger/Gehe/6,74         | Petroleum ether DAB | 28180B       | 1              |
| hedinger/Gehe/6,76         | Petroleum ether DAB | 28178B       | 1              |
| Hedinger/Geibo             | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/Geilenkirchen     | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/Holdermann        | Petroleum ether DAB | 28170B       | 1              |
| Hedinger/Jenne             | Petroleum ether DAB | 28170B       | 1              |
| Hedinger/Jenne             | Petroleum ether DAB | 28177B       | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Hedinger/Jenne             | Petroleum ether DAB | 281818       | 1              |
| Hedinger/Kehr              | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/Kehr              | Petroleum ether DAB | 281788       | 2              |
| Hedinger/Kehr              | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/Kehr              | Petroleum ether DAB | 28181B       | 1              |
| Hedinger/N/08.05.13/PZN... | Petroleum ether DAB | 28167B       | 1              |
| hedinger/noweda            | Petroleum ether DAB | 28169B       | 1              |
| hedinger/noweda            | Petroleum ether DAB | 281698       | 1              |
| hedinger/noweda            | Petroleum ether DAB | 28176B       | 1              |
| hedinger/Noweda            | Petroleum ether DAB | 28177B       | 1              |
| Hedinger/noweda            | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28170B       | 2              |
| Hedinger/Noweda            | Petroleum ether DAB | 28171B       | 2              |
| Hedinger/Noweda            | Petroleum ether DAB | 21728        | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28173B       | 3              |
| Hedinger/Noweda            | Petroleum ether DAB | 28174B       | 5              |
| Hedinger/Noweda            | Petroleum ether DAB | 28175B       | 2              |
| Hedinger/Noweda            | Petroleum ether DAB | 28176B       | 8              |
| Hedinger/Noweda            | Petroleum ether DAB | 28177B       | 3              |
| Hedinger/Noweda            | Petroleum ether DAB | 28178B       | 3              |
| Hedinger/Noweda            | Petroleum ether DAB | 28179B       | 2              |
| Hedinger/Noweda            | Petroleum ether DAB | 281798       | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28181B       | 5              |
| Hedinger/Noweda            | Petroleum ether DAB | 28182B       | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28183B       | 1              |
| Hedinger/Noweda            | Petroleum ether DAB | 28186B       | 1              |
| Hedinger/Otto              | Petroleum ether DAB | 281678       | 1              |
| Hedinger/Otto              | Petroleum ether DAB | 281698       | 1              |
| Hedinger/Otto              | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28168B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28174B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28175B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28176B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28177B       | 4              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28178B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 28180B       | 1              |
| Hedinger/Phoenix           | Petroleum ether DAB | 281808       | 1              |
| hedinger/phönix            | Petroleum ether DAB | 28167b       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28168B       | 3              |
| Hedinger/Phönix            | Petroleum ether DAB | 28169B       | 3              |
| Hedinger/Phönix            | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 281728       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28172B       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28173B       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28174B       | 7              |
| Hedinger/Phönix            | Petroleum ether DAB | 28175B       | 2              |
| Hedinger/Phönix            | Petroleum ether DAB | (028)028     | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28176B       | 10             |
| Hedinger/Phönix            | Petroleum ether DAB | 28177B       | 5              |
| Hedinger/Phönix            | Petroleum ether DAB | 281778       | 2              |
| Hedinger/Phönix            | Petroleum ether DAB | 28178B       | 11             |
| Hedinger/Phönix            | Petroleum ether DAB | 281788       | 2              |
| Hedinger/Phönix            | Petroleum ether DAB | 28179B       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 281798       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28180b       | 1              |
| Hedinger/Phönix            | Petroleum ether DAB | 28180B       | 2              |
| Hedinger/Phönix            | Petroleum ether DAB | 28181B       | 2              |
| Hedinger/Phönix            | Petroleum ether DAB | 281818       | 1              |

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| <b>Supplier</b>          | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|---------------------|--------------|----------------|
| Hedinger/Phönix          | Petroleum ether DAB | 28184B       | 4              |
| HEDINGER/Phönix          | Petroleum ether DAB | 28174B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28166B       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28168B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28169B       | 4              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 281698       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28170B       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28172B       | 6              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28167B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28172b       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28173b       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28174B       | 3              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28175B       | 6              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28176B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 281748       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28178B       | 3              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28177B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28179B       | 3              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28180B       | 5              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28181B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28183B       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28184B       | 2              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28182B       | 1              |
| Hedinger/Sanacorp        | Petroleum ether DAB | 28185B       | 1              |
| Hedinger/Stumpf          | Petroleum ether DAB | 28167B       | 1              |
| Hedinger/Stumpf          | Petroleum ether DAB | 28168B       | 1              |
| Hedinger/V.d.L.          | Petroleum ether DAB | 28170B       | 1              |
| Hedinger/V.d.L.          | Petroleum ether DAB | 28171B       | 1              |
| Hedinger/XX              | Petroleum ether DAB | 28181B       | 1              |
| Hedinger1                | Petroleum ether DAB | 28170B       | 1              |
| Hedinger                 | Petroleum ether DAB | 28167B       | 1              |
| heidinger/anzag          | Petroleum ether DAB | 28174B       | 1              |
| Heidinger/Anzag          | Petroleum ether DAB | 28174B       | 1              |
| Heidinger/Anzag          | Petroleum ether DAB | 28176B       | 1              |
| Heidinger/Anzag          | Petroleum ether DAB | 28179B       | 1              |
| heidinger/gehe           | Petroleum ether DAB | 28167B       | 1              |
| heidinger/gehe           | Petroleum ether DAB | 28172B       | 2              |
| heidinger/gehe           | Petroleum ether DAB | 28175B       | 1              |
| Heidinger/Noweda         | Petroleum ether DAB | 281788       | 1              |
| Hubertus Apotheke        | Petroleum ether DAB | 6325055      | 1              |
| Jenne                    | Petroleum ether DAB | 28171B       | 1              |
| Jenne                    | Petroleum ether DAB | 28173B       | 1              |
| Jenne                    | Petroleum ether DAB | 15045203     | 1              |
| Kehr/Hedinger            | Petroleum ether DAB | 28175B       | 1              |
| Klenk                    | Petroleum ether DAB | 28167b       | 1              |
| Klenk                    | Petroleum ether DAB | 28171B       | 1              |
| Kögl                     | Petroleum ether DAB | 1801320      | 1              |
| Kost/kost                | Petroleum ether DAB | 4065061213   | 1              |
| Krieger                  | Petroleum ether DAB | 6329034      | 1              |
| Kruger/Hedinger/06.01.14 | Petroleum ether DAB | 28167B       | 1              |
| L 20/Hedinger            | Petroleum ether DAB | 28175B       | 1              |
| L10                      | Petroleum ether DAB | 28174B       | 1              |
| L10/Fischar              | Petroleum ether DAB | 632801A      | 1              |
| L12                      | Petroleum ether DAB | 28175B       | 1              |
| L12                      | Petroleum ether DAB | 28179B       | 1              |
| Midas                    | Petroleum ether DAB | 28178B       | 1              |
| Noweda                   | Petroleum ether DAB | 28164B       | 1              |
| Noweda                   | Petroleum ether DAB | 28166B       | 1              |
| Noweda                   | Petroleum ether DAB | 28169B       | 1              |
| Noweda                   | Petroleum ether DAB | 281698       | 1              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Noweda                     | Petroleum ether DAB | 28171B       | 2              |
| Noweda                     | Petroleum ether DAB | 28175B       | 2              |
| Noweda                     | Petroleum ether DAB | 6327021      | 1              |
| Noweda                     | Petroleum ether DAB | 28176B       | 2              |
| Noweda                     | Petroleum ether DAB | 6327062      | 2              |
| Noweda                     | Petroleum ether DAB | 6327105      | 1              |
| Noweda                     | Petroleum ether DAB | 6327093      | 1              |
| Noweda                     | Petroleum ether DAB | 28178B       | 1              |
| Noweda                     | Petroleum ether DAB | 6328064      | 1              |
| Noweda                     | Petroleum ether DAB | 28179B       | 1              |
| Noweda                     | Petroleum ether DAB | 6327092      | 1              |
| Noweda                     | Petroleum ether DAB | 28180B       | 1              |
| Noweda                     | Petroleum ether DAB | 6329043      | 1              |
| Noweda                     | Petroleum ether DAB | 6320033      | 1              |
| Noweda                     | Petroleum ether DAB | 320062       | 1              |
| Noweda / Fischer           | Petroleum ether DAB | 6324075      | 1              |
| Noweda Hedinger 24.02.2... | Petroleum ether DAB | 28174B       | 1              |
| Caelo                      | Petroleum ether DAB | 17171506     | 1              |
| Noweda/hedinger            | Petroleum ether DAB | 28175B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28166B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28168B       | 2              |
| Noweda/Hedinger            | Petroleum ether DAB | 28170B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 281738       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28174B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 281748       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28176B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28177B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 28180B       | 1              |
| Noweda/Hedinger            | Petroleum ether DAB | 281818       | 1              |
| otto Fischar               | Petroleum ether DAB | 6327055      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6322116      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6323063      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6325063      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6325051      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6326085      | 1              |
| Otto Fischar               | Petroleum ether DAB | 632792       | 1              |
| Otto Fischar               | Petroleum ether DAB | 6327072      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6327092      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6320015      | 1              |
| Otto Fischar               | Petroleum ether DAB | 6322042      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6323094      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6324063      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6324115      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6327114      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6328065      | 2              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6328014      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6328123      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6328111      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6329034      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6329053      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6329051      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6320033      | 1              |
| Otto Fischar GmbH          | Petroleum ether DAB | 6320062      | 1              |
| Otto Fischar GmbH & Co KG  | Petroleum ether DAB | 6329103      | 1              |
| Otto Fischar GmbH & Co...  | Petroleum ether DAB | X81A41       | 1              |
| Otto Fischar GmbH & Co...  | Petroleum ether DAB | 6326101      | 1              |
| Otto Fischar GmbH & Co...  | Petroleum ether DAB | 6327091      | 1              |
| Otto Fischar GmbH & Co...  | Petroleum ether DAB | 6325111      | 1              |
| Otto Fischar GmbH & Co...  | Petroleum ether DAB | 6327013      | 1              |
| Otto Fischar GmbH & Co.KG  | Petroleum ether DAB | 6327035      | 1              |

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| <b>Supplier</b>             | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|---------------------|--------------|----------------|
| Otto Fischar GmbH&Co KG     | Petroleum ether DAB | 6327091      | 1              |
| Otto Fischar GmbH&Co KG     | Petroleum ether DAB | 6327115      | 1              |
| Otto Fischar GmbH/ Alli...  | Petroleum ether DAB | 6329023      | 1              |
| Otto Fischar GmbH/AHD       | Petroleum ether DAB | 6329051      | 1              |
| Otto Fischar GmbH/AHD       | Petroleum ether DAB | 6320014      | 1              |
| Otto Fischar GmbH/Gehe      | Petroleum ether DAB | 6320032      | 1              |
| Otto Fischar GmbH/Phönix    | Petroleum ether DAB | 6320062      | 1              |
| Otto Fischar Phönix         | Petroleum ether DAB | 6323069      | 1              |
| Otto Fischar Phönix         | Petroleum ether DAB | 6323111      | 1              |
| Otto Fischar/ Noweda/ N...  | Petroleum ether DAB | 6329073      | 1              |
| Otto Fischar/ AHD           | Petroleum ether DAB | 6329073      | 1              |
| Otto Fischar/ AHD           | Petroleum ether DAB | 6320065      | 1              |
| Otto Fischar/ Alliance      | Petroleum ether DAB | 632801A      | 1              |
| Otto Fischar/ Alliance      | Petroleum ether DAB | 6328105      | 1              |
| Otto Fischar/ Gehe          | Petroleum ether DAB | 6324035      | 1              |
| Otto Fischar/ Gehe          | Petroleum ether DAB | 6324044      | 2              |
| Otto Fischar/ Gehe          | Petroleum ether DAB | 6326027      | 1              |
| Otto Fischar/ Gehe          | Petroleum ether DAB | 6328113      | 1              |
| Otto Fischar/ Now           | Petroleum ether DAB | 6327091      | 1              |
| Otto Fischar/ Noweda        | Petroleum ether DAB | 6325119      | 1              |
| Otto Fischar/ Noweda        | Petroleum ether DAB | 6328113      | 1              |
| otto fischar/ Phoenix       | Petroleum ether DAB | 6325044      | 1              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6327092      | 1              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6328019      | 2              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6328065      | 1              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6328111      | 1              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6328114      | 1              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6329024      | 3              |
| Otto Fischar/ Phönix        | Petroleum ether DAB | 6329023      | 2              |
| otto fischar/ Sana          | Petroleum ether DAB | 6323065      | 1              |
| Otto Fischar/ Sanacorp      | Petroleum ether DAB | 6325051      | 1              |
| Otto Fischar/ Sanacorp      | Petroleum ether DAB | 6327116      | 1              |
| Otto Fischbar GmbH          | Petroleum ether DAB | 6328072      | 1              |
| Otto Fischbar GmbH          | Petroleum ether DAB | 6329031      | 1              |
| otto fischer                | Petroleum ether DAB | 15081602     | 1              |
| otto fischer                | Petroleum ether DAB | 6326035      | 1              |
| Otto Fischer                | Petroleum ether DAB | 6323069      | 1              |
| Otto Fischer                | Petroleum ether DAB | 6326052      | 1              |
| Otto Fischer                | Petroleum ether DAB | 6326105      | 1              |
| Otto Fischer                | Petroleum ether DAB | 6328015      | 1              |
| Otto Fischer / Sanacorp     | Petroleum ether DAB | 6325083      | 1              |
| Otto Fischer GmbH           | Petroleum ether DAB | 15031402     | 1              |
| Otto Fischer GmbH & co...   | Petroleum ether DAB | 6327019      | 1              |
| Otto Fischer GmbH & co...   | Petroleum ether DAB | 6327105      | 1              |
| Otto Fischer GmbH & co...   | Petroleum ether DAB | 6328044      | 2              |
| Otto Fischer GmbH & co...   | Petroleum ether DAB | 6328074      | 1              |
| Otto Fischer GmbH / Gehe    | Petroleum ether DAB | 6328072      | 1              |
| Otto Fischer GmbH / Phö...  | Petroleum ether DAB | 6328113      | 1              |
| Otto Fischer GmbH/ Allia... | Petroleum ether DAB | 6329074      | 1              |
| Otto Fischer GmbH/ Allia... | Petroleum ether DAB | 6329072      | 1              |
| Otto Fischer/ Gehe          | Petroleum ether DAB | 6329095      | 1              |
| Otto Fischer/ Noweda        | Petroleum ether DAB | 6325108      | 1              |
| Otto Fischer/ Noweda        | Petroleum ether DAB | 6327024      | 1              |
| Otto Fischer/ Phoenix       | Petroleum ether DAB | 6328032      | 2              |
| Otto Fischer/ Phönix        | Petroleum ether DAB | 6326026      | 4              |
| Otto Fischer/ Phönix        | Petroleum ether DAB | 6326047      | 1              |
| OttoFischar/ Alkun          | Petroleum ether DAB | 362510A      | 1              |
| OttoFischar/ Alkun          | Petroleum ether DAB | 6328121      | 1              |
| OttoFischer/ Gehe           | Petroleum ether DAB | 6329034      | 1              |
| OttoFischerGmbH/ Phoenix    | Petroleum ether DAB | 6326075      | 2              |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|---------------------|--------------------|----------------|
| Ph/Hedinger                | Petroleum ether DAB | 28178B             | 1              |
| Phoenix                    | Petroleum ether DAB | 28171B             | 1              |
| Phoenix                    | Petroleum ether DAB | 6326072            | 1              |
| Phoenix                    | Petroleum ether DAB | 6326093            | 1              |
| Phoenix                    | Petroleum ether DAB | 28176B             | 1              |
| Phoenix                    | Petroleum ether DAB | 6328063            | 1              |
| Phoenix                    | Petroleum ether DAB | 28178B             | 1              |
| Phoenix 08.03.14 Fischar   | Petroleum ether DAB | 6324013            | 1              |
| Phoenix/ Otto Fischer G... | Petroleum ether DAB | 6328014            | 1              |
| Phoenix/Cealo              | Petroleum ether DAB | 28176B/0818E-01170 | 1              |
| phoenix/hedinger           | Petroleum ether DAB | 28172B             | 1              |
| Phoenix/hedinger           | Petroleum ether DAB | 28168B             | 1              |
| Phoenix/hedinger           | Petroleum ether DAB | 28169B             | 2              |
| Phoenix/Hedinger           | Petroleum ether DAB | 28177B             | 1              |
| Phoenix/Hedinger           | Petroleum ether DAB | 28178B             | 1              |
| phönix                     | Petroleum ether DAB | 6326112            | 1              |
| phönix                     | Petroleum ether DAB | 28175B             | 1              |
| phönix                     | Petroleum ether DAB | 6327062            | 1              |
| Phönix                     | Petroleum ether DAB | 28168B             | 1              |
| Phönix                     | Petroleum ether DAB | 28169B             | 1              |
| Phönix                     | Petroleum ether DAB | 6327013            | 1              |
| Phönix                     | Petroleum ether DAB | 6327093            | 1              |
| Phönix                     | Petroleum ether DAB | 6329051            | 1              |
| Phönix                     | Petroleum ether DAB | 6329123            | 1              |
| Phönix                     | Petroleum ether DAB | 6329124            | 1              |
| Phönix                     | Petroleum ether DAB | 6320115            | 1              |
| Phönix EK:6,26 EUR -11     | Petroleum ether DAB | 28176B             | 1              |
| Phönix 16.09.2019          | Petroleum ether DAB | 6329051            | 1              |
| Caelo                      | Petroleum ether DAB | 6327072            | 3              |
| Euro OTC                   | Petroleum ether DAB | 6327019            | 3              |
| Fagron                     | Petroleum ether DAB | 6324114            | 1              |
| phönix/fischar             | Petroleum ether DAB | 6329031            | 4              |
| Phönix/Fischar             | Petroleum ether DAB | 6328013            | 1              |
| Phönix/Fischar             | Petroleum ether DAB | 6328072            | 5              |
| Phönix/Fischer             | Petroleum ether DAB | 6327034            | 1              |
| Phönix/Hedinger            | Petroleum ether DAB | 28179B             | 1              |
| Sana Corp/Otto Fischar     | Petroleum ether DAB | 6328063            | 1              |
| Sanacorp                   | Petroleum ether DAB | 28166B             | 1              |
| Sanacorp                   | Petroleum ether DAB | 6322096            | 1              |
| Sanacorp                   | Petroleum ether DAB | 6323068            | 1              |
| Sanacorp                   | Petroleum ether DAB | 28169B             | 1              |
| Sanacorp                   | Petroleum ether DAB | 28171B             | 5              |
| Sanacorp                   | Petroleum ether DAB | 632510A            | 1              |
| Sanacorp                   | Petroleum ether DAB | 28175B             | 1              |
| Sanacorp                   | Petroleum ether DAB | 28177B             | 1              |
| Sanacorp                   | Petroleum ether DAB | 28174B             | 1              |
| Sanacorp                   | Petroleum ether DAB | 28178B             | 1              |
| Sanacorp 8.12.15           | Petroleum ether DAB | 28174B             | 2              |
| Caelo                      | Petroleum ether DAB | 6323095            | 1              |
| Sanacorp /Fischar          | Petroleum ether DAB | 6329123            | 1              |
| Sanacorp WE:04.02.2017 ... | Petroleum ether DAB | 28175B             | 1              |
| Sanacorp/ Lamotte          | Petroleum ether DAB | 28177B             | 1              |
| Caelo                      | Petroleum ether DAB | 281668             | 3              |
| Caelo                      | Petroleum ether DAB | 28169B             | 6              |
| Caelo                      | Petroleum ether DAB | 64/AKD53           | 1              |
| Caelo                      | Petroleum ether DAB | 28184B             | 1              |
| Spangr/Hedinger            | Petroleum ether DAB | 28169B             | 1              |
| Spangro 14.09.2018         | Petroleum ether DAB | 6328064            | 1              |
| Spangro/Fischar            | Petroleum ether DAB | 6327017            | 1              |
| Spangro/Hedinger           | Petroleum ether DAB | 28171B             | 1              |

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| Supplier                   | Substance           | Batch      | Spectra |
|----------------------------|---------------------|------------|---------|
| Stumpf / Hedinger          | Petroleum ether DAB | 28169B     | 1       |
| Stumpf/Hedinger            | Petroleum ether DAB | 281718     | 1       |
| Stumpf/Hedinger            | Petroleum ether DAB | 28172B     | 1       |
| Taoasis                    | Petroleum ether DAB | 6328063    | 1       |
| tob                        | Petroleum ether DAB | 6326092    | 1       |
| Unisan                     | Petroleum ether DAB | 28174B     | 1       |
| Vbf A1/Phönix              | Petroleum ether DAB | 318E-01170 | 1       |
| VDL                        | Petroleum ether DAB | 28180B     | 1       |
| wepa/Sanaco                | Petroleum ether DAB | 6326031    | 1       |
| Hedinger                   | Petroleum ether DAB |            | 1       |
| Hedinger, Heiligenwiese... | Petroleum ether DAB |            | 1       |
| Hedinger/ Noweda           | Petroleum ether DAB |            | 1       |
| Hedinger/Otto              | Petroleum ether DAB |            | 1       |
| Hedinger/Sanacorp          | Petroleum ether DAB |            | 1       |
| Noweda                     | Petroleum ether DAB |            | 1       |
| Sanacorp                   | Petroleum ether DAB |            | 2       |
|                            | Petroleum ether DAB |            | 1       |

- 239 476 spectra from 1121 *Apo-Ident* customers from a total of 46 626 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Petroleum ether DAB* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Petroleum ether DAB* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 140           | 0              | 63 799        |
| Type B | 0              | 116           | 4              | 91 371        |
| Type C | 0              | 1875          | 12             | 239 476       |

The substance/substance group *Petroleum ether DAB* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| Type B | 100.0000 % (> 99.9656 %) | 96.6667 % (> 94.1667 %)  |
| Type C | 100.0000 % (> 99.6849 %) | 99.3641 % (> 99.2051 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.



### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Petroleum ether DAB* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Myrtle oil                                | 19.94                     | —                                 |
| Petroleum oil, white, cohobated           | 28.57                     | —                                 |
| Verbena oil, nature-identical             | 29.47                     | —                                 |
| Turpentine oil                            | 32.63                     | —                                 |
| Peppermint oil                            | 37.11                     | —                                 |
| Cypress oil                               | 37.97                     | —                                 |
| Matricaria oil, rich in (-)-alpha-bisa... | 39.06                     | —                                 |
| Cajeput (essentiel oil)                   | 41.33                     | —                                 |
| Juniper wood oil                          | 45.57                     | —                                 |
| Mint oil                                  | 46.79                     | —                                 |
| Eucalyptus oil                            | 53.37                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Petroleum ether DAB* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30899     | 30899                  | 0.00                            | 31.97                              |
| 31253     | 31253                  | 0.00                            | 28.57                              |
| 31283     | 31283                  | 0.00                            | 33.56                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Petroleum oil, white, cohobated**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31212-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Petroleum oil, white, cohobated; Oleum petrae album rectif.

### Special notes

When selecting the *Petroleum oil, white, cohobated* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group       | Type A | Type B | Type C |
|---------------------------------|--------|--------|--------|
| Petroleum oil, white, cohobated | 3      | 2      | 15     |

## Second-stage model

For differentiation of the substance/substance group *Petroleum oil, white, cohobated* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Petroleum oil, white, cohobated*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Petroleum oil, w... | 13146704 | 31212     | 40      | 1403110     |
| Caelo    | Petroleum oil, w... | 14019607 | 31387     | 60      | 20140124    |
| Caelo    | Petroleum oil, w... | 173331   | 34324     | 40      | 20180129*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Petroleum oil, white, cohobated*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 799 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Petroleum oil, white, cohobated*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Petroleum oil, white, cohoba... | 163278 | 33109     | 40      |
| Caelo    | Petroleum oil, white, cohoba... | 182344 | 34238     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 21 spectra from 14 *Apo-Ident* customers from 16 batches from the substance/substance group *Petroleum oil, white, cohobated*.
- Among them are spectra of independent samples from 15 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                       | Batch       | Spectra |
|----------|---------------------------------|-------------|---------|
| Caelo    | Petroleum oil, white, cohoba... | 14242203    | 2       |
| Caelo    | Petroleum oil, white, cohoba... | 12173103    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 2306921     | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 16327804    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 16165201    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 4416I-02003 | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 13086402    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 13086401    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 16327803    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 11198403    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 13303603    | 2       |
| Caelo    | Petroleum oil, white, cohoba... | 13146702    | 2       |
| Caelo    | Petroleum oil, white, cohoba... | 113791      | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 18234414    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 18234408    | 1       |
| Caelo    | Petroleum oil, white, cohoba... | 14019607    | 3       |

- 241 342 spectra from 1121 *Apo-Ident* customers from a total of 46 990 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Petroleum oil, white, cohobated* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Petroleum oil, white, cohobated* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 140           | 0              | 63 799        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 21            | 0              | 241 342       |

The substance/substance group *Petroleum oil, white, cohobated* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6853 %) | 100.0000 % (> 71.4286 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Petroleum oil, white, cohobated* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Petroleum ether DAB                       | 16.39                  | —                              |
| All-rac-alpha-tocopheryl acetate          | 33.43                  | —                              |
| Triglycerides, medium-chain               | 35.22                  | —                              |
| Myrtle oil                                | 36.39                  | —                              |
| Verbena oil, nature-identical             | 36.47                  | —                              |
| Peppermint oil                            | 36.69                  | —                              |
| Mint oil                                  | 40.97                  | —                              |
| Turpentine oil                            | 42.11                  | —                              |
| Guaiazulene 25%, water-soluble            | 42.55                  | —                              |
| Camphor oil 20%                           | 44.03                  | —                              |
| Matricaria oil, rich in (-)-alpha-bisa... | 46.55                  | —                              |
| Melissa oil                               | 46.84                  | —                              |
| Citronella oil                            | 48.83                  | —                              |
| Cypress oil                               | 52.77                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Petroleum oil, white, cohobated* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31212     | 31212               | 0.00                         | 35.88                           |
| 31387     | 31212               | 4.40                         | 35.93                           |
| 34324     | 34324               | 0.00                         | 17.08                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Phenoxyethanol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31808-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Phenoxyethanol; Phenoxyethanolum

### Special notes

When selecting the *Phenoxyethanol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Phenoxyethanol            | 3      | 2      | 2      |

## Second-stage model

For differentiation of the substance/substance group *Phenoxyethanol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Phenoxyethanol*:

| Supplier     | Substance      | Batch          | Sample ID | Spectra | Certificate        |
|--------------|----------------|----------------|-----------|---------|--------------------|
| Audor Pharma | Phenoxyethanol | APDEG4324219P  | 31808     | 60      | AR-16-FG-003720-01 |
| Audor Pharma | Phenoxyethanol | APDEG4324219P  | 31953     | 60      | 20150219           |
| Audor Pharma | Phenoxyethanol | APDEG4324219XP | 33293     | 40      | 20170406           |
| Euro OTC     | Phenoxyethanol | 2107019        | 35624     | 50      | 20210831*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 210 spectra of 4 reference samples from the substance/substance group *Phenoxyethanol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 729 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Phenoxyethanol*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance      | Batch   | Sample ID | Spectra |
|----------|----------------|---------|-----------|---------|
| Euro OTC | Phenoxyethanol | 2007015 | 35121     | 40      |
| Euro OTC | Phenoxyethanol | 2103021 | 35269     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 16 spectra from 8 *Apo-Ident* customers from 4 batches from the substance/substance group *Phenoxyethanol*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier     | Substance      | Batch          | Spectra |
|--------------|----------------|----------------|---------|
| Audor Pharma | Phenoxyethanol | APDEG432419P   | 1       |
| EuRho        | Phenoxyethanol | 2103021-01     | 1       |
| Audor Pharma | Phenoxyethanol | APDEG4324219P  | 12      |
| Audor Pharma | Phenoxyethanol | APDEG4324219XP | 2       |

- 241 347 spectra from 1121 *Apo-Ident* customers from a total of 47 002 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Phenoxyethanol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Phenoxyethanol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 210           | 0              | 63 729        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 16            | 0              | 241 347       |

The substance/substance group *Phenoxyethanol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.1429 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6854 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Phenoxyethanol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance               | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------|---------------------------|-----------------------------------|
| Hydroxyethyl salicylate | 33.64                     | —                                 |
| Benzyl alcohol          | 95.05                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Phenoxyethanol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31808     | 31808                  | 0.00                            | 51.12                              |
| 31953     | 35624                  | 2.45                            | 50.94                              |
| 33293     | 35624                  | 4.82                            | 48.51                              |
| 35624     | 35624                  | 0.00                            | 49.67                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Phytomenadione**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30747-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Phytomenadione; Phytomenadionum

### Special notes

When selecting the *Phytomenadione* substance/substance group, the following information is displayed to the user:

- Distinction to Phytomenadione, racemic: The monography Phytomenadione has been discontinued in Ph. Eur. 9.6. At the same time, Phytomenadione, racemic has been published. Decide, if a supplementary test is necessary.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Phytomenadione            | 3      | 2      | 12     |

## Second-stage model

For differentiation of the substance/substance group *Phytomenadione* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Phytomenadione*:

| Supplier | Substance      | Batch            | Sample ID | Spectra | Certificate |
|----------|----------------|------------------|-----------|---------|-------------|
| Fagron   | Phytomenadione | 12H31-N02        | 30747     | 40      | 1405178     |
| Fagron   | Phytomenadione | 16D07-B03-328576 | 33303     | 40      | 20160603    |
| Fagron   | Phytomenadione | 16D07-B03-328730 | 33304     | 40      | 20160603    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 3 reference samples from the substance/substance group *Phytomenadione*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 819 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 100 spectra of 2 reference samples from the substance/substance group *Phytomenadione*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance      | Batch            | Sample ID | Spectra |
|----------|----------------|------------------|-----------|---------|
| Fagron   | Phytomenadione | 14I02-B04-301537 | 31621     | 60      |
| Fagron   | Phytomenadione | 17F12-B12-344796 | 34086     | 40      |



- 91 391 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 14 spectra from 9 *Apo-Ident* customers from 13 batches from the substance/substance group *Phytomenadione*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance      | Batch            | Spectra |
|----------|----------------|------------------|---------|
| Fagron   | Phytomenadione | 13C25-N07        | 1       |
| Fagron   | Phytomenadione | 13D26-B07-286714 | 1       |
| Fagron   | Phytomenadione | 15F25-B04-314081 | 1       |
| Fagron   | Phytomenadione | 17F12-B12        | 1       |
| Fagron   | Phytomenadione | 18H03-B06        | 1       |
| Fagron   | Phytomenadione | 20D29-F05        | 1       |
| Fagron   | Phytomenadione | 17F28-H10-00239  | 1       |
| Fagron   | Phytomenadione | 17F12-B12-344795 | 2       |
| Merck    | Phytomenadione | EH14000190       | 1       |
| Merck    | Phytomenadione | EH13000590       | 1       |
| Merck    | Phytomenadione | L016067990       | 1       |
| Merck    | Phytomenadione | L017134390       | 1       |
| Merck    | Phytomenadione |                  | 1       |

- 241 349 spectra from 1121 *Apo-Ident* customers from a total of 46 994 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Phytomenadione* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Phytomenadione* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 100           | 0              | 91 351        |
| <b>Type C</b> | 0              | 12            | 2              | 241 349       |

The substance/substance group *Phytomenadione* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| Type B | 100.0000 % (> 99.9657 %) | 100.0000 % (> 94.0000 %) |
| Type C | 100.0000 % (> 99.6855 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Phytomenadione* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance               | Distance in main model | Distance in second-stage model |
|-------------------------|------------------------|--------------------------------|
| Permethrin 25% solution | 65.32                  | –                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Phytomenadione* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30747     | 30747               | 0.00                         | 120.63                          |
| 33303     | 30747               | 4.63                         | 119.88                          |
| 33304     | 30747               | 7.63                         | 119.22                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Pine silvestris oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31183-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Pine silvestris oil; Pini silvestris aetheroleum

### Special notes

When selecting the *Pine silvestris oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Pine silvestris oil       | 4      | 1      | 49     |

## Second-stage model

For differentiation of the substance/substance group *Pine silvestris oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Pine silvestris oil*:

| Supplier | Substance           | Batch     | Sample ID | Spectra | Certificate |
|----------|---------------------|-----------|-----------|---------|-------------|
| Caelo    | Pine silvestris ... | 13334502  | 31202     | 40      | 1403168     |
| Caelo    | Pine silvestris ... | 13334501  | 31405     | 40      | 20131009    |
| Caelo    | Pine silvestris ... | 180752    | 34452     | 40      | 20180309*   |
| Fagron   | Pine silvestris ... | 13E24-N05 | 31183     | 40      | 1403166     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Pine silvestris oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Pine silvestris oil*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance           | Batch    | Sample ID | Spectra |
|----------|---------------------|----------|-----------|---------|
| Caelo    | Pine silvestris oil | 16298401 | 33250     | 40      |
| Caelo    | Pine silvestris oil | 16298401 | 33424     | 40      |

- 91 411 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 135 spectra from 67 *Apo-Ident* customers from 50 batches from the substance/substance group *Pine silvestris oil*.
- Among them are spectra of independent samples from 49 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                  | Substance           | Batch         | Spectra |
|---------------------------|---------------------|---------------|---------|
| Bergland                  | Pine silvestris oil | C502587       | 1       |
| Bergland                  | Pine silvestris oil | C700086       | 1       |
| Caelo                     | Pine silvestris oil | 11024602      | 1       |
| Caelo                     | Pine silvestris oil | 11161605      | 2       |
| Caelo                     | Pine silvestris oil | 12080504      | 5       |
| Caelo                     | Pine silvestris oil | 12246907      | 2       |
| Caelo                     | Pine silvestris oil | 26091404      | 1       |
| Caelo                     | Pine silvestris oil | 14252203      | 2       |
| Caelo                     | Pine silvestris oil | 15239102      | 2       |
| Caelo                     | Pine silvestris oil | 24061710      | 1       |
| Caelo                     | Pine silvestris oil | 1713001       | 1       |
| Caelo                     | Pine silvestris oil | 18075203      | 1       |
| Caelo                     | Pine silvestris oil | 18075206      | 1       |
| Caelo                     | Pine silvestris oil | 19033402      | 3       |
| Caelo                     | Pine silvestris oil | 19033401      | 1       |
| Caelo                     | Pine silvestris oil | 2000000397005 | 1       |
| Caelo                     | Pine silvestris oil | 20000397004   | 1       |
| Caelo                     | Pine silvestris oil | 11024603      | 1       |
| Caelo                     | Pine silvestris oil | 12246905      | 1       |
| Caelo                     | Pine silvestris oil | 14252202      | 4       |
| Caelo                     | Pine silvestris oil | 19033403      | 1       |
| Caelo                     | Pine silvestris oil | 18075201      | 18      |
| Caelo                     | Pine silvestris oil | 16007406      | 1       |
| Caelo                     | Pine silvestris oil | 17321804      | 1       |
| Caelo                     | Pine silvestris oil | 19033404      | 2       |
| Caelo                     | Pine silvestris oil | 16298401      | 13      |
| Caelo                     | Pine silvestris oil | 17133001      | 9       |
| Caelo                     | Pine silvestris oil | 18075204      | 1       |
| Caelo                     | Pine silvestris oil | 15239101      | 8       |
| Caesar & Loretz GmbH      | Pine silvestris oil | 18075201      | 2       |
| Caesar & Loretz GmbH      | Pine silvestris oil | 19033403      | 1       |
| Caesar & Loretz GmbH      | Pine silvestris oil | 19033405      | 2       |
| Caesar & Loretz GmbH AHD  | Pine silvestris oil | 19033404      | 1       |
| Caesar & Loretz GmbH/gehe | Pine silvestris oil | 19033404      | 1       |
| Caesar & Loretz GmbH/Gehe | Pine silvestris oil | 18075201      | 2       |
| Caesar & Loretz GmbH/Gehe | Pine silvestris oil | 20000397004   | 2       |

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| Supplier       | Substance           | Batch            | Spectra |
|----------------|---------------------|------------------|---------|
| Fagron         | Pine silvestris oil | 12G20-N04        | 1       |
| Fagron         | Pine silvestris oil | 12L03-N05        | 1       |
| Fagron         | Pine silvestris oil | 14J27-B06        | 1       |
| Fagron         | Pine silvestris oil | 15F12-B02-308878 | 1       |
| Fagron         | Pine silvestris oil | 15F12_B02_308878 | 1       |
| Fagron         | Pine silvestris oil | 15F12-B02-323109 | 1       |
| Fiebig         | Pine silvestris oil | 16298402         | 1       |
| Fiebig         | Pine silvestris oil | 17321801         | 1       |
| Fiebig         | Pine silvestris oil | 18075201         | 2       |
| noweda         | Pine silvestris oil | 13334501         | 1       |
| Noweda         | Pine silvestris oil | 11161605         | 1       |
| Phönix         | Pine silvestris oil | 13334501         | 2       |
| Taoasis        | Pine silvestris oil | 30600-18490      | 1       |
| Taoasis        | Pine silvestris oil | 33717-112501     | 2       |
| Taoasis        | Pine silvestris oil | 8169-117244      | 4       |
| Taoasis        | Pine silvestris oil | 28663-119029     | 1       |
| Taoasis        | Pine silvestris oil | 20017-118846     | 1       |
| Taoasis        | Pine silvestris oil | 28663-120876     | 2       |
| Taoasis        | Pine silvestris oil | 28663-119531     | 1       |
| Taoasis        | Pine silvestris oil | 35808-123038     | 2       |
| Taoasis        | Pine silvestris oil | 49977-12442      | 1       |
| Taoasis        | Pine silvestris oil | 49977-125240     | 2       |
| Taoasis/Phönix | Pine silvestris oil | 32372-110382     | 1       |
| Caelo          | Pine silvestris oil | 13334501         | 5       |

- 241 228 spectra from 1121 *Apo-Ident* customers from a total of 46 956 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Pine silvestris oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Pine silvestris oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 160           | 0              | 63 779        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 133           | 2              | 241 228       |

The substance/substance group *Pine silvestris oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.5185 % (> 96.2963 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several

new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Pine silvestris oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Cypress oil       | 21.56                  | —                              |
| Dwarf pine oil    | 23.67                  | —                              |
| Juniper wood oil  | 29.29                  | —                              |
| Spearmint oil     | 29.63                  | —                              |
| Turpentine oil    | 34.10                  | —                              |
| Caraway oil       | 35.19                  | —                              |
| Eucalyptus oil    | 35.60                  | —                              |
| Juniper oil       | 41.11                  | —                              |
| Citric oil        | 42.30                  | —                              |
| Bitter orange oil | 45.57                  | —                              |
| Grapefruit oil    | 47.81                  | —                              |
| Bergamot oil      | 49.31                  | —                              |
| Cedar wood oil    | 54.15                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Pine silvestris oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31183     | 31183               | 0.00                         | 21.56                           |
| 31202     | 31202               | 0.00                         | 22.28                           |
| 31405     | 31202               | 2.43                         | 22.15                           |
| 34452     | 34452               | 0.00                         | 22.69                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical



variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Pine tar**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31221-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Pine tar; Pix liquida

### Special notes

When selecting the *Pine tar* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Pine tar                  | 3      | 1      | 0      |

## Second-stage model

For differentiation of the substance/substance group *Pine tar* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Pine tar*:

| Supplier | Substance | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------|----------|-----------|---------|-------------|
| Caelo    | Pine tar  | 13008302 | 31221     | 40      | 1403320     |
| Caelo    | Pine tar  | 16017905 | 33442     | 40      | 20160217    |
| Caelo    | Pine tar  | 180594   | 34085     | 40      | 20180227*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 120 spectra of 3 reference samples from the substance/substance group *Pine tar*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 819 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 60 spectra of 1 reference samples from the substance/substance group *Pine tar*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Pine tar  | 13008309 | 31614     | 60      |

- 91 431 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Pine tar*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Pine tar* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Pine tar* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 120           | 0              | 63 819        |
| <b>Type B</b> | 0              | 60            | 0              | 91 431        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Pine tar* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9657 %) | 100.0000 % (> 90.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Pine tar* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance       | Distance in<br>main model | Distance in<br>second-stage model |
|-----------------|---------------------------|-----------------------------------|
| (s)-Lactic acid | 156.84                    | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Pine tar* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31221     | 31221                  | 0.00                            | 164.53                             |
| 33442     | 31221                  | 22.38                           | 204.43                             |
| 34085     | 34085                  | 0.00                            | 256.68                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Polyhexanide solution 20%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30596-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Polyhexanide solution 20%; Solutio polyhexanidi 20%

### Special notes

When selecting the *Polyhexanide solution 20%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Polyhexanide solution 20% | 5      | 2      | 166    |

## Second-stage model

For differentiation of the substance/substance group *Polyhexanide solution 20%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Polyhexanide solution 20%*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate |
|----------|---------------------|------------------|-----------|---------|-------------|
| Fagron   | Polyhexanide sol... | 13H05-N04        | 31180     | 40      | 1403256     |
| Fagron   | Polyhexanide sol... | 13K29-B30-288935 | 31571     | 60      | 20131217    |
| Fagron   | Polyhexanide sol... | 16B16-B04-322720 | 32733     | 40      | 20160229    |
| Fagron   | Polyhexanide sol... | 18B16-B10-345748 | 34087     | 40      | 20180306    |
| Fagron   | Polyhexanide sol... | 20A16-F03-368291 | 34846     | 40      | 20200228    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Polyhexanide solution 20%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Polyhexanide solution 20%*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier | Substance                 | Batch            | Sample ID | Spectra |
|----------|---------------------------|------------------|-----------|---------|
| Fagron   | Polyhexanide solution 20% | 12A04-N06        | 30596     | 40      |
| Fagron   | Polyhexanide solution 20% | 15H28-B11-313603 | 32276     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 792 spectra from 395 *Apo-Ident* customers from 182 batches from the substance/substance group *Polyhexanide solution 20%*.
- Among them are spectra of independent samples from 166 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier         | Substance                 | Batch            | Spectra |
|------------------|---------------------------|------------------|---------|
| 18GR009011       | Polyhexanide solution 20% | 19D03-B01-360931 | 1       |
| Fagron           | Polyhexanide solution 20% | 17114-b02-343990 | 1       |
| Fagron           | Polyhexanide solution 20% | 19d303b01360930  | 1       |
| Fagron           | Polyhexanide solution 20% | 15H28-B11-313603 | 12      |
| Anzag            | Polyhexanide solution 20% | 16B16-B04-325487 | 1       |
| Anzag            | Polyhexanide solution 20% | 16G29-B01-335336 | 2       |
| Fagron           | Polyhexanide solution 20% | 19A16-B04-357983 | 9       |
| Anzag 14.01.2019 | Polyhexanide solution 20% | 18D09-B01-348161 | 1       |
| ANZAG KASSEL     | Polyhexanide solution 20% | 18GR353621       | 1       |
| Caelo            | Polyhexanide solution 20% | 12GR227646       | 1       |
| Fagron           | Polyhexanide solution 20% | 335336           | 1       |
| B.Braun / Gehe   | Polyhexanide solution 20% | 13103M18         | 3       |
| Beiersdorf       | Polyhexanide solution 20% | 18816-810-345748 | 1       |
| bergländ         | Polyhexanide solution 20% | 18D09-B01-348161 | 1       |
| Bombastus        | Polyhexanide solution 20% | 18b16b10435748   | 1       |
| Caelo            | Polyhexanide solution 20% | 12B09-N01        | 1       |
| Caelo            | Polyhexanide solution 20% | 13K29-B30-288938 | 2       |
| Caelo            | Polyhexanide solution 20% | 14F25-B06-300093 | 2       |
| Caelo            | Polyhexanide solution 20% | 14F25-B06-305013 | 1       |
| Caelo            | Polyhexanide solution 20% | 15H28-B11-313603 | 1       |
| Caelo            | Polyhexanide solution 20% | 15H28-B11-315703 | 1       |
| Caelo            | Polyhexanide solution 20% | 16B16-B04-325487 | 1       |
| Caelo            | Polyhexanide solution 20% | 17L14-B02-343990 | 1       |
| Caelo            | Polyhexanide solution 20% | 17GR185627       | 2       |
| Caelo            | Polyhexanide solution 20% | 15D09-B01-348161 | 1       |
| Caelo            | Polyhexanide solution 20% | 18B16-B10-345748 | 2       |
| Caelo            | Polyhexanide solution 20% | 16GR025056       | 1       |
| Caelo            | Polyhexanide solution 20% | 13351M28         | 2       |
| Caelo            | Polyhexanide solution 20% | 14F25-B06-296291 | 2       |
| Caelo            | Polyhexanide solution 20% | 20A16-F03-368291 | 1       |
| Caelo            | Polyhexanide solution 20% | 12K20N01         | 1       |
| Caelo            | Polyhexanide solution 20% | 18D09B01348161   | 1       |
| Caelo            | Polyhexanide solution 20% | 93007            | 1       |
| Caelo            | Polyhexanide solution 20% | 13K29-B30-288934 | 1       |
| Caelo            | Polyhexanide solution 20% | 14F25-B06        | 1       |
| Caelo            | Polyhexanide solution 20% | 16B16-B04-318789 | 2       |

*continued on the next page*

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| Supplier          | Substance                 | Batch             | Spectra |
|-------------------|---------------------------|-------------------|---------|
| Caelo             | Polyhexanide solution 20% | 16B16B04322720    | 2       |
| Caelo             | Polyhexanide solution 20% | 18G02-B01-353296  | 4       |
| Caelo             | Polyhexanide solution 20% | 18G02-B01-353297  | 1       |
| Caelo             | Polyhexanide solution 20% | 16G29B01328171    | 1       |
| Caelo             | Polyhexanide solution 20% | 14F25-B06-296292  | 2       |
| Caelo             | Polyhexanide solution 20% | 17L14-B02-343991  | 2       |
| Caelo             | Polyhexanide solution 20% | 18D09-B01-348160  | 1       |
| Caelo             | Polyhexanide solution 20% | 19D03-B01-360930  | 2       |
| Caelo             | Polyhexanide solution 20% | 14GR132285        | 1       |
| Caelo             | Polyhexanide solution 20% | AKD17             | 1       |
| Caelo             | Polyhexanide solution 20% | 16G29-B01-335336  | 1       |
| Caelo             | Polyhexanide solution 20% | 18D09-B01-348161  | 2       |
| Caelo             | Polyhexanide solution 20% | 18G02-B01         | 1       |
| Caelo             | Polyhexanide solution 20% | 19A16-B04-357983  | 1       |
| Caelo             | Polyhexanide solution 20% | 15H28-B11         | 1       |
| Calachem / Noweda | Polyhexanide solution 20% | 19A16-B04-357983  | 1       |
| Calachem / Noweda | Polyhexanide solution 20% | 20A16-F03-3682809 | 2       |
| Caleo/ Noweda     | Polyhexanide solution 20% | 18J18-B05         | 1       |
| Ebert-Jacobi      | Polyhexanide solution 20% | 16G29-B01-328171  | 1       |
| Ebert-Jacobi      | Polyhexanide solution 20% | 16G29-B01-330629  | 1       |
| Euro OTC          | Polyhexanide solution 20% | 16B16-B04-320854  | 1       |
| Euro OTC          | Polyhexanide solution 20% | 15H28-B11-313603  | 1       |
| Euro OTC          | Polyhexanide solution 20% | 15H28-B11-313604  | 1       |
| Euro OTC          | Polyhexanide solution 20% | 18D09-B01-348161  | 4       |
| Euro OTC          | Polyhexanide solution 20% | 18D09-B01348161   | 1       |
| facron 2          | Polyhexanide solution 20% | 19A16b04359557    | 1       |
| Fagon/Sanacorp    | Polyhexanide solution 20% | 18J18-B05-355791  | 1       |
| Fagron            | Polyhexanide solution 20% | 12K20-N01         | 5       |
| Fagron            | Polyhexanide solution 20% | 12k20-n01         | 2       |
| Fagron            | Polyhexanide solution 20% | 11GR180545        | 1       |
| Fagron            | Polyhexanide solution 20% | 13H05-No4         | 1       |
| Fagron            | Polyhexanide solution 20% | 13K29-B30         | 2       |
| Fagron            | Polyhexanide solution 20% | 14F25-B06-296291  | 2       |
| Fagron            | Polyhexanide solution 20% | 11G22N02          | 1       |
| Fagron            | Polyhexanide solution 20% | 14F25-B06         | 11      |
| Fagron            | Polyhexanide solution 20% | 14GR132285        | 2       |
| Fagron            | Polyhexanide solution 20% | 14F25B06300092    | 1       |
| Fagron            | Polyhexanide solution 20% | 14F25-B06-305013  | 4       |
| Fagron            | Polyhexanide solution 20% | 18071501          | 1       |
| Fagron            | Polyhexanide solution 20% | 15H28-B11-312309  | 5       |
| Fagron            | Polyhexanide solution 20% | 15H28-B11-315703  | 5       |
| Fagron            | Polyhexanide solution 20% | 15H28-B11_313603  | 1       |
| Fagron            | Polyhexanide solution 20% | 15H28             | 1       |
| Fagron            | Polyhexanide solution 20% | 16B16-B04-318789  | 10      |
| Fagron            | Polyhexanide solution 20% | 15h28-b11-312309  | 1       |
| Fagron            | Polyhexanide solution 20% | 16B16-b04-322720  | 1       |
| Fagron            | Polyhexanide solution 20% | 16B16-B04-325487  | 12      |
| Fagron            | Polyhexanide solution 20% | 25021712          | 1       |
| Fagron            | Polyhexanide solution 20% | 16G29-B01-328171  | 10      |
| Fagron            | Polyhexanide solution 20% | 16G29-B01-330630  | 3       |
| Fagron            | Polyhexanide solution 20% | 16GR180497        | 2       |
| Fagron            | Polyhexanide solution 20% | 16G-29-B01        | 1       |
| Fagron            | Polyhexanide solution 20% | 16G29-B01-334336  | 1       |
| Fagron            | Polyhexanide solution 20% | 16G29-B01-337612  | 3       |
| Fagron            | Polyhexanide solution 20% | 16g29-b01-335336  | 1       |
| Fagron            | Polyhexanide solution 20% | 17GR1856627       | 1       |
| Fagron            | Polyhexanide solution 20% | 17GR185627        | 15      |
| Fagron            | Polyhexanide solution 20% | 17L14-B02-343991  | 9       |
| Fagron            | Polyhexanide solution 20% | 17114b02143990    | 1       |
| Fagron            | Polyhexanide solution 20% | 18816-B10-345748  | 2       |

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| Supplier | Substance                 | Batch             | Spectra |
|----------|---------------------------|-------------------|---------|
| Fagron   | Polyhexanide solution 20% | 18B16-B10         | 3       |
| Fagron   | Polyhexanide solution 20% | 7051803           | 1       |
| Fagron   | Polyhexanide solution 20% | 18B16             | 1       |
| Fagron   | Polyhexanide solution 20% | 18009-8013-348161 | 1       |
| Fagron   | Polyhexanide solution 20% | 17G185627         | 1       |
| Fagron   | Polyhexanide solution 20% | 18GR038066        | 7       |
| Fagron   | Polyhexanide solution 20% | 18G02-B01-353298  | 1       |
| Fagron   | Polyhexanide solution 20% | 18G02-B01-353297  | 14      |
| Fagron   | Polyhexanide solution 20% | 2021906           | 1       |
| Fagron   | Polyhexanide solution 20% | 8GR038066         | 1       |
| Fagron   | Polyhexanide solution 20% | 18j18-b05-355791  | 1       |
| Fagron   | Polyhexanide solution 20% | 18GR353621        | 5       |
| Fagron   | Polyhexanide solution 20% | 19A16-B04-359557  | 24      |
| Fagron   | Polyhexanide solution 20% | 19D03-B01-360931  | 16      |
| Fagron   | Polyhexanide solution 20% | 19D03-B01-360932  | 1       |
| Fagron   | Polyhexanide solution 20% | 368290            | 1       |
| Fagron   | Polyhexanide solution 20% | 19D23-B01-360932  | 1       |
| Fagron   | Polyhexanide solution 20% | 19GR304768        | 6       |
| Fagron   | Polyhexanide solution 20% | 19E15-B01         | 4       |
| Fagron   | Polyhexanide solution 20% | 20A26-F03         | 2       |
| Fagron   | Polyhexanide solution 20% | 19D3-B01          | 1       |
| Fagron   | Polyhexanide solution 20% | 13H05-N040339/904 | 1       |
| Fagron   | Polyhexanide solution 20% | 16G29-B01         | 7       |
| Fagron   | Polyhexanide solution 20% | 17L14-B02         | 2       |
| Fagron   | Polyhexanide solution 20% | 19A16-B04         | 11      |
| Fagron   | Polyhexanide solution 20% | 18/18B05355791    | 1       |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368290  | 1       |
| Fagron   | Polyhexanide solution 20% | 2516U-03580       | 1       |
| Fagron   | Polyhexanide solution 20% | 13H05-N01         | 8       |
| Fagron   | Polyhexanide solution 20% | 14F25-B06-296292  | 12      |
| Fagron   | Polyhexanide solution 20% | 18G02-801         | 1       |
| Fagron   | Polyhexanide solution 20% | 19D03-B01-360931  | 1       |
| Fagron   | Polyhexanide solution 20% | 15H28-B11         | 7       |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368289  | 3       |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368288  | 9       |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368296  | 14      |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368292  | 5       |
| Fagron   | Polyhexanide solution 20% | A16-F03-3682912   | 1       |
| Fagron   | Polyhexanide solution 20% | 15C20-B06-309678  | 5       |
| Fagron   | Polyhexanide solution 20% | 18J18-B05         | 4       |
| Fagron   | Polyhexanide solution 20% | 18G02-B01_353297  | 1       |
| Fagron   | Polyhexanide solution 20% | 14F25-b06-296292  | 1       |
| Fagron   | Polyhexanide solution 20% | 3018E-03580       | 1       |
| Fagron   | Polyhexanide solution 20% | 16G29-B01-330629  | 10      |
| Fagron   | Polyhexanide solution 20% | 3-36829000        | 1       |
| Fagron   | Polyhexanide solution 20% | 20A16-F03         | 13      |
| Fagron   | Polyhexanide solution 20% | 20A16-F03-368290  | 15      |
| Fagron   | Polyhexanide solution 20% | 18D09-B01-348160  | 15      |
| Fagron   | Polyhexanide solution 20% | 1092005           | 1       |
| Fagron   | Polyhexanide solution 20% | 16gr025056        | 1       |
| Fagron   | Polyhexanide solution 20% | 13K29-B30_288934  | 1       |
| Fagron   | Polyhexanide solution 20% | 14GR274618        | 1       |
| Fagron   | Polyhexanide solution 20% | 7018230004        | 2       |
| Fagron   | Polyhexanide solution 20% | 18J18-B05355791   | 1       |
| Fagron   | Polyhexanide solution 20% | 19A16-B04-39557   | 1       |
| Fagron   | Polyhexanide solution 20% | 19A16-B09-357983  | 1       |
| Fagron   | Polyhexanide solution 20% | 19D03-01-360931   | 1       |
| Fagron   | Polyhexanide solution 20% | 17L14-B02-343990  | 12      |
| Fagron   | Polyhexanide solution 20% | 18D09-B01-348161  | 21      |
| Fagron   | Polyhexanide solution 20% | 3714M-03580       | 1       |

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| Supplier        | Substance                 | Batch              | Spectra |
|-----------------|---------------------------|--------------------|---------|
| Fagron          | Polyhexanide solution 20% | 2215I-03580        | 1       |
| Fagron          | Polyhexanide solution 20% | 2019U-03580        | 1       |
| Fagron          | Polyhexanide solution 20% | 20A16-F03-368294   | 2       |
| Fagron          | Polyhexanide solution 20% | 12D27-N07          | 1       |
| Fagron          | Polyhexanide solution 20% | 12A04-N06          | 1       |
| Fagron          | Polyhexanide solution 20% | 14F25-B06-300092   | 8       |
| Fagron          | Polyhexanide solution 20% | 16B16-b04          | 1       |
| Fagron          | Polyhexanide solution 20% | 16GR025056         | 5       |
| Fagron          | Polyhexanide solution 20% | 19D03-B01          | 4       |
| Fagron          | Polyhexanide solution 20% | 19D03B01           | 1       |
| Fagron          | Polyhexanide solution 20% | 20A16-F03368290    | 1       |
| Fagron          | Polyhexanide solution 20% | 20A166-F03-3682809 | 1       |
| Fagron          | Polyhexanide solution 20% | 701823_00004       | 1       |
| Fagron          | Polyhexanide solution 20% | 19A16_B04          | 1       |
| Fagron          | Polyhexanide solution 20% | 19003-B01-360931   | 1       |
| Fagron          | Polyhexanide solution 20% | F03-3682900        | 1       |
| Fagron          | Polyhexanide solution 20% | 18d09-b01-348160   | 1       |
| Fagron          | Polyhexanide solution 20% | 16B16-B04          | 7       |
| Fagron          | Polyhexanide solution 20% | 19D03-BV01-360931  | 2       |
| Fagron          | Polyhexanide solution 20% | 16B16-B04-320854   | 9       |
| Fagron          | Polyhexanide solution 20% | 15H28-B11313603    | 1       |
| Fagron          | Polyhexanide solution 20% | 18G02-B01-353296   | 22      |
| Fagron          | Polyhexanide solution 20% | 19D03-B01360931    | 1       |
| Fagron          | Polyhexanide solution 20% | 20A16F033368296    | 1       |
| Fagron          | Polyhexanide solution 20% | 18d09b01348160     | 1       |
| Fagron          | Polyhexanide solution 20% | 18816B10345748     | 1       |
| Fagron          | Polyhexanide solution 20% | 18G02-B01          | 9       |
| Fagron          | Polyhexanide solution 20% | 19GR009011         | 1       |
| Fagron          | Polyhexanide solution 20% | 15H28-B11-313604   | 6       |
| Fagron          | Polyhexanide solution 20% | 16816-B04          | 1       |
| Fagron          | Polyhexanide solution 20% | 18D09-B01          | 5       |
| Fagron          | Polyhexanide solution 20% | 18D09-B01348160    | 1       |
| Fagron          | Polyhexanide solution 20% | 18G02-B01353296    | 1       |
| Fagron          | Polyhexanide solution 20% | 18J18-B05-355791   | 14      |
| Fagron          | Polyhexanide solution 20% | 32289-58-0         | 1       |
| Fagron          | Polyhexanide solution 20% | F03-3682906        | 1       |
| Fagron          | Polyhexanide solution 20% | 13K29-B30-288934   | 5       |
| Fagron          | Polyhexanide solution 20% | 14F25-B06296292    | 1       |
| Fagron          | Polyhexanide solution 20% | 15GR209540         | 1       |
| Fagron          | Polyhexanide solution 20% | 16G29-B01-335336   | 14      |
| Fagron          | Polyhexanide solution 20% | 16G259-B01-328171  | 1       |
| Fagron          | Polyhexanide solution 20% | 18B10-345748       | 1       |
| Fagron          | Polyhexanide solution 20% | 18I18-B05-355791   | 3       |
| Fagron          | Polyhexanide solution 20% | 19D03-B01-360930   | 19      |
| Fagron          | Polyhexanide solution 20% | 19D03-B01-3609-30  | 1       |
| Fargom          | Polyhexanide solution 20% | 116B16-B04-320854  | 1       |
| Fargon          | Polyhexanide solution 20% | 16G29-B01-328171   | 1       |
| Fargon          | Polyhexanide solution 20% | 16G29-B01-0004     | 1       |
| Fargon          | Polyhexanide solution 20% | 20A16-F03-368296   | 1       |
| Fargon/ Gehe    | Polyhexanide solution 20% | 15H28-B11-312309   | 1       |
| Fargon/AHC      | Polyhexanide solution 20% | 18G02-B01-353296   | 1       |
| Fargon/AHD      | Polyhexanide solution 20% | 18GR038066         | 1       |
| Fargon/Gehe     | Polyhexanide solution 20% | 19D03-B01          | 1       |
| Fragon          | Polyhexanide solution 20% | 12K20-N01          | 1       |
| Fragon GmbH     | Polyhexanide solution 20% | 16GR025056         | 1       |
| Fragon/Noweda   | Polyhexanide solution 20% | 16G29-B01-328171   | 1       |
| Fragon/Sanacorp | Polyhexanide solution 20% | 20A16-F03-368290   | 1       |
| Gehe            | Polyhexanide solution 20% | 17L14-B02-343990   | 1       |
| Gehe            | Polyhexanide solution 20% | 18B16-B10-345748   | 1       |
| Gehe            | Polyhexanide solution 20% | 18G02b01353297     | 1       |

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| Supplier                  | Substance                 | Batch             | Spectra |
|---------------------------|---------------------------|-------------------|---------|
| Gehe                      | Polyhexanide solution 20% | 18G02-B01-353297  | 1       |
| GEHE                      | Polyhexanide solution 20% | 18G02-B01         | 1       |
| GEHE 14.04.2014           | Polyhexanide solution 20% | 13K29-B30_288934  | 1       |
| Gehe 16.12.14             | Polyhexanide solution 20% | 14F25-B06-296292  | 1       |
| Fagron                    | Polyhexanide solution 20% | 16GR1-B01-330629  | 1       |
| Caelo                     | Polyhexanide solution 20% | 19d03-b01-360931  | 1       |
| Gehe/Fagaron              | Polyhexanide solution 20% | 16B16-B04-320854  | 1       |
| Gepepharm                 | Polyhexanide solution 20% | 17061709          | 1       |
| Ichthyol Gesellschaft/AHD | Polyhexanide solution 20% | 14F25-B06-296292  | 1       |
| Noveda                    | Polyhexanide solution 20% | 18/18-B05-355791  | 1       |
| Noweda                    | Polyhexanide solution 20% | 12K20-N01         | 1       |
| Noweda                    | Polyhexanide solution 20% | 15H28-B11-312309  | 2       |
| Noweda                    | Polyhexanide solution 20% | 14F25B06305013    | 1       |
| Noweda                    | Polyhexanide solution 20% | 18J18-B05-355791  | 1       |
| Noweda                    | Polyhexanide solution 20% | 19A16-B04-359557  | 1       |
| Noweda                    | Polyhexanide solution 20% | 20A16-F03-3682809 | 1       |
| Fagron                    | Polyhexanide solution 20% | 13K29-B30-288938  | 4       |
| Phagron                   | Polyhexanide solution 20% | 17L14-B02-343990  | 1       |
| Phoenix                   | Polyhexanide solution 20% | 12K20-N01         | 1       |
| Phoenix                   | Polyhexanide solution 20% | 16B16-B04         | 1       |
| Phoenix                   | Polyhexanide solution 20% | 18G02-B01-353297  | 1       |
| Phoenix                   | Polyhexanide solution 20% | 19D03-B01-360930  | 1       |
| Phoenix                   | Polyhexanide solution 20% | 20A16-F03-368290  | 1       |
| Fagron                    | Polyhexanide solution 20% | 14F25-B06-300093  | 8       |
| Phönix                    | Polyhexanide solution 20% | 18D09-B01-348160  | 1       |
| Phönix                    | Polyhexanide solution 20% | 18B16-B10-345748  | 1       |
| Phönix                    | Polyhexanide solution 20% | 19D03-B01-360930  | 1       |
| Phönix                    | Polyhexanide solution 20% | F03-3682808       | 1       |
| PHÖNIX                    | Polyhexanide solution 20% | 17L14-B02         | 1       |
| PHÖNIX                    | Polyhexanide solution 20% | 18D09-B01-348160  | 1       |
| Phönix Gotha              | Polyhexanide solution 20% | 19A16-B04-359557  | 1       |
| Phytocomm                 | Polyhexanide solution 20% | 27803278          | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 14f25-b06-2962291 | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 16B16-B04-318789  | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 17L14-B02-343990  | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 18D09-B01-348160  | 2       |
| Sanacorp                  | Polyhexanide solution 20% | 18GR038066        | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 18G02-B01         | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 18J18-Bo5         | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 18GR353621        | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 19D03-B01         | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 20A16-F03         | 1       |
| Sanacorp                  | Polyhexanide solution 20% | 19GR304768        | 1       |
| Fagron                    | Polyhexanide solution 20% | 20A16-F003-368289 | 1       |
| Fagron                    | Polyhexanide solution 20% | 13H05-N04         | 9       |
| Fagron                    | Polyhexanide solution 20% |                   | 2       |
| Fagron                    | Polyhexanide solution 20% | 16B16-B04-322720  | 8       |
| Fagron                    | Polyhexanide solution 20% | 18B16-B10-345748  | 19      |
| Fagron                    | Polyhexanide solution 20% | 20A16-F03-368291  | 9       |

- 240571 spectra from 1121 *Apo-Ident* customers from a total of 46827 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).



## Validation results

The validation runs checked whether the substance/substance group *Polyhexanide solution 20%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Polyhexanide solution 20%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 220           | 0              | 63 719        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 775           | 17             | 240 571       |

The substance/substance group *Polyhexanide solution 20%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 97.8535 % (> 97.4747 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Polyhexanide solution 20%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Hydrophilic base emulsion (NRF p.25)      | 18.19                  | —                              |
| Dextrorotary lactic acid 20%              | 31.64                  | —                              |
| Aluminium acetotartrate solution          | 33.13                  | —                              |
| Non-ionic hydrous liniment SR/DAC (NRF... | 34.62                  | —                              |
| Liquorice juice purified, diluted         | 35.85                  | —                              |
| Chlorhexidine digluconate solution        | 38.57                  | —                              |
| Water                                     | 39.25                  | —                              |
| Gel basis Audor®                          | 41.33                  | —                              |
| Chest elixir                              | 42.92                  | —                              |
| Condurango wine                           | 43.14                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)       | 44.09                  | —                              |
| Hydrophilic cream, non-ionic SR (NRF p... | 46.73                  | —                              |
| Fortified wine                            | 49.04                  | —                              |
| Hydrophilic cream, non-ionic without p... | 50.08                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the sub-

stance/substance group *Polyhexanide solution 20%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31180     | 31180               | 0.00                         | 28.29                           |
| 31571     | 31180               | 7.93                         | 29.02                           |
| 32733     | 31180               | 12.02                        | 30.04                           |
| 34087     | 31180               | 4.95                         | 25.94                           |
| 34846     | 31180               | 8.09                         | 29.75                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Polyol fatty acid ester**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30755-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Polyol fatty acid ester; Cetiol® HE

### Special notes

When selecting the *Polyol fatty acid ester* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Polyol fatty acid ester   | 4      | 2      | 29     |

## Second-stage model

For differentiation of the substance/substance group *Polyol fatty acid ester* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Polyol fatty acid ester*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Polyol fatty aci... | 11162809 | 30755     | 40      | 20110616    |
| Caelo    | Polyol fatty aci... | 13292302 | 31179     | 40      | 1402589     |
| Caelo    | Polyol fatty aci... | 13357702 | 31366     | 40      | 20131112    |
| Caelo    | Polyol fatty aci... | 16254506 | 33459     | 40      | 20160901    |
| Caelo    | Polyol fatty aci... | 16254506 | 33460     | 40      | 20160901    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 200 spectra of 5 reference samples from the substance/substance group *Polyol fatty acid ester*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 739 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Polyol fatty acid ester*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance               | Batch  | Sample ID | Spectra |
|----------|-------------------------|--------|-----------|---------|
| Caelo    | Polyol fatty acid ester | 161120 | 32196     | 40      |
| Caelo    | Polyol fatty acid ester | 172830 | 33676     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 138 spectra from 78 *Apo-Ident* customers from 33 batches from the substance/substance group *Polyol fatty acid ester*.
- Among them are spectra of independent samples from 29 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance               | Batch       | Spectra |
|----------------------------|-------------------------|-------------|---------|
| Bombastus                  | Polyol fatty acid ester | 16254506    | 1       |
| Bombastus                  | Polyol fatty acid ester | 16254508    | 1       |
| Caelo                      | Polyol fatty acid ester | 12361804    | 4       |
| Caelo                      | Polyol fatty acid ester | 13158901    | 1       |
| Caelo                      | Polyol fatty acid ester | 13158902    | 5       |
| Caelo                      | Polyol fatty acid ester | 13158904    | 1       |
| Caelo                      | Polyol fatty acid ester | 11081403    | 1       |
| Caelo                      | Polyol fatty acid ester | 13357703    | 4       |
| Caelo                      | Polyol fatty acid ester | 14322405    | 5       |
| Caelo                      | Polyol fatty acid ester | 143033502   | 1       |
| Caelo                      | Polyol fatty acid ester | 15298004    | 5       |
| Caelo                      | Polyol fatty acid ester | 16254502    | 5       |
| Caelo                      | Polyol fatty acid ester | 16254504    | 5       |
| Caelo                      | Polyol fatty acid ester | 4111711     | 1       |
| Caelo                      | Polyol fatty acid ester | 17072203    | 13      |
| Caelo                      | Polyol fatty acid ester | 17283001    | 1       |
| Caelo                      | Polyol fatty acid ester | 17283008    | 3       |
| Caelo                      | Polyol fatty acid ester | 19093502    | 1       |
| Caelo                      | Polyol fatty acid ester | 190935002   | 8       |
| Caelo                      | Polyol fatty acid ester | 190935004   | 2       |
| Caelo                      | Polyol fatty acid ester | 16254508    | 1       |
| Caelo                      | Polyol fatty acid ester | 19093501    | 3       |
| Caelo                      | Polyol fatty acid ester | 14322407    | 1       |
| Caelo                      | Polyol fatty acid ester | 14033502    | 9       |
| Caelo                      | Polyol fatty acid ester | 11162811    | 1       |
| Caelo                      | Polyol fatty acid ester | 16112005    | 3       |
| Caelo                      | Polyol fatty acid ester | 17283006    | 7       |
| Caelo                      | Polyol fatty acid ester | 12361808    | 4       |
| Caelo                      | Polyol fatty acid ester | 13158903    | 5       |
| Caesar & Loretz GmbH       | Polyol fatty acid ester | 19093501    | 5       |
| Caesar & Loretz GmbH       | Polyol fatty acid ester | 190935002   | 1       |
| Caesar & Loretz GmbH/Gehe  | Polyol fatty acid ester | 17283008    | 1       |
| Caesar & Loretz GmbH/Ph... | Polyol fatty acid ester | 190935002   | 1       |
| Caesar/ Noweda             | Polyol fatty acid ester | 2613E-01243 | 1       |
| Carlo/Gehe/11,9            | Polyol fatty acid ester | 19093501    | 1       |
| GEHE                       | Polyol fatty acid ester | 12361804    | 1       |

*continued on the next page*

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| Supplier | Substance               | Batch    | Spectra |
|----------|-------------------------|----------|---------|
| Noweda   | Polyol fatty acid ester | 13158903 | 1       |
| Phönix   | Polyol fatty acid ester | 13357702 | 1       |
| Phönix   | Polyol fatty acid ester | 14033502 | 2       |
| Sanacorp | Polyol fatty acid ester | 1/AKD14  | 1       |
| Caelo    | Polyol fatty acid ester | 13292302 | 5       |
| Caelo    | Polyol fatty acid ester | 13357702 | 5       |
| Caelo    | Polyol fatty acid ester | 16254506 | 9       |
| Caelo    | Polyol fatty acid ester | 11162809 | 1       |

- 241 225 spectra from 1121 *Apo-Ident* customers from a total of 46 974 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Polyol fatty acid ester* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Polyol fatty acid ester* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 200           | 0              | 63 739        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 138           | 0              | 241 225       |

The substance/substance group *Polyol fatty acid ester* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 100.0000 % (> 95.6522 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Polyol fatty acid ester* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Polysorbate 80                            | 15.01                     | —                                 |
| Polysorbate 20                            | 18.16                     | —                                 |
| Macroglycerol ricinoleate                 | 19.22                     | —                                 |
| Polysorbate 60                            | 24.33                     | —                                 |
| Macrogol 20 glycerol monostearate type... | 24.75                     | —                                 |
| Macrogol 8 stearate type I                | 25.33                     | —                                 |
| Macroglycerol hydroxystearate 40          | 31.24                     | —                                 |
| Lauromacrogol 400                         | 34.27                     | —                                 |
| Macrogol ointment                         | 35.61                     | —                                 |
| Macrogol 4 lauryl ether                   | 36.59                     | —                                 |
| Macrogols 400                             | 44.35                     | —                                 |
| Macrogol-2-laurylether                    | 46.67                     | —                                 |
| Macrogols 300                             | 53.49                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Polyol fatty acid ester* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30755     | 31179                  | 7.83                            | 16.11                              |
| 31179     | 31179                  | 0.00                            | 18.52                              |
| 31366     | 31179                  | 5.77                            | 17.85                              |
| 33459     | 31179                  | 5.61                            | 16.96                              |
| 33460     | 31179                  | 7.17                            | 16.39                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Polysorbates / Macrogol 20 glycerol monostearate type II**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 10004575-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Polysorbates / Macrogol 20 glycerol monostearate type II; Macrogol 20 glycerol monostearate type II; Macrogol 20 glyceroli monostearas; Polysorbate 20; Polysorbate 60; Polysorbate 80; Polysorbatum 20; Polysorbatum 60; Polysorbatum 80

### Special notes

When selecting the *Polysorbates / Macrogol 20 glycerol monostearate type II* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                                | Type A | Type B | Type C |
|----------------------------------------------------------|--------|--------|--------|
| Polysorbates / Macrogol 20 glycerol monostearate type II | 25     | 14     | 325    |

## Second-stage model

For differentiation of the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II* the following second-stage model is used:

- [Submodel 10](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|----------|---------------------|------------------|-----------|---------|--------------------|
| Caelo    | Macrogol 20 glyc... | 14033701         | 31469     | 60      | 20140214           |
| Caelo    | Macrogol 20 glyc... | 162800           | 33323     | 40      | 20161026*          |
| Caelo    | Macrogol 20 glyc... | 170801           | 33324     | 40      | 20170428*          |
| Caelo    | Macrogol 20 glyc... | 20000323         | 35044     | 40      | 20200310*          |
| Caelo    | Macrogol 20 glyc... | 20004413         | 35257     | 40      | 20210226*          |
| Fagron   | Macrogol 20 glyc... | 13H09-N06        | 31182     | 40      | 1407195            |
| Caelo    | Polysorbate 20      | 14019413         | 31323     | 40      | AR-15-FG-008174-01 |
| Caelo    | Polysorbate 20      | 14365105         | 31697     | 60      | 20150116           |
| Caelo    | Polysorbate 20      | 182768           | 34331     | 40      | 20180312*          |
| Caelo    | Polysorbate 20      | 190922           | 34469     | 40      | 20190503*          |
| Caelo    | Polysorbate 20      | 192430           | 34707     | 40      | 20191014*          |
| Caelo    | Polysorbate 20      | 21000590         | 35295     | 40      | 20210406*          |
| Caelo    | Polysorbate 60      | 12133619         | 31033     | 40      | 20120531           |
| Caelo    | Polysorbate 60      | 14027102         | 31324     | 40      | AR-15-FG-008175-01 |
| Caelo    | Polysorbate 60      | 170258           | 33058     | 40      | 20170313*          |
| Caelo    | Polysorbate 60      | 172920           | 33888     | 40      | 20171117*          |
| Caelo    | Polysorbate 60      | 180292           | 34081     | 40      | 20180302*          |
| Caelo    | Polysorbate 60      | 182897           | 34338     | 40      | 20181128*          |
| Caelo    | Polysorbate 60      | 191141           | 34623     | 40      | 20190604*          |
| Caelo    | Polysorbate 60      | 192038           | 34702     | 40      | 20190827*          |
| Caelo    | Polysorbate 80      | 12116009         | 30893     | 80      | 20120427           |
| Caelo    | Polysorbate 80      | 13372015         | 31325     | 40      | AR-15-FG-008176-01 |
| Caelo    | Polysorbate 80      | 20000727         | 35015     | 40      | 20200408*          |
| Fagron   | Polysorbate 80      | 17A23-B09-331594 | 33300     | 40      | 20170208           |
| Fagron   | Polysorbate 80      | 18H01-B04-357189 | 34673     | 40      | 20180828           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 1080 spectra of 25 reference samples from the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 25 different batches.
- 62 859 spectra from a total of 1282 batches from further 220 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A*

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 690 spectra of 18 reference samples from the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II*.
- Among them are spectra of independent samples from 14 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID          | Spectra |
|----------|---------------------------------|----------|--------------------|---------|
| Caelo    | Macrogol 20 glycerol monoste... | 161883   | 33325              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 161884   | 33326              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 172882   | 33901              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 172880   | 33902              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 181870   | 34239              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 183242   | 34335              | 40      |
| Caelo    | Polysorbate 20                  | 162335   | 32330              | 40      |
| Caelo    | Polysorbate 20                  | 172825   | 33884              | 40      |
| Caelo    | Polysorbate 60                  | 161771   | 32329              | 40      |
| Caelo    | Polysorbate 60                  | 170999   | 33322              | 40      |
| Caelo    | Polysorbate 60                  | 19000533 | 35041              | 40      |
| Caelo    | Polysorbate 80                  | 16260201 | 33296              | 40      |
| Caelo    | Polysorbate 80                  | 173048   | 33887              | 40      |
| Caelo    | Polysorbate 80                  | 191639   | 34624              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 162800   | 32702              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 161883   | 33722              | 40      |
| Caelo    | Macrogol 20 glycerol monoste... | 161884   | 33723              | 40      |
| Caelo    | Polysorbate 80                  | 12116009 | 30893 <sup>†</sup> | 10      |

- 90 801 spectra from a total of 2000 batches from further 342 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 2470 spectra from 758 *Apo-Ident* customers from 339 batches from the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II*.

<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

- Among them are spectra of independent samples from 324 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                       | Batch         | Spectra |
|----------------------------|---------------------------------|---------------|---------|
| Bombastus                  | Macrogol 20 glycerol monoste... | 13H09-N06     | 1       |
| Bombastus                  | Macrogol 20 glycerol monoste... | 700906        | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 12326201      | 2       |
| Caelo                      | Macrogol 20 glycerol monoste... | 13213601      | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 15009302      | 2       |
| Caelo                      | Macrogol 20 glycerol monoste... | 14302001      | 2       |
| Caelo                      | Macrogol 20 glycerol monoste... | 15410503      | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 16188401      | 10      |
| Caelo                      | Macrogol 20 glycerol monoste... | 16188302      | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 17080101      | 2       |
| Caelo                      | Macrogol 20 glycerol monoste... | 17080104      | 8       |
| Caelo                      | Macrogol 20 glycerol monoste... | 18018506      | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 1708002       | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 18018501      | 5       |
| Caelo                      | Macrogol 20 glycerol monoste... | 18018508      | 6       |
| Caelo                      | Macrogol 20 glycerol monoste... | 19040503      | 7       |
| Caelo                      | Macrogol 20 glycerol monoste... | ES62A93607    | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 15410502      | 4       |
| Caelo                      | Macrogol 20 glycerol monoste... | 15410504      | 4       |
| Caelo                      | Macrogol 20 glycerol monoste... | 15060303      | 2       |
| Caelo                      | Macrogol 20 glycerol monoste... | 17080102      | 5       |
| Caelo                      | Macrogol 20 glycerol monoste... | 18018505      | 6       |
| Caelo                      | Macrogol 20 glycerol monoste... | 18324202      | 9       |
| Caesar & Loretz GmbH       | Macrogol 20 glycerol monoste... | 18018501      | 1       |
| Caesar & Loretz GmbH       | Macrogol 20 glycerol monoste... | 18324202      | 2       |
| Caesar & Loretz GmbH       | Macrogol 20 glycerol monoste... | 19040503      | 2       |
| Caesar & Loretz GmbH       | Macrogol 20 glycerol monoste... | 20000323003   | 1       |
| Caesar & Loretz GmbH/No... | Macrogol 20 glycerol monoste... | 20000323003   | 1       |
| Euro OTC                   | Macrogol 20 glycerol monoste... | 15410502      | 1       |
| Fagron                     | Macrogol 20 glycerol monoste... | 12H23-N03     | 4       |
| Gehe                       | Macrogol 20 glycerol monoste... | 18324202      | 2       |
| Gehe                       | Macrogol 20 glycerol monoste... | 19040503      | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 20000323003   | 6       |
| Fagron                     | Macrogol 20 glycerol monoste... | ES61A85388    | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 13213602      | 3       |
| Caelo                      | Macrogol 20 glycerol monoste... | 3042223       | 1       |
| 21.03.2017                 | Polysorbate 20                  | 153233912     | 1       |
| AHD                        | Polysorbate 20                  | 15323912      | 1       |
| AHD                        | Polysorbate 20                  | 16233506      | 1       |
| AHD                        | Polysorbate 20                  | 17021310      | 1       |
| AHD                        | Polysorbate 20                  | 17325410      | 1       |
| Alliance                   | Polysorbate 20                  | 14365105      | 2       |
| Alliance                   | Polysorbate 20                  | 17021310      | 1       |
| Alliance Healthcare        | Polysorbate 20                  | 17325413      | 1       |
| Alliance Healthcare        | Polysorbate 20                  | 19092207      | 1       |
| Anzag                      | Polysorbate 20                  | 12303006Caelo | 1       |
| Anzag                      | Polysorbate 20                  | 16114502      | 1       |
| Anzag                      | Polysorbate 20                  | 17325413      | 1       |
| Caelo                      | Polysorbate 20                  | 11347719      | 8       |
| Caelo                      | Polysorbate 20                  | 21000590006   | 7       |
| Berkel AHK                 | Polysorbate 20                  | 14019418      | 1       |
| Bionorica/Phönix           | Polysorbate 20                  | 17325410      | 1       |
| Bombastus                  | Polysorbate 20                  | 13297001      | 1       |
| Bombastus                  | Polysorbate 20                  | 17325301      | 1       |
| Cael Sanacorp 05.02.2016   | Polysorbate 20                  | 15323902      | 1       |
| Caelo                      | Polysorbate 20                  | 3478          | 1       |
| Caelo                      | Polysorbate 20                  | 11179511      | 4       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|-----------------|------------------|---------------------|----------------|
| Caelo           | Polysorbate 20   | 11179506            | 2              |
| Caelo           | Polysorbate 20   | 11117201            | 2              |
| Caelo           | Polysorbate 20   | 2704212525          | 1              |
| Caelo           | Polysorbate 20   | 11347701            | 1              |
| Caelo           | Polysorbate 20   | 11347711            | 8              |
| Caelo           | Polysorbate 20   | 2112E-02525         | 1              |
| Caelo           | Polysorbate 20   | 20210312-1          | 1              |
| Caelo           | Polysorbate 20   | 20220312-1          | 1              |
| Caelo           | Polysorbate 20   | 11347702            | 1              |
| Caelo           | Polysorbate 20   | 19021303            | 1              |
| Caelo           | Polysorbate 20   | 12303016            | 13             |
| Caelo           | Polysorbate 20   | 2713E2525           | 1              |
| Caelo           | Polysorbate 20   | 13086505            | 3              |
| Caelo           | Polysorbate 20   | 13086509            | 9              |
| Caelo           | Polysorbate 20   | 13086512            | 14             |
| Caelo           | Polysorbate 20   | 13066512            | 1              |
| Caelo           | Polysorbate 20   | 611poly             | 1              |
| Caelo           | Polysorbate 20   | 1329001             | 1              |
| Caelo           | Polysorbate 20   | C1300               | 1              |
| Caelo           | Polysorbate 20   | 13086510            | 1              |
| Caelo           | Polysorbate 20   | 13297009            | 12             |
| Caelo           | Polysorbate 20   | 14041503            | 1              |
| Caelo           | Polysorbate 20   | 14365109            | 28             |
| Caelo           | Polysorbate 20   | 15323912            | 22             |
| Caelo           | Polysorbate 20   | 12031605            | 1              |
| Caelo           | Polysorbate 20   | 2805                | 1              |
| Caelo           | Polysorbate 20   | 16029704            | 1              |
| Caelo           | Polysorbate 20   | 16114503            | 51             |
| Caelo           | Polysorbate 20   | 170130P/16233501    | 1              |
| Caelo           | Polysorbate 20   | 162335              | 1              |
| Caelo           | Polysorbate 20   | 16233502            | 1              |
| Caelo           | Polysorbate 20   | 24061713            | 1              |
| Caelo           | Polysorbate 20   | 16233500            | 1              |
| Caelo           | Polysorbate 20   | 17021303            | 53             |
| Caelo           | Polysorbate 20   | 16114504            | 1              |
| Caelo           | Polysorbate 20   | 17021311            | 9              |
| Caelo           | Polysorbate 20   | 17325302            | 1              |
| Caelo           | Polysorbate 20   | 17021304            | 1              |
| Caelo           | Polysorbate 20   | 25041806            | 1              |
| Caelo           | Polysorbate 20   | 19071802            | 1              |
| Caelo           | Polysorbate 20   | 1732510             | 1              |
| Caelo           | Polysorbate 20   | 1725407             | 1              |
| Caelo           | Polysorbate 20   | 18276802            | 3              |
| Caelo           | Polysorbate 20   | 182768012           | 1              |
| Caelo           | Polysorbate 20   | 18276808            | 1              |
| Caelo           | Polysorbate 20   | 18276810            | 35             |
| Caelo           | Polysorbate 20   | 19092203            | 1              |
| Caelo           | Polysorbate 20   | 19092208            | 4              |
| Caelo           | Polysorbate 20   | 20002482005         | 16             |
| Caelo           | Polysorbate 20   | 20002891006         | 1              |
| Caelo           | Polysorbate 20   | 2000590006          | 1              |
| Caelo           | Polysorbate 20   | 21000590008         | 1              |
| Caelo           | Polysorbate 20   | 17021307            | 1              |
| Caelo           | Polysorbate 20   | 18276811            | 1              |
| Caelo           | Polysorbate 20   | 21000590009         | 2              |
| Caelo           | Polysorbate 20   | 13297001            | 7              |
| Caelo           | Polysorbate 20   | 17325407            | 64             |
| Caelo           | Polysorbate 20   | 17325301-20180404Ma | 1              |
| Caelo           | Polysorbate 20   | 3217M-02525         | 1              |
| Caelo           | Polysorbate 20   | 714E-02525          | 1              |

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| Supplier             | Substance      | Batch               | Spectra |
|----------------------|----------------|---------------------|---------|
| Caelo                | Polysorbate 20 | 11347715            | 6       |
| Caelo                | Polysorbate 20 | 80479168            | 1       |
| Caelo                | Polysorbate 20 | 26(18276801)        | 1       |
| Caelo                | Polysorbate 20 | 16233501            | 54      |
| Caelo                | Polysorbate 20 | 17235413            | 1       |
| Caelo                | Polysorbate 20 | 20002891003         | 7       |
| Caelo                | Polysorbate 20 | 1532902             | 2       |
| Caelo                | Polysorbate 20 | 25(17021303)        | 1       |
| Caelo                | Polysorbate 20 | 70879397            | 1       |
| Caelo                | Polysorbate 20 | 173254105745        | 1       |
| Caelo                | Polysorbate 20 | 200002482005        | 1       |
| Caelo                | Polysorbate 20 | 13297010            | 18      |
| Caelo                | Polysorbate 20 | 16114502            | 9       |
| Caelo                | Polysorbate 20 | 18276807            | 52      |
| Caelo                | Polysorbate 20 | 13297001-3449311132 | 1       |
| Caelo                | Polysorbate 20 | 13086517            | 15      |
| Caelo                | Polysorbate 20 | 17355301            | 1       |
| Caelo                | Polysorbate 20 | 15159004            | 3       |
| Caelo                | Polysorbate 20 | 15323902            | 22      |
| Caelo                | Polysorbate 20 | 17325413            | 55      |
| Caelo                | Polysorbate 20 | 4612A-02525         | 1       |
| Caelo                | Polysorbate 20 | 16233506            | 26      |
| Caelo                | Polysorbate 20 | 14365116            | 35      |
| Caelo                | Polysorbate 20 | 182776806           | 1       |
| Caelo                | Polysorbate 20 | 192430005           | 8       |
| Caelo                | Polysorbate 20 | 1532302             | 1       |
| Caelo                | Polysorbate 20 | 14019410            | 9       |
| Caelo                | Polysorbate 20 | 14213213            | 11      |
| Caelo                | Polysorbate 20 | 1465109             | 1       |
| Caelo                | Polysorbate 20 | 173254413           | 1       |
| Caelo                | Polysorbate 20 | 20002891002         | 14      |
| Caelo                | Polysorbate 20 | 17021310            | 61      |
| Caelo                | Polysorbate 20 | 1912M-02525         | 1       |
| Caelo                | Polysorbate 20 | 1709930             | 2       |
| Caelo                | Polysorbate 20 | 14213211            | 2       |
| Caelo                | Polysorbate 20 | 20002891001         | 1       |
| Caelo                | Polysorbate 20 | 21000590002         | 1       |
| Caelo                | Polysorbate 20 | 12303006            | 10      |
| Caelo                | Polysorbate 20 | 3114I-02525         | 1       |
| Caelo                | Polysorbate 20 | 2215I-02525         | 1       |
| Caelo                | Polysorbate 20 | 1623350             | 1       |
| Caelo                | Polysorbate 20 | 2616A-02525         | 1       |
| Caelo                | Polysorbate 20 | 17325410            | 46      |
| Caelo                | Polysorbate 20 | 2918E-02525         | 1       |
| Caelo                | Polysorbate 20 | 19092207            | 44      |
| Caelo                | Polysorbate 20 | 13297005            | 11      |
| Caelo                | Polysorbate 20 | 1086517             | 1       |
| Caelo                | Polysorbate 20 | 14019418            | 23      |
| Caelo                | Polysorbate 20 | 1465105             | 1       |
| Caelo                | Polysorbate 20 | 5/AKD7              | 1       |
| Caelo                | Polysorbate 20 | 16029703            | 54      |
| Caelo                | Polysorbate 20 | 18276801            | 118     |
| Caelo                | Polysorbate 20 | 19092206            | 31      |
| Caelo                | Polysorbate 20 | 17325301            | 64      |
| Caeol/Noweda         | Polysorbate 20 | 17325413            | 1       |
| Caeolo               | Polysorbate 20 | 17325301            | 1       |
| Caeolo/Gehe          | Polysorbate 20 | 16233501            | 1       |
| Caeolo/Noweda        | Polysorbate 20 | 17325407            | 1       |
| Caesar & Loretz      | Polysorbate 20 | 17325413            | 1       |
| Caesar & Loretz GmbH | Polysorbate 20 | 16233501            | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH       | Polysorbate 20   | 17325410         | 1              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 18276801         | 11             |
| Caesar & Loretz GmbH       | Polysorbate 20   | 18276806         | 2              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 18276807         | 14             |
| Caesar & Loretz GmbH       | Polysorbate 20   | 18276810         | 9              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 19092206         | 8              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 19092207         | 9              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 1819Q-02525      | 1              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 192430005        | 10             |
| Caesar & Loretz GmbH       | Polysorbate 20   | 200002482005     | 1              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 20002482005      | 4              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 20002891002      | 3              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 20002891003      | 2              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 21000590006      | 3              |
| Caesar & Loretz GmbH       | Polysorbate 20   | 21000590002      | 1              |
| Caesar & Loretz GmbH Hi... | Polysorbate 20   | 15323902         | 1              |
| Caesar & Loretz GmbH Sa... | Polysorbate 20   | 20002482005      | 1              |
| Caesar & Loretz GmbH/ AHD  | Polysorbate 20   | 18276807         | 1              |
| Caesar & Loretz GmbH/ P... | Polysorbate 20   | 18276810         | 1              |
| Caesar & Loretz GmbH/Fi... | Polysorbate 20   | 18276807         | 1              |
| Caesar & Loretz GmbH/Gehe  | Polysorbate 20   | 19092207         | 1              |
| Caesar & Loretz GmbH/Gehe  | Polysorbate 20   | 21000590009      | 1              |
| Caesar & Loretz GmbH/Ge... | Polysorbate 20   | 20002482005      | 1              |
| Caesar & Loretz GmbH/Je... | Polysorbate 20   | 18276807         | 1              |
| Caesar & Loretz GmbH/Je... | Polysorbate 20   | 21000590009      | 1              |
| Caesar & Loretz GmbH/Kehr  | Polysorbate 20   | 19092206         | 1              |
| Caesar & Loretz GmbH/No... | Polysorbate 20   | 18276801         | 1              |
| Caesar & Loretz GmbH/No... | Polysorbate 20   | 19092207         | 1              |
| Caesar & Loretz GmbH/Ph... | Polysorbate 20   | 18276810         | 2              |
| Caesar & Loretz GmbH/Sa... | Polysorbate 20   | 18276810         | 1              |
| Caesar & Loretz GmbHGehe   | Polysorbate 20   | 18276807         | 1              |
| Caesar & Loretz GmbHNow... | Polysorbate 20   | 20002891003      | 1              |
| Caesar & Loretz Hilden     | Polysorbate 20   | 18276810         | 1              |
| Caesar&Lorenz/Noweda       | Polysorbate 20   | 17325413         | 1              |
| Caolo- Noweda              | Polysorbate 20   | 16029703         | 1              |
| Cealo                      | Polysorbate 20   | 14019418         | 1              |
| Cealo/Anzag                | Polysorbate 20   | 18276810         | 1              |
| Cealo/Gehe                 | Polysorbate 20   | 192430005        | 1              |
| Cealo/GEHE                 | Polysorbate 20   | 18276801         | 1              |
| Cealo/Phoenix              | Polysorbate 20   | 19092207         | 1              |
| Dr. Wolff                  | Polysorbate 20   | 17021303         | 1              |
| EuRho                      | Polysorbate 20   | 14019410         | 1              |
| Eurho Phönix               | Polysorbate 20   | 18276806         | 1              |
| Euro OTC                   | Polysorbate 20   | 13297009         | 1              |
| Euro OTC                   | Polysorbate 20   | 16029703         | 2              |
| Euro OTC                   | Polysorbate 20   | 14213213         | 1              |
| Euro OTC                   | Polysorbate 20   | 18276806         | 2              |
| Euro OTC                   | Polysorbate 20   | 18276801         | 1              |
| Euro OTC                   | Polysorbate 20   | 13297010         | 1              |
| euro//Noweda               | Polysorbate 20   | 17325413         | 1              |
| Fagron                     | Polysorbate 20   | 11I15-N13        | 1              |
| Fagron                     | Polysorbate 20   | 13J18-B02-287378 | 4              |
| Fagron                     | Polysorbate 20   | 14A23-B01-294167 | 1              |
| Fagron                     | Polysorbate 20   | 25092014A        | 1              |
| Fagron                     | Polysorbate 20   | 13J18-B02        | 1              |
| Fagron                     | Polysorbate 20   | 14A23-B01        | 1              |
| Fagron                     | Polysorbate 20   | 14365105         | 1              |
| Fagron                     | Polysorbate 20   | 16029703         | 1              |
| Fagron                     | Polysorbate 20   | 17021311         | 1              |
| Fiebig                     | Polysorbate 20   | 17325410         | 2              |

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| Supplier              | Substance      | Batch       | Spectra |
|-----------------------|----------------|-------------|---------|
| Fiebig                | Polysorbate 20 | 17325413    | 1       |
| Fiebig                | Polysorbate 20 | 18276807    | 1       |
| Gehe                  | Polysorbate 20 | 14365116    | 1       |
| Gehe                  | Polysorbate 20 | 16114502    | 1       |
| Gehe                  | Polysorbate 20 | 16233501    | 1       |
| Gehe                  | Polysorbate 20 | 17325301    | 1       |
| Gehe                  | Polysorbate 20 | 17325407    | 2       |
| Gehe                  | Polysorbate 20 | 17325413    | 1       |
| Gehe                  | Polysorbate 20 | 17325410    | 1       |
| Gehe                  | Polysorbate 20 | 18276806    | 1       |
| Gehe                  | Polysorbate 20 | 18276810    | 2       |
| GEHE                  | Polysorbate 20 | 13086505    | 1       |
| GEHE                  | Polysorbate 20 | 17325407    | 1       |
| GEHE                  | Polysorbate 20 | 18276801    | 1       |
| Caelo                 | Polysorbate 20 | 18276806    | 17      |
| Fagron                | Polysorbate 20 | 16114502    | 2       |
| Infectopharm / Noweda | Polysorbate 20 | 17325301    | 1       |
| Jenne                 | Polysorbate 20 | 17021310    | 1       |
| Kehr                  | Polysorbate 20 | 17021303    | 1       |
| Kehr                  | Polysorbate 20 | 17325407    | 1       |
| Kehr                  | Polysorbate 20 | 17325413    | 2       |
| Caelo                 | Polysorbate 20 | 182766810   | 1       |
| L10                   | Polysorbate 20 | 17021303    | 1       |
| L12                   | Polysorbate 20 | 17325410    | 1       |
| Lamotte/Alliance      | Polysorbate 20 | 15323912    | 1       |
| Nachprüfung           | Polysorbate 20 | 111111      | 1       |
| Nachprüfung           | Polysorbate 20 | 123456      | 1       |
| Noweda                | Polysorbate 20 | 12303016    | 1       |
| Noweda                | Polysorbate 20 | 15323902    | 1       |
| Noweda                | Polysorbate 20 | 16233501    | 2       |
| Noweda                | Polysorbate 20 | 16233506    | 1       |
| Noweda                | Polysorbate 20 | 11111111    | 1       |
| Noweda                | Polysorbate 20 | 17325301    | 1       |
| Noweda                | Polysorbate 20 | 18276801    | 1       |
| Noweda                | Polysorbate 20 | 18276810    | 1       |
| Noweda                | Polysorbate 20 | 19092207    | 2       |
| Noweda                | Polysorbate 20 | 19092208    | 1       |
| Noweda                | Polysorbate 20 | 20002891001 | 1       |
| Caelo                 | Polysorbate 20 | 11117205    | 2       |
| Caelo                 | Polysorbate 20 | 1523902     | 1       |
| Phoenix               | Polysorbate 20 | 13086517    | 1       |
| Phoenix               | Polysorbate 20 | 16233501    | 1       |
| Phoenix               | Polysorbate 20 | 17021303    | 2       |
| Phoenix               | Polysorbate 20 | 3095        | 1       |
| Phoenix               | Polysorbate 20 | 18276807    | 2       |
| Phoenix               | Polysorbate 20 | 18276810    | 2       |
| Phoenix               | Polysorbate 20 | 3380        | 1       |
| Phoenix 30.01.2019    | Polysorbate 20 | 18276801    | 1       |
| Phönix                | Polysorbate 20 | 14019410    | 2       |
| Phönix                | Polysorbate 20 | 14365116    | 1       |
| Phönix                | Polysorbate 20 | 16233501    | 1       |
| Phönix                | Polysorbate 20 | 1735301     | 1       |
| Phönix                | Polysorbate 20 | 17021310    | 1       |
| Phönix                | Polysorbate 20 | 17325407    | 1       |
| Phönix                | Polysorbate 20 | 20002482005 | 1       |
| Phönix Gotha          | Polysorbate 20 | 11347701    | 1       |
| Phönix Gotha          | Polysorbate 20 | 13297005    | 1       |
| Phönix Gotha          | Polysorbate 20 | 14365116    | 1       |
| Caelo                 | Polysorbate 20 | 11347707    | 5       |
| Sanacorp              | Polysorbate 20 | 12345       | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Sanacorp                   | Polysorbate 20   | 11347711     | 1              |
| Sanacorp                   | Polysorbate 20   | 12303006     | 1              |
| Sanacorp                   | Polysorbate 20   | 13086509     | 2              |
| Sanacorp                   | Polysorbate 20   | 13086517     | 1              |
| Sanacorp                   | Polysorbate 20   | 4/AKD1       | 1              |
| Sanacorp                   | Polysorbate 20   | 14019410     | 1              |
| Sanacorp                   | Polysorbate 20   | 15323902     | 1              |
| Sanacorp                   | Polysorbate 20   | 16114503     | 1              |
| Sanacorp                   | Polysorbate 20   | 17021303     | 2              |
| Sanacorp                   | Polysorbate 20   | 17325413     | 2              |
| Sanacorp                   | Polysorbate 20   | 17325412     | 1              |
| Sanacorp                   | Polysorbate 20   | 1827680      | 1              |
| Sanacorp, 16.08.2016, 4... | Polysorbate 20   | 16114502     | 1              |
| VDL                        | Polysorbate 20   | 11347707     | 1              |
| VDL                        | Polysorbate 20   | 13297005     | 1              |
| VDL;4,39EUR;23.03.15       | Polysorbate 20   | 14365105     | 1              |
| WE:31.03.2016 Sanacorp     | Polysorbate 20   | 15323902     | 2              |
| 10.02.2020 Phoenix         | Polysorbate 60   | 19114102     | 1              |
| Anzag                      | Polysorbate 60   | 18005907     | 1              |
| Caelo                      | Polysorbate 60   | 12133611     | 2              |
| Caelo                      | Polysorbate 60   | 15067408     | 12             |
| Caelo                      | Polysorbate 60   | 15292906     | 5              |
| Caelo                      | Polysorbate 60   | 17025804     | 2              |
| Caelo                      | Polysorbate 60   | 17099901     | 8              |
| Caelo                      | Polysorbate 60   | 16177106     | 2              |
| Caelo                      | Polysorbate 60   | 17099903     | 1              |
| Caelo                      | Polysorbate 60   | 18005903     | 2              |
| Caelo                      | Polysorbate 60   | 18005907     | 2              |
| Caelo                      | Polysorbate 60   | 18005909     | 13             |
| Caelo                      | Polysorbate 60   | 19114102     | 7              |
| Caelo                      | Polysorbate 60   | 192038002    | 3              |
| Caelo                      | Polysorbate 60   | 15067407     | 2              |
| Caelo                      | Polysorbate 60   | 12133602     | 1              |
| Caelo                      | Polysorbate 60   | 18005910     | 1              |
| Caelo                      | Polysorbate 60   | 14027103     | 2              |
| Caelo                      | Polysorbate 60   | 13258902     | 5              |
| Caelo                      | Polysorbate 60   | 13098006     | 1              |
| Caelo                      | Polysorbate 60   | 15067401     | 7              |
| Caelo                      | Polysorbate 60   | 20004253001  | 1              |
| Caelo                      | Polysorbate 60   | 17099903     | 6              |
| Caelo                      | Polysorbate 60   | 1805909      | 1              |
| Caelo                      | Polysorbate 60   | 16177104     | 2              |
| Caelo                      | Polysorbate 60   | 18289705     | 5              |
| Caelo                      | Polysorbate 60   | 15067409     | 3              |
| Caelo                      | Polysorbate 60   | 16007302     | 11             |
| Caelo                      | Polysorbate 60   | 17099905     | 9              |
| Caelo                      | Polysorbate 60   | 20001789003  | 1              |
| Caesar & Loretz GmbH       | Polysorbate 60   | 18029208     | 2              |
| Caesar & Loretz GmbH       | Polysorbate 60   | 18289705     | 1              |
| Caesar & Loretz GmbH       | Polysorbate 60   | 19114102     | 2              |
| Caesar & Loretz GmbH       | Polysorbate 60   | 20001789003  | 1              |
| Caesar & Loretz GmbH       | Polysorbate 60   | 20004253001  | 1              |
| Caesar & Loretz GmbH / ... | Polysorbate 60   | 17099905     | 1              |
| Caesar & Loretz GmbH/Fi... | Polysorbate 60   | 19114102     | 1              |
| Caesar & Loretz GmbH/Gehe  | Polysorbate 60   | 18289705     | 1              |
| Caesar & Loretz GmbH/Je... | Polysorbate 60   | 20004253001  | 1              |
| Caesar & Loretz GmbH/Ph... | Polysorbate 60   | 19114102     | 1              |
| Caesar&Loretz GmbH         | Polysorbate 60   | 15067409     | 1              |
| Carlo/Gehe/6,65            | Polysorbate 60   | 18289705     | 1              |
| Cealo                      | Polysorbate 60   | 16007302     | 1              |

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| Supplier            | Substance      | Batch            | Spectra |
|---------------------|----------------|------------------|---------|
| Ebert-Jacobi        | Polysorbate 60 | 1617106          | 1       |
| Fa. Croda           | Polysorbate 60 | 22004            | 6       |
| Fiebig              | Polysorbate 60 | 20001789003      | 1       |
| Gehe                | Polysorbate 60 | 16177104         | 1       |
| Gehe                | Polysorbate 60 | 18289705         | 1       |
| Gehe am 06.02.2014  | Polysorbate 60 | 13258902         | 1       |
| Noweda              | Polysorbate 60 | 17099905         | 2       |
| Noweda              | Polysorbate 60 | 18289705         | 1       |
| Sanacorp            | Polysorbate 60 | 17099905         | 1       |
| Sanacorp            | Polysorbate 60 | 18005909         | 1       |
| Alliance            | Polysorbate 80 | 18236805         | 1       |
| Alliance Healthcare | Polysorbate 80 | 12315308         | 1       |
| Alte Apotheke       | Polysorbate 80 | 16059402         | 1       |
| Anzag               | Polysorbate 80 | 1/2454542        | 2       |
| Anzag               | Polysorbate 80 | 16059402         | 1       |
| Anzag               | Polysorbate 80 | 18K21-B02-359671 | 1       |
| Bären Apotheke      | Polysorbate 80 | 16260201         | 1       |
| Bombastus           | Polysorbate 80 | 11347907         | 1       |
| Caelo               | Polysorbate 80 | 11179606         | 1       |
| Caelo               | Polysorbate 80 | 3212I-02527      | 1       |
| Caelo               | Polysorbate 80 | 20210312-2       | 1       |
| Caelo               | Polysorbate 80 | 12116005         | 4       |
| Caelo               | Polysorbate 80 | 11347909         | 1       |
| Caelo               | Polysorbate 80 | 12315305         | 1       |
| Caelo               | Polysorbate 80 | 12315308         | 9       |
| Caelo               | Polysorbate 80 | 21061301         | 1       |
| Caelo               | Polysorbate 80 | 123125308        | 1       |
| Caelo               | Polysorbate 80 | 12315317         | 10      |
| Caelo               | Polysorbate 80 | 3213E2527        | 1       |
| Caelo               | Polysorbate 80 | 12315328         | 15      |
| Caelo               | Polysorbate 80 | 12116014         | 1       |
| Caelo               | Polysorbate 80 | 4512A-02527      | 1       |
| Caelo               | Polysorbate 80 | 13152219         | 1       |
| Caelo               | Polysorbate 80 | 27111308         | 1       |
| Caelo               | Polysorbate 80 | 13152223         | 11      |
| Caelo               | Polysorbate 80 | 13152218         | 1       |
| Caelo               | Polysorbate 80 | 14190306         | 7       |
| Caelo               | Polysorbate 80 | 15121404         | 1       |
| Caelo               | Polysorbate 80 | 1419026          | 1       |
| Caelo               | Polysorbate 80 | 14190316         | 20      |
| Caelo               | Polysorbate 80 | 42175394         | 2       |
| Caelo               | Polysorbate 80 | 14190317         | 1       |
| Caelo               | Polysorbate 80 | 4513M            | 1       |
| Caelo               | Polysorbate 80 | 2772013          | 1       |
| Caelo               | Polysorbate 80 | 16260210         | 26      |
| Caelo               | Polysorbate 80 | 15104103         | 11      |
| Caelo               | Polysorbate 80 | 25062015C        | 1       |
| Caelo               | Polysorbate 80 | 18081502         | 1       |
| Caelo               | Polysorbate 80 | 5015A-02527      | 1       |
| Caelo               | Polysorbate 80 | 2821             | 1       |
| Caelo               | Polysorbate 80 | 16059403         | 1       |
| Caelo               | Polysorbate 80 | 1609402          | 1       |
| Caelo               | Polysorbate 80 | 1709947          | 1       |
| Caelo               | Polysorbate 80 | 17064702         | 2       |
| Caelo               | Polysorbate 80 | 18236805         | 11      |
| Caelo               | Polysorbate 80 | 18236810         | 15      |
| Caelo               | Polysorbate 80 | 18236812         | 1       |
| Caelo               | Polysorbate 80 | 19163904         | 20      |
| Caelo               | Polysorbate 80 | 18H01-B04        | 1       |
| Caelo               | Polysorbate 80 | 182368           | 2       |

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| Supplier                   | Substance      | Batch              | Spectra |
|----------------------------|----------------|--------------------|---------|
| Caelo                      | Polysorbate 80 | 162602210          | 2       |
| Caelo                      | Polysorbate 80 | 15104126           | 7       |
| Caelo                      | Polysorbate 80 | 5218Q-02527        | 2       |
| Caelo                      | Polysorbate 80 | 11179618           | 1       |
| Caelo                      | Polysorbate 80 | 16053402           | 1       |
| Caelo                      | Polysorbate 80 | 16260201           | 35      |
| Caelo                      | Polysorbate 80 | 20000727002        | 2       |
| Caelo                      | Polysorbate 80 | 18236818P-200217-6 | 1       |
| Caelo                      | Polysorbate 80 | 15104112           | 20      |
| Caelo                      | Polysorbate 80 | 18236808           | 12      |
| Caelo                      | Polysorbate 80 | 18045803           | 15      |
| Caelo                      | Polysorbate 80 | 17064705           | 28      |
| Caelo                      | Polysorbate 80 | 10235202           | 1       |
| Caelo                      | Polysorbate 80 | 13372012           | 11      |
| Caelo                      | Polysorbate 80 | 3327               | 1       |
| Caelo                      | Polysorbate 80 | 515I-02527         | 1       |
| Caelo                      | Polysorbate 80 | 2915A-02527        | 1       |
| Caelo                      | Polysorbate 80 | 5116Q-02527        | 1       |
| Caelo                      | Polysorbate 80 | 18045805           | 1       |
| Caelo                      | Polysorbate 80 | 15104113           | 1       |
| Caelo                      | Polysorbate 80 | 1220616            | 1       |
| Caelo                      | Polysorbate 80 | 17A23-B09          | 1       |
| Caelo                      | Polysorbate 80 | 18236801           | 34      |
| Caelo                      | Polysorbate 80 | 20000727006        | 1       |
| Caelo                      | Polysorbate 80 | 12116013           | 6       |
| Caelo                      | Polysorbate 80 | 16059408           | 1       |
| Caelo                      | Polysorbate 80 | 16260206           | 1       |
| Caelo                      | Polysorbate 80 | 15104121           | 17      |
| Caelo                      | Polysorbate 80 | 16059402           | 48      |
| Caelo                      | Polysorbate 80 | 18236813           | 10      |
| Caelo                      | Polysorbate 80 | 11347907           | 2       |
| Caelo                      | Polysorbate 80 | 18045802           | 3       |
| Caelo                      | Polysorbate 80 | 17064706           | 1       |
| Caelo                      | Polysorbate 80 | 18045804           | 1       |
| Caelo                      | Polysorbate 80 | 18236818           | 6       |
| Caelo                      | Polysorbate 80 | 191639002          | 1       |
| Caelo                      | Polysorbate 80 | 20003729005        | 1       |
| Caelo                      | Polysorbate 80 | 13152216           | 15      |
| Caelo                      | Polysorbate 80 | 12315324           | 1       |
| Caelo                      | Polysorbate 80 | 1612B08327237      | 1       |
| Caelo                      | Polysorbate 80 | 16260202           | 2       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18045803           | 2       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236801           | 3       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236805           | 5       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236808           | 3       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236811           | 2       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236813           | 2       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 18236818           | 1       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 19163904           | 7       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 19163901           | 4       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 19163902           | 5       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 191639002          | 1       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 20000727004        | 1       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 20000727003        | 1       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 20000727002        | 1       |
| Caesar & Loretz GmbH       | Polysorbate 80 | 20003729005        | 1       |
| Caesar & Loretz GmbH/ G... | Polysorbate 80 | 19163904           | 1       |
| Caesar & Loretz GmbH/An... | Polysorbate 80 | 19163904           | 1       |
| Caesar & Loretz GmbH/Gehe  | Polysorbate 80 | 20003729005        | 1       |
| Caesar & Loretz GmbH/No... | Polysorbate 80 | 18236818           | 1       |

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| Supplier                   | Substance      | Batch              | Spectra |
|----------------------------|----------------|--------------------|---------|
| Caesar & Loretz GmbH/Sa... | Polysorbate 80 | 19163904           | 2       |
| Caesar & Loretz/Noweda     | Polysorbate 80 | 16260201           | 1       |
| Caleo/ Noweda              | Polysorbate 80 | 16059402           | 1       |
| Cealo                      | Polysorbate 80 | 16260210           | 1       |
| Cealo                      | Polysorbate 80 | 18236801           | 2       |
| Cealo/AHD                  | Polysorbate 80 | 16059402           | 1       |
| Cealo/Sanacorp             | Polysorbate 80 | 16260210           | 1       |
| Devesa/ Phönix             | Polysorbate 80 | 14K27-B01-307106   | 1       |
| Ebert u. Jacobi 24.06...   | Polysorbate 80 | 15104112           | 1       |
| Euro OTC                   | Polysorbate 80 | 16059402           | 1       |
| Euro OTC                   | Polysorbate 80 | 18236808           | 1       |
| Fagro/Phönix               | Polysorbate 80 | 14C24-B07-296371   | 1       |
| Fagron                     | Polysorbate 80 | 908ND3714          | 2       |
| Fagron                     | Polysorbate 80 | 11L22-N12          | 1       |
| Fagron                     | Polysorbate 80 | 13C19-N01          | 1       |
| Fagron                     | Polysorbate 80 | 808ND3713          | 1       |
| Fagron                     | Polysorbate 80 | 13C19N01           | 1       |
| Fagron                     | Polysorbate 80 | 14C24-B07-296371   | 3       |
| Fagron                     | Polysorbate 80 | 14C24-B07          | 1       |
| Fagron                     | Polysorbate 80 | 226953-0002        | 1       |
| Fagron                     | Polysorbate 80 | 14K27-B01-307106   | 2       |
| Fagron                     | Polysorbate 80 | 16I12-B02-327237   | 1       |
| Fagron                     | Polysorbate 80 | 18B07-B07          | 1       |
| Fagron                     | Polysorbate 80 | 18H01-B04-352186   | 1       |
| Fagron                     | Polysorbate 80 | 12K05-N04          | 4       |
| Fagron                     | Polysorbate 80 | 13A10-N03          | 2       |
| Fagron                     | Polysorbate 80 | 813I-02527         | 1       |
| Fagron                     | Polysorbate 80 | 18K21-B02-359671   | 4       |
| Fagron                     | Polysorbate 80 | 16059402           | 1       |
| Fagron                     | Polysorbate 80 | 16/12-B08          | 1       |
| Fagron                     | Polysorbate 80 | 16/12-B08-32727237 | 1       |
| Fagron                     | Polysorbate 80 | 17A23-B09-334347   | 1       |
| Fagron                     | Polysorbate 80 | 18H01-B04-354550   | 1       |
| Fagron                     | Polysorbate 80 | 18236802           | 2       |
| Fagron                     | Polysorbate 80 | 18B17-B07-346922   | 1       |
| Fargon                     | Polysorbate 80 | 10114N07           | 1       |
| Fargon/Kehr                | Polysorbate 80 | 14K27-B01-307106   | 1       |
| Fiebig                     | Polysorbate 80 | 17064705           | 1       |
| Fiebig                     | Polysorbate 80 | 18236808           | 1       |
| Fiebig                     | Polysorbate 80 | 20000727002        | 1       |
| gehe                       | Polysorbate 80 | 18h01-b04-357189   | 1       |
| Gehe                       | Polysorbate 80 | 12K05-N04          | 1       |
| Gehe                       | Polysorbate 80 | 14190316           | 1       |
| Gehe                       | Polysorbate 80 | 15104111           | 1       |
| Gehe                       | Polysorbate 80 | 15104103           | 1       |
| Gehe                       | Polysorbate 80 | 16260201           | 1       |
| Gehe                       | Polysorbate 80 | 1612-B08-327237    | 1       |
| Gehe                       | Polysorbate 80 | 17064705           | 1       |
| Gehe                       | Polysorbate 80 | 18H01-B04-357189   | 2       |
| GEHE                       | Polysorbate 80 | 16B17-B09          | 1       |
| Gehe 01.07.2014            | Polysorbate 80 | 13372015           | 1       |
| gehe 28.12.2013            | Polysorbate 80 | 13152216           | 3       |
| Caelo                      | Polysorbate 80 | 1190318/16260210   | 1       |
| Hedinger                   | Polysorbate 80 | 18236805           | 2       |
| Henry Lamotte / Gehe       | Polysorbate 80 | 18236805           | 1       |
| Ichthyol /Anzag            | Polysorbate 80 | 20(18236808)       | 1       |
| ICHTHYOL/ahp               | Polysorbate 80 | 14190310           | 1       |
| Kögl                       | Polysorbate 80 | 1700293            | 2       |
| Krieger                    | Polysorbate 80 | 131522232x         | 1       |
| L12                        | Polysorbate 80 | 16260201           | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Nachprüfung 3008           | Polysorbate 80                  | 13152223         | 1       |
| NOW                        | Polysorbate 80                  | 15104121         | 1       |
| Noweda                     | Polysorbate 80                  | 16260210         | 1       |
| Noweda                     | Polysorbate 80                  | 18236801         | 1       |
| Noweda                     | Polysorbate 80                  | 18236818         | 1       |
| noweda/anzag               | Polysorbate 80                  | 18236808         | 1       |
| Fagron                     | Polysorbate 80                  | 18H01-B04        | 1       |
| Phoenix                    | Polysorbate 80                  | 12116005         | 1       |
| Phoenix                    | Polysorbate 80                  | 3079             | 1       |
| Fagron                     | Polysorbate 80                  | 12D02-N02        | 1       |
| Phönix                     | Polysorbate 80                  | 17064705         | 1       |
| Phönix                     | Polysorbate 80                  | 18236801         | 1       |
| PHÖNIX                     | Polysorbate 80                  | 18045803         | 2       |
| Sanacorp                   | Polysorbate 80                  | 7/AKD20          | 1       |
| Sanacorp                   | Polysorbate 80                  | 17064706         | 2       |
| Sanacorp                   | Polysorbate 80                  | 18045804         | 1       |
| Sanacorp, 4,52, 18.1.17    | Polysorbate 80                  | 16059402         | 1       |
| VDL Nachliefer; 2.7.15;... | Polysorbate 80                  | 15104103         | 1       |
| Caelo                      | Macrogol 20 glycerol monoste... | 14033701         | 2       |
| Fagron                     | Macrogol 20 glycerol monoste... | 13H09-N06        | 5       |
| Caelo                      | Polysorbate 20                  | 14019413         | 1       |
| Caelo                      | Polysorbate 20                  | 14365105         | 24      |
| Caelo                      | Polysorbate 20                  |                  | 4       |
|                            | Polysorbate 20                  | 14019413         | 1       |
| Sanacorp                   | Polysorbate 20                  |                  | 1       |
| Caelo                      | Polysorbate 60                  | 14027102         | 1       |
| Caelo                      | Polysorbate 80                  | 12116009         | 8       |
| Caelo                      | Polysorbate 80                  | 13372015         | 1       |
| Fagron                     | Polysorbate 80                  | 18H01-B04-357189 | 1       |
| VDL 17.04.14               | Polysorbate 80                  |                  | 1       |

- 238 893 spectra from 1121 *Apo-Ident* customers from a total of 46 677 batches from a further 339 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Polysorbates / Macrogol 20 glycerol monostearate type II* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1080          | 0              | 62 859        |
| <b>Type B</b> | 0              | 690           | 0              | 90 801        |
| <b>Type C</b> | 0              | 2453          | 17             | 238 893       |

The substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.4444 %) |
| Type B | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.1304 %) |
| Type C | 100.0000 % (> 99.6849 %) | 99.3117 % (> 99.1903 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                           | Distance in main model | Distance in second-stage model |
|-------------------------------------|------------------------|--------------------------------|
| Macrogolglycerol hydroxystearate 40 | 9.09                   | 20.56                          |
| Macrogolglycerol ricinoleate        | 11.05                  | 14.84                          |
| Macrogol 8 stearate type I          | 14.49                  | 24.59                          |
| Polyol fatty acid ester             | 17.35                  | —                              |
| Macrogol ointment                   | 17.94                  | —                              |
| Lauromacrogol 400                   | 18.34                  | 21.44                          |
| Macrogols 400                       | 47.00                  | —                              |
| Macrogols 300                       | 50.02                  | —                              |
| ⋮                                   | ⋮                      | ⋮                              |
| Macrogol 4 lauryl ether             | 53.02                  | 52.49                          |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Polysorbates / Macrogol 20 glycerol monostearate type II* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30893     | 35015               | 3.04                         | 14.57                           |
| 31033     | 34623               | 1.25                         | 15.47                           |
| 31182     | 31182               | 0.00                         | 21.75                           |
| 31323     | 31323               | 0.00                         | 34.88                           |
| 31324     | 31324               | 0.00                         | 18.04                           |
| 31325     | 31325               | 0.00                         | 16.30                           |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31469            | 31182                      | 4.13                                | 20.94                                  |
| 31697            | 35295                      | 3.60                                | 30.31                                  |
| 33058            | 33058                      | 0.00                                | 27.57                                  |
| 33300            | 31325                      | 5.84                                | 14.74                                  |
| 33323            | 33323                      | 0.00                                | 27.79                                  |
| 33324            | 33324                      | 0.00                                | 29.19                                  |
| 33888            | 33888                      | 0.00                                | 29.60                                  |
| 34081            | 34081                      | 0.00                                | 24.81                                  |
| 34331            | 34331                      | 0.00                                | 34.72                                  |
| 34338            | 34338                      | 0.00                                | 16.22                                  |
| 34469            | 34469                      | 0.00                                | 35.32                                  |
| 34623            | 34623                      | 0.00                                | 16.07                                  |
| 34673            | 31325                      | 4.70                                | 16.98                                  |
| 34702            | 34702                      | 0.00                                | 24.22                                  |
| 34707            | 34707                      | 0.00                                | 31.59                                  |
| 35015            | 35015                      | 0.00                                | 17.97                                  |
| 35044            | 35044                      | 0.00                                | 25.54                                  |
| 35257            | 35257                      | 0.00                                | 19.36                                  |
| 35295            | 35295                      | 0.00                                | 36.30                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Potash soap DAC**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30987-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Potash soap DAC; Sapo kalinus DAC

### Special notes

When selecting the *Potash soap DAC* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Potash soap DAC           | 10     | 15     | 72     |

## Second-stage model

For differentiation of the substance/substance group *Potash soap DAC* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Potash soap DAC*:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------|----------|-----------|---------|-------------|
| Caelo    | Potash soap DAC | 13008101 | 30987     | 40      | 1402565     |
| Caelo    | Potash soap DAC | 14143401 | 31480     | 40      | 20140520    |
| Caelo    | Potash soap DAC | 14240801 | 31561     | 60      | 20140815    |
| Caelo    | Potash soap DAC | 14289101 | 31650     | 60      | 20141017    |
| Caelo    | Potash soap DAC | 160908   | 32392     | 40      | 20160606*   |
| Caelo    | Potash soap DAC | 160909   | 32393     | 40      | 20160606*   |
| Caelo    | Potash soap DAC | 160910   | 32394     | 40      | 20160606*   |
| Caelo    | Potash soap DAC | 171575   | 33408     | 40      | 20170620*   |
| Caelo    | Potash soap DAC | 170461   | 33409     | 40      | 20170620*   |
| Caelo    | Potash soap DAC | 170462   | 33410     | 40      | 20170620*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 440 spectra of 10 reference samples from the substance/substance group *Potash soap DAC*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 10 different batches.
- 63 499 spectra from a total of 1297 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 640 spectra of 15 reference samples from the substance/substance group *Potash soap DAC*.
- Among them are spectra of independent samples from 15 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Potash soap DAC | 13322201 | 31125     | 40      |
| Caelo    | Potash soap DAC | 173023   | 34016     | 40      |
| Caelo    | Potash soap DAC | 180707   | 34149     | 40      |
| Caelo    | Potash soap DAC | 190048   | 34528     | 40      |
| Caelo    | Potash soap DAC | 190049   | 34529     | 40      |
| Caelo    | Potash soap DAC | 190050   | 34530     | 40      |
| Caelo    | Potash soap DAC | 19000483 | 34985     | 40      |
| Caelo    | Potash soap DAC | 20003353 | 35160     | 40      |
| Caelo    | Potash soap DAC | 21001021 | 35320     | 40      |
| Caelo    | Potash soap DAC | 21001022 | 35321     | 40      |
| Caelo    | Potash soap DAC | 21001023 | 35322     | 40      |
| Caelo    | Potash soap DAC | 21002108 | 35618     | 50      |
| Caelo    | Potash soap DAC | 21002109 | 35619     | 50      |
| Caelo    | Potash soap DAC | 21002110 | 35620     | 50      |
| Caelo    | Potash soap DAC | 21002111 | 35621     | 50      |

- 90 851 spectra from a total of 2001 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 174 spectra from 76 *Apo-Ident* customers from 74 batches from the substance/substance group *Potash soap DAC*.
- Among them are spectra of independent samples from 72 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance       | Batch    | Spectra |
|----------|-----------------|----------|---------|
| AHD      | Potash soap DAC | 19062201 | 1       |
| Caelo    | Potash soap DAC | 17045801 | 5       |
| Caelo    | Potash soap DAC | 16256801 | 1       |
| Caelo    | Potash soap DAC | 19062201 | 4       |
| Caelo    | Potash soap DAC | 13161901 | 2       |
| Caelo    | Potash soap DAC | 12060401 | 1       |
| Caelo    | Potash soap DAC | 12060701 | 1       |
| Caelo    | Potash soap DAC | 13322601 | 1       |
| Caelo    | Potash soap DAC | 13322401 | 1       |
| Caelo    | Potash soap DAC | 14143601 | 1       |
| Caelo    | Potash soap DAC | 14240701 | 1       |
| Caelo    | Potash soap DAC | 14241101 | 2       |
| Caelo    | Potash soap DAC | 16091201 | 1       |
| Caelo    | Potash soap DAC | 16091101 | 1       |
| Caelo    | Potash soap DAC | 16257001 | 1       |
| Caelo    | Potash soap DAC | 17046201 | 3       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caelo                      | Potash soap DAC | 17221701    | 2       |
| Caelo                      | Potash soap DAC | 17302101    | 1       |
| Caelo                      | Potash soap DAC | 17302201    | 3       |
| Caelo                      | Potash soap DAC | 18211402    | 1       |
| Caelo                      | Potash soap DAC | 19005001    | 1       |
| Caelo                      | Potash soap DAC | 19062301    | 2       |
| Caelo                      | Potash soap DAC | 19159301    | 8       |
| Caelo                      | Potash soap DAC | 19159101    | 3       |
| Caelo                      | Potash soap DAC | 20001215001 | 2       |
| Caelo                      | Potash soap DAC | 19000482001 | 4       |
| Caelo                      | Potash soap DAC | 20001214001 | 1       |
| Caelo                      | Potash soap DAC | 20003355001 | 1       |
| Caelo                      | Potash soap DAC | 14033001    | 1       |
| Caelo                      | Potash soap DAC | 14241001    | 2       |
| Caelo                      | Potash soap DAC | 17221901    | 3       |
| Caelo                      | Potash soap DAC | 18071001    | 1       |
| Caelo                      | Potash soap DAC | 11276401    | 1       |
| Caelo                      | Potash soap DAC | 20002382002 | 1       |
| Caelo                      | Potash soap DAC | 18070801    | 3       |
| Caelo                      | Potash soap DAC | 11198901    | 1       |
| Caelo                      | Potash soap DAC | 15435201    | 2       |
| Caelo                      | Potash soap DAC | 19159201    | 5       |
| Caelo                      | Potash soap DAC | 14289201    | 1       |
| Caelo                      | Potash soap DAC | 20002384001 | 1       |
| Caelo                      | Potash soap DAC | 16256901    | 3       |
| Caelo                      | Potash soap DAC | 17157501    | 2       |
| Caelo                      | Potash soap DAC | 13322201    | 1       |
| Caelo                      | Potash soap DAC | 15240401    | 2       |
| Caelo                      | Potash soap DAC | 190005001   | 1       |
| Caelo                      | Potash soap DAC | 19211101    | 3       |
| Caelo                      | Potash soap DAC | 19062601    | 1       |
| Caelo                      | Potash soap DAC | 20002381001 | 2       |
| Caelo                      | Potash soap DAC | 20003357001 | 1       |
| Caelo                      | Potash soap DAC | 20002380001 | 2       |
| Caelo                      | Potash soap DAC | 17046001    | 1       |
| Caelo                      | Potash soap DAC | 19000483001 | 2       |
| Caelo                      | Potash soap DAC | 16090901    | 1       |
| Caelo                      | Potash soap DAC | 17046101    | 1       |
| Caelo                      | Potash soap DAC | 16091001    | 1       |
| Caelo                      | Potash soap DAC | 13161401    | 1       |
| Caelo                      | Potash soap DAC | 14032801    | 1       |
| Caelo                      | Potash soap DAC | 14240901    | 1       |
| Caelo                      | Potash soap DAC | 15/134/KS   | 1       |
| Caelo                      | Potash soap DAC | 15435301    | 1       |
| Caelo                      | Potash soap DAC | 15182001    | 1       |
| Caelo                      | Potash soap DAC | 19004901    | 1       |
| Caelo                      | Potash soap DAC | 19210901    | 6       |
| Caelo                      | Potash soap DAC | 15240501    | 4       |
| Caesar & Loretz GmbH       | Potash soap DAC | 19062201    | 3       |
| Caesar & Loretz GmbH       | Potash soap DAC | 19005001    | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 18211301    | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 192733001   | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 19000483001 | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 19210901    | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 19000482001 | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 20002380001 | 1       |
| Caesar & Loretz GmbH       | Potash soap DAC | 20002382002 | 3       |
| Caesar & Loretz GmbH       | Potash soap DAC | 20003353001 | 1       |
| Caesar & Loretz GmbH / ... | Potash soap DAC | 18211501    | 1       |
| Caesar & Loretz GmbH / ... | Potash soap DAC | 19062601    | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caesar & Loretz GmbH / ... | Potash soap DAC | 19211101    | 1       |
| Caesar & Loretz GmbH / ... | Potash soap DAC | 19000482001 | 2       |
| Caesar & Loretz GmbH / ... | Potash soap DAC | 19004901    | 2       |
| Caesar & Loretz GmbH/Gehe  | Potash soap DAC | 20001210001 | 1       |
| Caesar & Loretz GmbH/Je... | Potash soap DAC | 19159201    | 1       |
| Caesar & Loretz GmbH/Je... | Potash soap DAC | 19000483001 | 2       |
| Caesar & Loretz GmbH/Ph... | Potash soap DAC | 19210901    | 2       |
| Caesar & Loretz GmbH/Ph... | Potash soap DAC | 20003353001 | 1       |
| Caesar & Loretz GmbH/Sa... | Potash soap DAC | 19159201    | 1       |
| Caesar & Loretz GmbH/Sa... | Potash soap DAC | 20003355001 | 1       |
| Carlo/Phönix/6,40          | Potash soap DAC | 19062301    | 1       |
| Gehe                       | Potash soap DAC | 20001212001 | 1       |
| GEHE                       | Potash soap DAC | 17221901    | 1       |
| Caelo                      | Potash soap DAC | 18211301    | 1       |
| Caelo                      | Potash soap DAC | 18211501    | 1       |
| Jenne                      | Potash soap DAC | 19062201    | 1       |
| Caelo                      | Potash soap DAC | 18060501    | 4       |
| Klenk                      | Potash soap DAC | 14143401    | 1       |
| Noweda                     | Potash soap DAC | 17302301    | 1       |
| Noweda                     | Potash soap DAC | 19159301    | 1       |
| Noweda                     | Potash soap DAC | 19000483001 | 1       |
| Caelo                      | Potash soap DAC | 14032901    | 1       |
| Caelo                      | Potash soap DAC | 20001210001 | 3       |
| Sanacorp                   | Potash soap DAC | 17302101    | 1       |
| Sanacorp                   | Potash soap DAC | 18211501    | 1       |
| Sanacorp                   | Potash soap DAC | 192733001   | 1       |
| Sanacorp                   | Potash soap DAC | 19000483001 | 2       |
| Caelo                      | Potash soap DAC | 14289101    | 2       |

- 241 189 spectra from 1121 *Apo-Ident* customers from a total of 46 933 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Potash soap DAC* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Potash soap DAC* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 440           | 0              | 63 499        |
| <b>Type B</b> | 0              | 640           | 0              | 90 851        |
| <b>Type C</b> | 0              | 173           | 1              | 241 189       |

The substance/substance group *Potash soap DAC* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.6364 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 99.0625 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.4253 % (> 97.7011 %)  |



In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Potash soap DAC* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in<br>main model | Distance in<br>second-stage model |
|------------------------------|---------------------------|-----------------------------------|
| Base cream DAC               | 36.44                     | —                                 |
| Non-ionic hydrophil ointment | 56.99                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Potash soap DAC* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30987     | 30987                  | 0.00                            | 62.21                              |
| 31480     | 32394                  | 2.14                            | 63.89                              |
| 31561     | 32394                  | 5.34                            | 66.57                              |
| 31650     | 33409                  | 12.00                           | 65.50                              |
| 32392     | 32392                  | 0.00                            | 64.00                              |
| 32393     | 32393                  | 0.00                            | 63.19                              |
| 32394     | 32394                  | 0.00                            | 65.01                              |
| 33408     | 33408                  | 0.00                            | 59.73                              |
| 33409     | 33409                  | 0.00                            | 59.51                              |
| 33410     | 33410                  | 0.00                            | 59.03                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Potash soap Ph.Helv.**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 34278-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Potash soap Ph.Helv.; Sapo kalinus Ph.Helv.

### Special notes

When selecting the *Potash soap Ph.Helv.* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Potash soap Ph.Helv.      | 2      | 1      | 0      |

## Second-stage model

For differentiation of the substance/substance group *Potash soap Ph.Helv.* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Potash soap Ph.Helv.*:

| Supplier    | Substance           | Batch      | Sample ID | Spectra | Certificate |
|-------------|---------------------|------------|-----------|---------|-------------|
| Hänseler AG | Potash soap Ph.H... | 2018080637 | 34278     | 40      | 1812453     |
| Hänseler AG | Potash soap Ph.H... | 2017080141 | 34279     | 40      | 1812452     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 80 spectra of 2 reference samples from the substance/substance group *Potash soap Ph.Helv.*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 859 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Potash soap Ph.Helv.*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier    | Substance            | Batch      | Sample ID | Spectra |
|-------------|----------------------|------------|-----------|---------|
| Hänseler AG | Potash soap Ph.Helv. | 2017120020 | 34280     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Potash soap Ph.Helv.*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Potash soap Ph.Helv.* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Potash soap Ph.Helv.* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 80            | 0              | 63 859        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Potash soap Ph.Helv.* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9800 %) | 100.0000 % (> 92.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Potash soap Ph.Helv.* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance       | Distance in<br>main model | Distance in<br>second-stage model |
|-----------------|---------------------------|-----------------------------------|
| Potash soap DAC | 80.46                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Potash soap Ph.Helv.* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 34278     | 34278                  | 0.00                            | 95.64                              |
| 34279     | 34279                  | 0.00                            | 74.35                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Propylene glycol**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30872-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Propylene glycol; Propylenglycolum

### Special notes

When selecting the *Propylene glycol* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Propylene glycol          | 13     | 11     | 815    |

## Second-stage model

For differentiation of the substance/substance group *Propylene glycol* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Propylene glycol*:

| Supplier      | Substance        | Batch            | Sample ID | Spectra | Certificate |
|---------------|------------------|------------------|-----------|---------|-------------|
| Bombastus     | Propylene glycol | 301162           | 32728     | 40      | 20160323    |
| Bombastus     | Propylene glycol | 18003480         | 34516     | 40      | 20180627    |
| Caelo         | Propylene glycol | 12372405         | 30872     | 40      | 20130107    |
| Caelo         | Propylene glycol | 14346604         | 31663     | 60      | 1508143     |
| Caelo         | Propylene glycol | 15335403         | 32074     | 40      | 20150930    |
| Caelo         | Propylene glycol | 15355108         | 32486     | 40      | 20151021    |
| Euro OTC      | Propylene glycol | 1509031          | 31738     | 60      | 20151005*   |
| Euro OTC      | Propylene glycol | 1603034          | 32190     | 40      | 20160425*   |
| Euro OTC      | Propylene glycol | 1606014          | 32466     | 40      | 20160617*   |
| Fagron        | Propylene glycol | 18J03-B07-356433 | 34514     | 40      | 20181107    |
| Fagron        | Propylene glycol | 19A28-B09-361175 | 34515     | 40      | 20190513    |
| Henry Lamotte | Propylene glycol | 0123095          | 30920     | 40      | 1502554     |
| Henry Lamotte | Propylene glycol | 6012897001       | 34513     | 40      | 20180808    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 560 spectra of 13 reference samples from the substance/substance group *Propylene glycol*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 13 different batches.
- 63 379 spectra from a total of 1294 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 450 spectra of 11 reference samples from the substance/substance group *Propylene glycol*.
- Among them are spectra of independent samples from 11 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance        | Batch   | Sample ID | Spectra |
|----------|------------------|---------|-----------|---------|
| Euro OTC | Propylene glycol | 1610031 | 32836     | 40      |
| Euro OTC | Propylene glycol | 1703024 | 33447     | 40      |
| Euro OTC | Propylene glycol | 1708002 | 33665     | 40      |
| Euro OTC | Propylene glycol | 1711023 | 33923     | 40      |
| Euro OTC | Propylene glycol | 1803023 | 34093     | 40      |
| Euro OTC | Propylene glycol | 1809007 | 34302     | 40      |
| Euro OTC | Propylene glycol | 1901018 | 34431     | 40      |
| Euro OTC | Propylene glycol | 1906034 | 34654     | 40      |
| Euro OTC | Propylene glycol | 1912001 | 34808     | 40      |
| Euro OTC | Propylene glycol | 2003060 | 34834     | 40      |
| Euro OTC | Propylene glycol | 2104019 | 35580     | 50      |

- 91 041 spectra from a total of 2005 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 7393 spectra from 1037 *Apo-Ident* customers from 850 batches from the substance/substance group *Propylene glycol*.
- Among them are spectra of independent samples from 814 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance        | Batch       | Spectra |
|----------------------------|------------------|-------------|---------|
| / Noweda                   | Propylene glycol | 1000007047  | 2       |
| /Phoenix                   | Propylene glycol | 17053806    | 1       |
| 03.12.18 Phoenix           | Propylene glycol | 8064908     | 1       |
| 11.09.2018 Phoenix 2,69EUR | Propylene glycol | 18064904    | 1       |
| 19.04.2016 Phoenix 2,84EUR | Propylene glycol | 15335403    | 1       |
| A.H.D.                     | Propylene glycol | 1112004-01  | 1       |
| ACM                        | Propylene glycol | KNC0776J15  | 1       |
| Adler                      | Propylene glycol | 18064908    | 2       |
| AHD                        | Propylene glycol | 13100907    | 1       |
| AHD                        | Propylene glycol | 29775B      | 1       |
| AHD                        | Propylene glycol | 1000001132  | 1       |
| AHD                        | Propylene glycol | 17053809    | 1       |
| AHD                        | Propylene glycol | F08-3744509 | 1       |
| AHD / Lamotte              | Propylene glycol | 1000002992  | 2       |
| AHD 26.01.15               | Propylene glycol | 14248707    | 1       |
| AHD Lamotte GmbH           | Propylene glycol | 8002520002  | 1       |

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| Supplier                     | Substance        | Batch            | Spectra |
|------------------------------|------------------|------------------|---------|
| Caelo                        | Propylene glycol | 60016860001      | 1       |
| AHD/Henry Lamotte Oils ...   | Propylene glycol | 1000007047       | 1       |
| AHD/Lamotte                  | Propylene glycol | 6012897001       | 5       |
| AHL                          | Propylene glycol | 17H03-B04-340573 | 2       |
| Alliance                     | Propylene glycol | 18J03-B07-356433 | 1       |
| Alliance 05.2.15             | Propylene glycol | 14113105         | 1       |
| Alliance H.                  | Propylene glycol | 15430513         | 1       |
| Alliance Healthcare          | Propylene glycol | 272684           | 1       |
| Alliance Healthcare          | Propylene glycol | 12372403         | 1       |
| Alliance Healthcare          | Propylene glycol | 10274303         | 1       |
| Alliance Healthcare          | Propylene glycol | 15430508         | 1       |
| Alliance Healthcare          | Propylene glycol | 17321705         | 1       |
| Alliance Healthcare          | Propylene glycol | 19A28-B09-361175 | 1       |
| Alliance Healthcare/Hen. ... | Propylene glycol | 125099           | 2       |
| Caelo                        | Propylene glycol | 192461011        | 47      |
| Alliance/Caeolo              | Propylene glycol | 18219105         | 1       |
| Alliance/Henry               | Propylene glycol | 8002520002       | 1       |
| Allianz                      | Propylene glycol | 8003093001       | 2       |
| Allianz                      | Propylene glycol | 1000007047       | 1       |
| Anzag                        | Propylene glycol | 12G13N07         | 1       |
| Anzag                        | Propylene glycol | 13E22-B03-283450 | 1       |
| Anzag                        | Propylene glycol | 1000002768       | 1       |
| Anzag                        | Propylene glycol | 8002520002       | 4       |
| Anzag                        | Propylene glycol | 18064901         | 1       |
| Anzag                        | Propylene glycol | 18219106         | 1       |
| ANZAG                        | Propylene glycol | 123095           | 8       |
| Anzag 19.03.13 ek: 3,03EUR   | Propylene glycol | 12372404         | 2       |
| ANZAG 20.01.2014             | Propylene glycol | 13256704         | 1       |
| Anzag 25.01.2013             | Propylene glycol | 12169802         | 2       |
| Caelo                        | Propylene glycol | 20000779005      | 21      |
| Fagron                       | Propylene glycol | 26021320         | 5       |
| Anzag/Henry Lotte            | Propylene glycol | 8003093001       | 1       |
| apo-ident                    | Propylene glycol | 1708002-01       | 1       |
| Apo-ident                    | Propylene glycol | 1509031-01       | 1       |
| Apo-ident                    | Propylene glycol | 1603034-01       | 2       |
| Apotheke/Defektur Misch. ... | Propylene glycol | 35/15            | 1       |
| Apotheke-Ansatz              | Propylene glycol | 19/15            | 1       |
| Audor Pharma                 | Propylene glycol | 2016M-02110      | 1       |
| Azelis                       | Propylene glycol | 81930p2          | 1       |
| Azelis                       | Propylene glycol | 81930p1          | 1       |
| Azelis                       | Propylene glycol | 81930p5          | 1       |
| Azelis                       | Propylene glycol | 81930p3          | 1       |
| Azelis                       | Propylene glycol | 81930p6          | 1       |
| Azelis                       | Propylene glycol | 81930p4          | 1       |
| Azelis                       | Propylene glycol | 32030            | 8       |
| Bambustus/Noweda             | Propylene glycol | 299106           | 10      |
| BASF                         | Propylene glycol | 1501013-01       | 1       |
| BASF AG                      | Propylene glycol | 140802001        | 1       |
| BASF AG Deutschland          | Propylene glycol | 1901018-01       | 1       |
| BASF/Gehe                    | Propylene glycol | 1610031-01       | 1       |
| BASF/Phoenix                 | Propylene glycol | 1901018-01       | 1       |
| BASF/Sanacorp                | Propylene glycol | 1509031-01       | 1       |
| Beiersdorf AG                | Propylene glycol | 15335404         | 1       |
| Bombastus                    | Propylene glycol | 265358           | 1       |
| Bombastus                    | Propylene glycol | 268295           | 1       |
| Bombastus                    | Propylene glycol | 13256707         | 1       |
| Bombastus                    | Propylene glycol | 286382           | 4       |
| Bombastus                    | Propylene glycol | 299106           | 6       |
| Bombastus                    | Propylene glycol | 303788           | 25      |
| Bombastus                    | Propylene glycol | 306364           | 1       |

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| Supplier        | Substance        | Batch            | Spectra |
|-----------------|------------------|------------------|---------|
| Bombastus       | Propylene glycol | 309031           | 7       |
| Bombastus       | Propylene glycol | 311417           | 7       |
| Bombastus       | Propylene glycol | 17H03-B04-340573 | 1       |
| Bombastus       | Propylene glycol | 8003093001       | 2       |
| Bombastus       | Propylene glycol | 1901018-01       | 1       |
| Bombastus       | Propylene glycol | 20004944         | 1       |
| Bombastus       | Propylene glycol | 123095           | 1       |
| Bombastus       | Propylene glycol | 16251201         | 1       |
| Bombastus       | Propylene glycol | 18000424         | 11      |
| Bombastus       | Propylene glycol | 270359           | 1       |
| Bombastus       | Propylene glycol | 281569           | 3       |
| Bombastus       | Propylene glycol | 20001869         | 2       |
| Bombastus       | Propylene glycol | 7/14             | 1       |
| Bombastus       | Propylene glycol | 296424           | 4       |
| Bombastus       | Propylene glycol | 277548           | 4       |
| Bombastus       | Propylene glycol | 283937           | 1       |
| Bombastus       | Propylene glycol | 289078           | 4       |
| Bombastus       | Propylene glycol | 291103           | 1       |
| Bombastus       | Propylene glycol | 293947           | 9       |
| Bombastus       | Propylene glycol | 295111           | 5       |
| Bombastus       | Propylene glycol | 2983947          | 1       |
| Bombastus       | Propylene glycol | 15430504         | 2       |
| Bombastus       | Propylene glycol | 309030           | 3       |
| Bombastus       | Propylene glycol | 311416           | 3       |
| Bombastus       | Propylene glycol | 18000423         | 3       |
| Bombastus       | Propylene glycol | 18005449         | 10      |
| Bombastus       | Propylene glycol | 60091702         | 1       |
| Bombastus       | Propylene glycol | 20001870         | 6       |
| Bombastus       | Propylene glycol | 297626           | 11      |
| Bombastus       | Propylene glycol | 1803479          | 1       |
| Bombastus       | Propylene glycol | 19001346         | 11      |
| Bombastus       | Propylene glycol | 20000738         | 1       |
| Bombastus       | Propylene glycol | 19003049         | 6       |
| Bombastus       | Propylene glycol | 17275502         | 1       |
| Bombastus       | Propylene glycol | 307185           | 11      |
| Bombastus       | Propylene glycol | 11417            | 1       |
| Bombastus       | Propylene glycol | 18H07-B01-352662 | 1       |
| Bombastuts/Gehe | Propylene glycol | 307185           | 2       |
| cae             | Propylene glycol | 15430514         | 1       |
| Caeleo/ Krieger | Propylene glycol | 17321703         | 1       |
| Caeleo/ Krieger | Propylene glycol | 18064912         | 1       |
| Caelo           | Propylene glycol | 5061201          | 1       |
| Caelo           | Propylene glycol | 20111203         | 1       |
| Caelo           | Propylene glycol | 14113102         | 21      |
| Caelo           | Propylene glycol | 14113103         | 6       |
| Caelo           | Propylene glycol | 1804212110       | 1       |
| Caelo           | Propylene glycol | 10371307         | 1       |
| Caelo           | Propylene glycol | 11300502         | 2       |
| Caelo           | Propylene glycol | 11300505         | 2       |
| Caelo           | Propylene glycol | 11372006         | 14      |
| Caelo           | Propylene glycol | 20071201         | 1       |
| Caelo           | Propylene glycol | 11H04-N01        | 1       |
| Caelo           | Propylene glycol | 11372010         | 6       |
| Caelo           | Propylene glycol | 12088207         | 11      |
| Caelo           | Propylene glycol | 611211           | 1       |
| Caelo           | Propylene glycol | 3512M-02110      | 1       |
| Caelo           | Propylene glycol | 12088205         | 3       |
| Caelo           | Propylene glycol | 113Q-02110       | 1       |
| Caelo           | Propylene glycol | 20140612-6       | 1       |
| Caelo           | Propylene glycol | 1288205          | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Propylene glycol | 12169802         | 16             |
| Caelo           | Propylene glycol | 25011302         | 1              |
| Caelo           | Propylene glycol | 6021301          | 1              |
| Caelo           | Propylene glycol | 12169804         | 8              |
| Caelo           | Propylene glycol | 28021301         | 1              |
| Caelo           | Propylene glycol | 12G13-N07        | 4              |
| Caelo           | Propylene glycol | 12372404         | 14             |
| Caelo           | Propylene glycol | 25031301         | 1              |
| Caelo           | Propylene glycol | 1219803          | 1              |
| Caelo           | Propylene glycol | 150771           | 1              |
| Caelo           | Propylene glycol | 18041302         | 1              |
| Caelo           | Propylene glycol | 19041307         | 1              |
| Caelo           | Propylene glycol | 12372403         | 7              |
| Caelo           | Propylene glycol | 31051317         | 1              |
| Caelo           | Propylene glycol | 12372402         | 2              |
| Caelo           | Propylene glycol | 13100908         | 37             |
| Caelo           | Propylene glycol | 26061302         | 1              |
| Caelo           | Propylene glycol | 12100907         | 1              |
| Caelo           | Propylene glycol | 13100906         | 11             |
| Caelo           | Propylene glycol | 13071303         | 1              |
| Caelo           | Propylene glycol | 13167006         | 7              |
| Caelo           | Propylene glycol | 42488055         | 1              |
| Caelo           | Propylene glycol | 2101302          | 1              |
| Caelo           | Propylene glycol | 12111304         | 1              |
| Caelo           | Propylene glycol | 13256709         | 14             |
| Caelo           | Propylene glycol | 13167005         | 1              |
| Caelo           | Propylene glycol | 24121301         | 1              |
| Caelo           | Propylene glycol | 70214PJK02       | 1              |
| Caelo           | Propylene glycol | 11021404         | 1              |
| Caelo           | Propylene glycol | 14051804         | 15             |
| Caelo           | Propylene glycol | 26041402         | 1              |
| Caelo           | Propylene glycol | 13G09-B01283456  | 1              |
| Caelo           | Propylene glycol | 140101001        | 2              |
| Caelo           | Propylene glycol | 123095           | 1              |
| Caelo           | Propylene glycol | 3071402          | 1              |
| Caelo           | Propylene glycol | 12071403         | 1              |
| Caelo           | Propylene glycol | 14051805         | 25             |
| Caelo           | Propylene glycol | 27091402         | 2              |
| Caelo           | Propylene glycol | 29091403         | 1              |
| Caelo           | Propylene glycol | 13E22-B03        | 1              |
| Caelo           | Propylene glycol | 1051805          | 1              |
| Caelo           | Propylene glycol | 14A09-B04-289598 | 1              |
| Caelo           | Propylene glycol | 1405180          | 1              |
| Caelo           | Propylene glycol | 12345            | 1              |
| Caelo           | Propylene glycol | 13111405         | 1              |
| Caelo           | Propylene glycol | 14113105         | 12             |
| Caelo           | Propylene glycol | 14248706         | 5              |
| Caelo           | Propylene glycol | 14346606         | 8              |
| Caelo           | Propylene glycol | 15A07-B04-302969 | 1              |
| Caelo           | Propylene glycol | 1518601          | 1              |
| Caelo           | Propylene glycol | 15181601         | 26             |
| Caelo           | Propylene glycol | 15262401         | 22             |
| Caelo           | Propylene glycol | 15262402         | 10             |
| Caelo           | Propylene glycol | 12101701         | 1              |
| Caelo           | Propylene glycol | 14C05-B02-295787 | 2              |
| Caelo           | Propylene glycol | 14248703         | 21             |
| Caelo           | Propylene glycol | 14248707         | 11             |
| Caelo           | Propylene glycol | 125099           | 19             |
| Caelo           | Propylene glycol | 16021506         | 1              |
| Caelo           | Propylene glycol | 14288707         | 1              |

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| Supplier | Substance        | Batch             | Spectra |
|----------|------------------|-------------------|---------|
| Caelo    | Propylene glycol | 14346608          | 16      |
| Caelo    | Propylene glycol | 17041501          | 1       |
| Caelo    | Propylene glycol | 14346609          | 20      |
| Caelo    | Propylene glycol | 8051503           | 1       |
| Caelo    | Propylene glycol | 1436604           | 1       |
| Caelo    | Propylene glycol | 1071502           | 1       |
| Caelo    | Propylene glycol | 15181604          | 9       |
| Caelo    | Propylene glycol | 28071503          | 1       |
| Caelo    | Propylene glycol | 15181603          | 15      |
| Caelo    | Propylene glycol | 15081501          | 1       |
| Caelo    | Propylene glycol | 15262407          | 14      |
| Caelo    | Propylene glycol | 151816055         | 1       |
| Caelo    | Propylene glycol | 15335407          | 20      |
| Caelo    | Propylene glycol | 1518602           | 1       |
| Caelo    | Propylene glycol | 15262408          | 11      |
| Caelo    | Propylene glycol | 2741              | 1       |
| Caelo    | Propylene glycol | 15262404          | 17      |
| Caelo    | Propylene glycol | 15262409          | 15      |
| Caelo    | Propylene glycol | 1000001132        | 8       |
| Caelo    | Propylene glycol | 15G28-B03-311889  | 1       |
| Caelo    | Propylene glycol | 15335405          | 36      |
| Caelo    | Propylene glycol | 2755              | 1       |
| Caelo    | Propylene glycol | 2765              | 1       |
| Caelo    | Propylene glycol | 1526409           | 1       |
| Caelo    | Propylene glycol | 153565101         | 1       |
| Caelo    | Propylene glycol | 29814B            | 1       |
| Caelo    | Propylene glycol | 15430505          | 7       |
| Caelo    | Propylene glycol | 15430506          | 9       |
| Caelo    | Propylene glycol | 15430513          | 15      |
| Caelo    | Propylene glycol | 153335405         | 1       |
| Caelo    | Propylene glycol | 6071520           | 1       |
| Caelo    | Propylene glycol | 15430502          | 28      |
| Caelo    | Propylene glycol | 15355107          | 1       |
| Caelo    | Propylene glycol | 15413409          | 1       |
| Caelo    | Propylene glycol | 15340502          | 1       |
| Caelo    | Propylene glycol | 154305            | 1       |
| Caelo    | Propylene glycol | 15439502          | 1       |
| Caelo    | Propylene glycol | 16C10-B04         | 1       |
| Caelo    | Propylene glycol | 1540502           | 1       |
| Caelo    | Propylene glycol | 16105403          | 59      |
| Caelo    | Propylene glycol | 15430511          | 1       |
| Caelo    | Propylene glycol | 15430512          | 17      |
| Caelo    | Propylene glycol | 2887              | 1       |
| Caelo    | Propylene glycol | 2888              | 1       |
| Caelo    | Propylene glycol | 16C10-B04-323302  | 2       |
| Caelo    | Propylene glycol | 1610503           | 1       |
| Caelo    | Propylene glycol | 16251202          | 64      |
| Caelo    | Propylene glycol | 170131PG/16105403 | 1       |
| Caelo    | Propylene glycol | 1615403           | 1       |
| Caelo    | Propylene glycol | 16C10B04323302    | 1       |
| Caelo    | Propylene glycol | 16251207          | 11      |
| Caelo    | Propylene glycol | 18031704          | 1       |
| Caelo    | Propylene glycol | 16251205          | 54      |
| Caelo    | Propylene glycol | 11051707          | 1       |
| Caelo    | Propylene glycol | 16G04B01328151    | 1       |
| Caelo    | Propylene glycol | 10061712          | 1       |
| Caelo    | Propylene glycol | 17061707          | 1       |
| Caelo    | Propylene glycol | 162251207         | 1       |
| Caelo    | Propylene glycol | 16551207          | 1       |
| Caelo    | Propylene glycol | 307185            | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Propylene glycol | 6071718          | 1              |
| Caelo           | Propylene glycol | 161003101        | 1              |
| Caelo           | Propylene glycol | 17053804         | 70             |
| Caelo           | Propylene glycol | 29879B           | 1              |
| Caelo           | Propylene glycol | 17a06-b03-332091 | 1              |
| Caelo           | Propylene glycol | 1140817          | 1              |
| Caelo           | Propylene glycol | 18081702         | 1              |
| Caelo           | Propylene glycol | 1053801          | 1              |
| Caelo           | Propylene glycol | 17A06-B03-332091 | 1              |
| Caelo           | Propylene glycol | 17053807         | 12             |
| Caelo           | Propylene glycol | 170538015378     | 1              |
| Caelo           | Propylene glycol | 17053803         | 1              |
| Caelo           | Propylene glycol | 4111708          | 1              |
| Caelo           | Propylene glycol | 13111703         | 1              |
| Caelo           | Propylene glycol | 17E22-B10-336830 | 2              |
| Caelo           | Propylene glycol | 17053810         | 5              |
| Caelo           | Propylene glycol | 170538065447     | 1              |
| Caelo           | Propylene glycol | 11121702         | 1              |
| Caelo           | Propylene glycol | 15081620         | 1              |
| Caelo           | Propylene glycol | 17423HH431       | 1              |
| Caelo           | Propylene glycol | 17053805         | 1              |
| Caelo           | Propylene glycol | 7053806          | 1              |
| Caelo           | Propylene glycol | 17321705         | 6              |
| Caelo           | Propylene glycol | 12021823         | 1              |
| Caelo           | Propylene glycol | 2021801          | 1              |
| Caelo           | Propylene glycol | 17321704         | 40             |
| Caelo           | Propylene glycol | 17H03-B04-340573 | 1              |
| Caelo           | Propylene glycol | 17275504         | 1              |
| Caelo           | Propylene glycol | 17A06B03_334896  | 1              |
| Caelo           | Propylene glycol | 1000007047       | 3              |
| Caelo           | Propylene glycol | 18064901         | 174            |
| Caelo           | Propylene glycol | 5051802          | 1              |
| Caelo           | Propylene glycol | 7051807          | 1              |
| Caelo           | Propylene glycol | 9061811          | 1              |
| Caelo           | Propylene glycol | 1711023-01       | 2              |
| Caelo           | Propylene glycol | 7071806          | 1              |
| Caelo           | Propylene glycol | 1731703          | 1              |
| Caelo           | Propylene glycol | 18000424         | 1              |
| Caelo           | Propylene glycol | 18064907         | 58             |
| Caelo           | Propylene glycol | 18A19-B01        | 1              |
| Caelo           | Propylene glycol | 18064905         | 1              |
| Caelo           | Propylene glycol | 16081802         | 1              |
| Caelo           | Propylene glycol | 18A19-B01-348338 | 2              |
| Caelo           | Propylene glycol | 1803023-01       | 1              |
| Caelo           | Propylene glycol | 19091801         | 1              |
| Caelo           | Propylene glycol | 10101720         | 1              |
| Caelo           | Propylene glycol | 18046901         | 1              |
| Caelo           | Propylene glycol | 18H07-B01        | 1              |
| Caelo           | Propylene glycol | 27101805         | 1              |
| Caelo           | Propylene glycol | 1051821          | 1              |
| Caelo           | Propylene glycol | 18064908         | 51             |
| Caelo           | Propylene glycol | 18A19-B01-351227 | 5              |
| Caelo           | Propylene glycol | 28111814         | 1              |
| Caelo           | Propylene glycol | 22121810         | 1              |
| Caelo           | Propylene glycol | 22121811         | 1              |
| Caelo           | Propylene glycol | 1809007-01       | 7              |
| Caelo           | Propylene glycol | 18064912         | 83             |
| Caelo           | Propylene glycol | 18064915         | 111            |
| Caelo           | Propylene glycol | 180644913        | 1              |
| Caelo           | Propylene glycol | 1064907          | 1              |

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| Supplier | Substance        | Batch             | Spectra |
|----------|------------------|-------------------|---------|
| Caelo    | Propylene glycol | 6012897001        | 12      |
| Caelo    | Propylene glycol | 19064915          | 1       |
| Caelo    | Propylene glycol | 18064917          | 46      |
| Caelo    | Propylene glycol | 18219101          | 67      |
| Caelo    | Propylene glycol | 18219102          | 52      |
| Caelo    | Propylene glycol | 80649121          | 1       |
| Caelo    | Propylene glycol | 18219103          | 1       |
| Caelo    | Propylene glycol | 18219105          | 32      |
| Caelo    | Propylene glycol | 19243602          | 14      |
| Caelo    | Propylene glycol | 19246101          | 58      |
| Caelo    | Propylene glycol | 192461006         | 12      |
| Caelo    | Propylene glycol | 192461009         | 1       |
| Caelo    | Propylene glycol | 2000779009        | 2       |
| Caelo    | Propylene glycol | 20003592003       | 9       |
| Caelo    | Propylene glycol | 20000779007       | 1       |
| Caelo    | Propylene glycol | 1316003           | 1       |
| Caelo    | Propylene glycol | 17321703          | 106     |
| Caelo    | Propylene glycol | 17053809          | 90      |
| Caelo    | Propylene glycol | ch8003093001      | 1       |
| Caelo    | Propylene glycol | 11K28-N01         | 3       |
| Caelo    | Propylene glycol | 1806491           | 1       |
| Caelo    | Propylene glycol | 13167003          | 19      |
| Caelo    | Propylene glycol | 31256708          | 1       |
| Caelo    | Propylene glycol | 13256706          | 20      |
| Caelo    | Propylene glycol | 12K13-N05         | 1       |
| Caelo    | Propylene glycol | 15A07-B04-302970  | 3       |
| Caelo    | Propylene glycol | 6031720           | 1       |
| Caelo    | Propylene glycol | 18H07-B01-352703  | 2       |
| Caelo    | Propylene glycol | 16105404          | 13      |
| Caelo    | Propylene glycol | 1428704           | 2       |
| Caelo    | Propylene glycol | 171106PG/16251202 | 1       |
| Caelo    | Propylene glycol | 18064904          | 108     |
| Caelo    | Propylene glycol | 18964901          | 1       |
| Caelo    | Propylene glycol | 13100905          | 2       |
| Caelo    | Propylene glycol | 300915            | 1       |
| Caelo    | Propylene glycol | 1703024-01        | 3       |
| Caelo    | Propylene glycol | 11125811          | 1       |
| Caelo    | Propylene glycol | 13100907          | 24      |
| Caelo    | Propylene glycol | 1610031           | 1       |
| Caelo    | Propylene glycol | 17296702          | 1       |
| Caelo    | Propylene glycol | 19E20-B01-362176  | 1       |
| Caelo    | Propylene glycol | 19230103          | 10      |
| Caelo    | Propylene glycol | 18003480          | 1       |
| Caelo    | Propylene glycol | 13256708          | 8       |
| Caelo    | Propylene glycol | 11300506          | 3       |
| Caelo    | Propylene glycol | 24041221          | 2       |
| Caelo    | Propylene glycol | 6509HH9041        | 1       |
| Caelo    | Propylene glycol | 210718064901      | 1       |
| Caelo    | Propylene glycol | 15181602          | 16      |
| Caelo    | Propylene glycol | 11372011          | 3       |
| Caelo    | Propylene glycol | 1610540           | 1       |
| Caelo    | Propylene glycol | 17H03-B04-344395  | 1       |
| Caelo    | Propylene glycol | 1526407           | 1       |
| Caelo    | Propylene glycol | 15L23-B01-318036  | 1       |
| Caelo    | Propylene glycol | 20000779009       | 8       |
| Caelo    | Propylene glycol | 1606014-01        | 1       |
| Caelo    | Propylene glycol | 1610031-01        | 1       |
| Caelo    | Propylene glycol | 18J03-B07-356433  | 2       |
| Caelo    | Propylene glycol | 19A18-T06-063528  | 1       |
| Caelo    | Propylene glycol | 1651206           | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Propylene glycol | 170808PG/16251206 | 1              |
| Caelo           | Propylene glycol | 1705804           | 1              |
| Caelo           | Propylene glycol | 18064916          | 5              |
| Caelo           | Propylene glycol | 18219110          | 16             |
| Caelo           | Propylene glycol | 1924610063        | 1              |
| Caelo           | Propylene glycol | 192461012         | 3              |
| Caelo           | Propylene glycol | 3092003           | 1              |
| Caelo           | Propylene glycol | 9102001           | 1              |
| Caelo           | Propylene glycol | 3352              | 1              |
| Caelo           | Propylene glycol | 83/2014           | 1              |
| Caelo           | Propylene glycol | 5671401           | 3              |
| Caelo           | Propylene glycol | 17053814          | 19             |
| Caelo           | Propylene glycol | 1821902           | 1              |
| Caelo           | Propylene glycol | 12088206          | 5              |
| Caelo           | Propylene glycol | 13256707          | 29             |
| Caelo           | Propylene glycol | 418M-02110        | 1              |
| Caelo           | Propylene glycol | 18J03-B07-357162  | 1              |
| Caelo           | Propylene glycol | 1923601           | 1              |
| Caelo           | Propylene glycol | 14346602          | 7              |
| Caelo           | Propylene glycol | 1793451           | 2              |
| Caelo           | Propylene glycol | 15430504          | 24             |
| Caelo           | Propylene glycol | 1625120           | 1              |
| Caelo           | Propylene glycol | 140510804         | 1              |
| Caelo           | Propylene glycol | 514E-02110        | 1              |
| Caelo           | Propylene glycol | 15335408          | 14             |
| Caelo           | Propylene glycol | 17053806          | 83             |
| Caelo           | Propylene glycol | 1418Q-02110       | 1              |
| Caelo           | Propylene glycol | 16251208          | 3              |
| Caelo           | Propylene glycol | 19241006          | 3              |
| Caelo           | Propylene glycol | 20003592002       | 1              |
| Caelo           | Propylene glycol | 1000002768        | 1              |
| Caelo           | Propylene glycol | 16851205          | 1              |
| Caelo           | Propylene glycol | 1316Q-02110       | 1              |
| Caelo           | Propylene glycol | 13256704          | 30             |
| Caelo           | Propylene glycol | 11372009          | 5              |
| Caelo           | Propylene glycol | 26021320          | 2              |
| Caelo           | Propylene glycol | 1000002992        | 3              |
| Caelo           | Propylene glycol | 1304C009-281100   | 2              |
| Caelo           | Propylene glycol | 14051802          | 18             |
| Caelo           | Propylene glycol | 1436603           | 1              |
| Caelo           | Propylene glycol | 15F25-B02-311890  | 1              |
| Caelo           | Propylene glycol | 16251201          | 96             |
| Caelo           | Propylene glycol | 1708002-01        | 1              |
| Caelo           | Propylene glycol | 18046912          | 1              |
| Caelo           | Propylene glycol | 6016860001        | 1              |
| Caelo           | Propylene glycol | 19I27-F03-365136  | 1              |
| Caelo           | Propylene glycol | 46033516K0        | 1              |
| Caelo           | Propylene glycol | 13256705          | 21             |
| Caelo           | Propylene glycol | 15069202          | 18             |
| Caelo           | Propylene glycol | 2021621           | 1              |
| Caelo           | Propylene glycol | 20000779002       | 15             |
| Caelo           | Propylene glycol | 14248702          | 16             |
| Caelo           | Propylene glycol | 15430514          | 5              |
| Caelo           | Propylene glycol | 16251203          | 12             |
| Caelo           | Propylene glycol | 11300504          | 1              |
| Caelo           | Propylene glycol | 4248702           | 1              |
| Caelo           | Propylene glycol | 14346605          | 2              |
| Caelo           | Propylene glycol | 15262403          | 25             |
| Caelo           | Propylene glycol | 1540513           | 1              |
| Caelo           | Propylene glycol | 1605403           | 1              |

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| Supplier | Substance        | Batch             | Spectra |
|----------|------------------|-------------------|---------|
| Caelo    | Propylene glycol | 16251206          | 75      |
| Caelo    | Propylene glycol | 7053802           | 1       |
| Caelo    | Propylene glycol | 170729184         | 1       |
| Caelo    | Propylene glycol | 17053802          | 9       |
| Caelo    | Propylene glycol | 17053188          | 1       |
| Caelo    | Propylene glycol | 170323182         | 1       |
| Caelo    | Propylene glycol | 17275502          | 69      |
| Caelo    | Propylene glycol | 180130PG/17275502 | 1       |
| Caelo    | Propylene glycol | 181016185         | 1       |
| Caelo    | Propylene glycol | 18064906          | 27      |
| Caelo    | Propylene glycol | 18064918          | 16      |
| Caelo    | Propylene glycol | 18/03-B07-355043  | 1       |
| Caelo    | Propylene glycol | 19243601          | 58      |
| Caelo    | Propylene glycol | 200000779005      | 1       |
| Caelo    | Propylene glycol | 20003903005       | 1       |
| Caelo    | Propylene glycol | 18219106          | 48      |
| Caelo    | Propylene glycol | 19246100          | 1       |
| Caelo    | Propylene glycol | 200000779002      | 1       |
| Caelo    | Propylene glycol | 192461005         | 50      |
| Caelo    | Propylene glycol | 1301C004-277798   | 2       |
| Caelo    | Propylene glycol | 1301C003-277799   | 1       |
| Caelo    | Propylene glycol | 14248704          | 8       |
| Caelo    | Propylene glycol | 15335406          | 34      |
| Caelo    | Propylene glycol | 17E22-B10         | 1       |
| Caelo    | Propylene glycol | 18064920          | 8       |
| Caelo    | Propylene glycol | 19230102          | 14      |
| Caelo    | Propylene glycol | 1924601           | 1       |
| Caelo    | Propylene glycol | 1113102           | 1       |
| Caelo    | Propylene glycol | 15335404          | 39      |
| Caelo    | Propylene glycol | 1310098           | 1       |
| Caelo    | Propylene glycol | 1405003-01        | 1       |
| Caelo    | Propylene glycol | 2310070           | 1       |
| Caelo    | Propylene glycol | 14346603          | 13      |
| Caelo    | Propylene glycol | 15069201          | 5       |
| Caelo    | Propylene glycol | 15181605          | 12      |
| Caelo    | Propylene glycol | 15262406          | 8       |
| Caelo    | Propylene glycol | 3615U-02110       | 1       |
| Caelo    | Propylene glycol | 1562408           | 1       |
| Caelo    | Propylene glycol | 1603034-01        | 3       |
| Caelo    | Propylene glycol | 16C10-B04-321659  | 1       |
| Caelo    | Propylene glycol | 1562404           | 1       |
| Caelo    | Propylene glycol | 30718             | 1       |
| Caelo    | Propylene glycol | 8003093001        | 5       |
| Caelo    | Propylene glycol | 1725502           | 1       |
| Caelo    | Propylene glycol | 18065904          | 1       |
| Caelo    | Propylene glycol | 18219107          | 2       |
| Caelo    | Propylene glycol | 19230101          | 33      |
| Caelo    | Propylene glycol | 1906034-01        | 2       |
| Caelo    | Propylene glycol | 12169803          | 10      |
| Caelo    | Propylene glycol | 13167004          | 26      |
| Caelo    | Propylene glycol | 1272404           | 1       |
| Caelo    | Propylene glycol | 14051803          | 7       |
| Caelo    | Propylene glycol | 14346607          | 25      |
| Caelo    | Propylene glycol | 54/AKD7           | 1       |
| Caelo    | Propylene glycol | 150903101         | 1       |
| Caelo    | Propylene glycol | 15430503          | 40      |
| Caelo    | Propylene glycol | 8002520002        | 6       |
| Caelo    | Propylene glycol | 58/AKD16          | 1       |
| Caelo    | Propylene glycol | 15051721          | 2       |
| Caelo    | Propylene glycol | 17321708          | 11      |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|------------------|-------------------|----------------|
| Caelo                      | Propylene glycol | 18064902          | 44             |
| Caelo                      | Propylene glycol | 17053815          | 1              |
| Caelo                      | Propylene glycol | 1321704           | 1              |
| Caelo                      | Propylene glycol | 29934B            | 1              |
| Caelo                      | Propylene glycol | 1806908           | 1              |
| Caelo                      | Propylene glycol | 18064913          | 14             |
| Caelo                      | Propylene glycol | 186494            | 1              |
| Caelo                      | Propylene glycol | 1064915           | 1              |
| Caelo                      | Propylene glycol | 9246101           | 1              |
| Caelo                      | Propylene glycol | 11372005          | 3              |
| Caelo                      | Propylene glycol | 17E22B10          | 1              |
| Caelo                      | Propylene glycol | 2913M-02110       | 1              |
| Caelo                      | Propylene glycol | 5262402           | 1              |
| Caeolo / Phönix            | Propylene glycol | 17053806          | 2              |
| Caeolo/Phoenix             | Propylene glycol | 18064912          | 2              |
| Caeolo/Sanacorp            | Propylene glycol | 18064916          | 1              |
| Caesa / Alliance Health... | Propylene glycol | 18064907          | 1              |
| caesar                     | Propylene glycol | 14248707          | 1              |
| Caesar & Lorenz GmbH       | Propylene glycol | 18064901          | 2              |
| Caesar & Lorenz GmbH       | Propylene glycol | 18219102          | 1              |
| Caesar & Lorenz GmbH       | Propylene glycol | 18219106          | 1              |
| Caesar & Lorenz GmbH       | Propylene glycol | 19243601          | 2              |
| Caesar & Lorenz GmbH       | Propylene glycol | 192461005         | 1              |
| Caesar & Lorenz GmbH       | Propylene glycol | 20000779002       | 1              |
| Caelo                      | Propylene glycol | 200000779009      | 1              |
| Caesar & Loretz            | Propylene glycol | 16251206          | 1              |
| Caesar & Loretz            | Propylene glycol | 18064901          | 1              |
| Caesar & Loretz            | Propylene glycol | 18064908          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 11372006          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 12372404          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 14051804          | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 15262403          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 16251201          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064904          | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 210718064901      | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064915          | 12             |
| Caesar & Loretz GmbH       | Propylene glycol | 18064912          | 3              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064908          | 3              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064917          | 9              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064913          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064916          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064914          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18064919          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219101          | 5              |
| Caesar & Loretz GmbH       | Propylene glycol | 18J03-_B07-356433 | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219102          | 12             |
| Caesar & Loretz GmbH       | Propylene glycol | 18064918          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219110          | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219103          | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219106          | 5              |
| Caesar & Loretz GmbH       | Propylene glycol | 19230103          | 7              |
| Caesar & Loretz GmbH       | Propylene glycol | 19230101          | 5              |
| Caesar & Loretz GmbH       | Propylene glycol | 18219105          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 19230102          | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 19243602          | 8              |
| Caesar & Loretz GmbH       | Propylene glycol | 19243601          | 16             |
| Caesar & Loretz GmbH       | Propylene glycol | 19246101          | 12             |
| Caesar & Loretz GmbH       | Propylene glycol | 18219112          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 19243603          | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | B01-3621706       | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|----------------------------|------------------|----------------|----------------|
| Caesar & Loretz GmbH       | Propylene glycol | 192461005      | 5              |
| Caesar & Loretz GmbH       | Propylene glycol | 192461006      | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 1912001-01     | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 20000779002    | 10             |
| Caesar & Loretz GmbH       | Propylene glycol | 192461009      | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 192461001      | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 20000779005    | 8              |
| Caesar & Loretz GmbH       | Propylene glycol | 20000779006    | 9              |
| Caesar & Loretz GmbH       | Propylene glycol | 200000779006   | 3              |
| Caesar & Loretz GmbH       | Propylene glycol | 2000079005     | 1              |
| Caesar & Loretz GmbH       | Propylene glycol | 20003592003    | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 20000779009    | 4              |
| Caesar & Loretz GmbH       | Propylene glycol | 20000779008    | 2              |
| Caesar & Loretz GmbH       | Propylene glycol | 20003903008    | 2              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 15430512       | 1              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 18064904       | 3              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 18064912       | 1              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 17053804       | 2              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 17321703       | 1              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 108064915      | 1              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 18064915       | 4              |
| Caesar & Loretz GmbH / ... | Propylene glycol | 19246101       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 13256705       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 14248706       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 14248707       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 15335403       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 15335404       | 1              |
| Caesar & Loretz GmbH Hi... | Propylene glycol | 15430508       | 1              |
| Caesar & Loretz GmbH Sa... | Propylene glycol | 19246101       | 1              |
| Caesar & Loretz GmbH, 4... | Propylene glycol | 11300505       | 1              |
| Caesar & Loretz GmbH, 4... | Propylene glycol | 11372007       | 1              |
| Caesar & Loretz GmbH, 4... | Propylene glycol | 12169802       | 5              |
| Caesar & Loretz GmbH/ A... | Propylene glycol | 19246101       | 1              |
| Caesar & Loretz GmbH/ A... | Propylene glycol | 192461005      | 1              |
| Caesar & Loretz GmbH/ J... | Propylene glycol | 20000779006    | 1              |
| Caesar & Loretz GmbH/ P... | Propylene glycol | 18219105       | 1              |
| Caesar & Loretz GmbH/ P... | Propylene glycol | 19243601       | 1              |
| Caesar & Loretz GmbH/AHD   | Propylene glycol | 18219102       | 1              |
| Caesar & Loretz GmbH/AHD   | Propylene glycol | 19230101       | 1              |
| Caesar & Loretz GmbH/AHD   | Propylene glycol | 20003592003    | 1              |
| Caesar & Loretz GmbH/Gehe  | Propylene glycol | 18064917       | 1              |
| Caesar & Loretz GmbH/Gehe  | Propylene glycol | 19243602       | 1              |
| Caesar & Loretz GmbH/Gö... | Propylene glycol | 19230101       | 1              |
| Caesar & Loretz GmbH/Je... | Propylene glycol | 18219102       | 1              |
| Caesar & Loretz GmbH/Je... | Propylene glycol | 19230103       | 1              |
| Caesar & Loretz GmbH/Je... | Propylene glycol | 19243601       | 1              |
| Caesar & Loretz GmbH/Je... | Propylene glycol | 192461006      | 1              |
| Caesar & Loretz GmbH/Kr... | Propylene glycol | 192461006      | 1              |
| Caesar & Loretz GmbH/No... | Propylene glycol | 192461005      | 3              |
| Caesar & Loretz GmbH/No... | Propylene glycol | 18J03B07355043 | 1              |
| Caesar & Loretz GmbH/Ph... | Propylene glycol | 192461006      | 1              |
| Caesar & Loretz GmbH/Ph... | Propylene glycol | 18219106       | 1              |
| Caesar & Loretz GmbH/Ph... | Propylene glycol | 18064917       | 1              |
| Caesar & Loretz GmbH/Px    | Propylene glycol | 18064917       | 1              |
| Caesar & Loretz GmbH/sa... | Propylene glycol | 18219106       | 1              |
| Caesar & Loretz GmbH/sa... | Propylene glycol | 20000779009    | 1              |
| Caesar & Loretz GmbH/Sa... | Propylene glycol | 18064920       | 2              |
| Caesar & Loretz GmbH/Sa... | Propylene glycol | 20003592003    | 1              |
| Caesar & Loretz GmbH/Sp... | Propylene glycol | 18064913       | 1              |
| Caesar & Loretz GmbH/VDL   | Propylene glycol | 19246101       | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz Hilden     | Propylene glycol | 18064912         | 3              |
| Caesar & Loretz Hilden     | Propylene glycol | 19230102         | 2              |
| Caesar & Loretz Hilden     | Propylene glycol | 19243601         | 1              |
| Caesar & Loretz/Noweda     | Propylene glycol | 16105403         | 1              |
| Caesar /phönix             | Propylene glycol | 13167003         | 1              |
| Caesar und Loretz          | Propylene glycol | 18219106         | 1              |
| Caesar und Loretz GmbH     | Propylene glycol | 17053806         | 2              |
| Caesar und Loretz GmbH     | Propylene glycol | 20000779005      | 1              |
| caesar&lorenz              | Propylene glycol | 15262406         | 1              |
| Caesar&Loretz GmbH         | Propylene glycol | 15335405         | 1              |
| caesar&lorenz GmbH,Phön... | Propylene glycol | 16251201         | 1              |
| Caesar&Loretz GmbH/ San... | Propylene glycol | 18064915         | 1              |
| Caesar&Loretz GmbH/Anzag   | Propylene glycol | 15181605         | 2              |
| Caesar&lorenz,Phoenix      | Propylene glycol | 15069202         | 1              |
| Caesar/Ebert               | Propylene glycol | 18064912         | 1              |
| Caesar/Noweda              | Propylene glycol | 13100906         | 1              |
| Caesar/Noweda              | Propylene glycol | 13167006         | 2              |
| Caesar/Noweda              | Propylene glycol | 14051803         | 2              |
| Caleo                      | Propylene glycol | 15430508         | 1              |
| Caleo/ Gehe                | Propylene glycol | 18064915         | 2              |
| Caleo/ Noweda              | Propylene glycol | 17053809         | 1              |
| Calo/Sanacorp              | Propylene glycol | 16105403         | 1              |
| canea, anzag               | Propylene glycol | 13167003         | 3              |
| Carlo/ Gehe                | Propylene glycol | 16105403         | 1              |
| cealo                      | Propylene glycol | 16251201         | 1              |
| Cealo                      | Propylene glycol | 13100907         | 2              |
| Cealo                      | Propylene glycol | 15430504         | 1              |
| Cealo / Noweda             | Propylene glycol | 13256708         | 2              |
| Cealo/ AHD                 | Propylene glycol | 18219102         | 1              |
| Cealo/ Anzag               | Propylene glycol | 17053804         | 1              |
| Cealo/Phönix               | Propylene glycol | 15430502         | 1              |
| Ceasar & Loretz GmbH / ... | Propylene glycol | 18064908         | 1              |
| Celo                       | Propylene glycol | 11607-2          | 1              |
| Celo/Phönix                | Propylene glycol | 17053804         | 3              |
| Delta                      | Propylene glycol | 17A06-B03-332091 | 1              |
| Delta                      | Propylene glycol | 17H03-B04-344395 | 1              |
| Ebert & Jacobi             | Propylene glycol | 1000007047       | 2              |
| Ebert & Jacobi             | Propylene glycol | 6016860001       | 2              |
| Eigenherstellung           | Propylene glycol | 120912PML01      | 1              |
| Eu Rho/Ge-HH               | Propylene glycol | 1912001-01       | 1              |
| EuRho                      | Propylene glycol | 1302002-01       | 1              |
| EuRho                      | Propylene glycol | 1206038-01       | 1              |
| EuRho                      | Propylene glycol | 1509031-01       | 2              |
| EuRho                      | Propylene glycol | 1803023-01       | 1              |
| EuRho                      | Propylene glycol | 1906034-01       | 1              |
| EuRho/ AHD                 | Propylene glycol | 18064904         | 1              |
| EuRho/Noweda               | Propylene glycol | 140020-01        | 1              |
| EuRho/Noweda               | Propylene glycol | 1504031-01       | 1              |
| EuRho/Noweda               | Propylene glycol | 1803023-01       | 5              |
| EuRho/Noweda               | Propylene glycol | 1809007-01       | 5              |
| EuRho/Noweda               | Propylene glycol | 1901018-01       | 5              |
| EuRho/Noweda               | Propylene glycol | Euro0TC          | 1              |
| EuRho/Noweda               | Propylene glycol | 1912001-01       | 1              |
| Euro OTC                   | Propylene glycol | 130200201        | 1              |
| Euro OTC                   | Propylene glycol | 1307021-01       | 7              |
| Euro OTC                   | Propylene glycol | 130702101        | 1              |
| Euro OTC                   | Propylene glycol | 140500301        | 3              |
| Euro OTC                   | Propylene glycol | 140802001        | 1              |
| Euro OTC                   | Propylene glycol | 150101301        | 2              |
| Euro OTC                   | Propylene glycol | 15262403         | 1              |

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| Supplier                   | Substance        | Batch            | Spectra |
|----------------------------|------------------|------------------|---------|
| Euro OTC                   | Propylene glycol | 160303401        | 2       |
| Euro OTC                   | Propylene glycol | 1509031-02       | 1       |
| Euro OTC                   | Propylene glycol | 16C10-B04-321081 | 1       |
| Euro OTC                   | Propylene glycol | 1703024-01       | 19      |
| Euro OTC                   | Propylene glycol | 309031           | 1       |
| Euro OTC                   | Propylene glycol | 17538H61471      | 1       |
| Euro OTC                   | Propylene glycol | 18064901         | 2       |
| Euro OTC                   | Propylene glycol | 1809007-01       | 28      |
| Euro OTC                   | Propylene glycol | 1051821          | 1       |
| Euro OTC                   | Propylene glycol | 96377556P0       | 3       |
| Euro OTC                   | Propylene glycol | 1912001-01       | 9       |
| Euro OTC                   | Propylene glycol | 19G04-B03-363220 | 1       |
| Euro OTC                   | Propylene glycol | 1408020-01       | 11      |
| Euro OTC                   | Propylene glycol | 1996034-01       | 1       |
| Euro OTC                   | Propylene glycol | 16G04-B01-328151 | 2       |
| Euro OTC                   | Propylene glycol | 17008002-01      | 1       |
| Euro OTC                   | Propylene glycol | 1206038-01       | 4       |
| Euro OTC                   | Propylene glycol | 1109015-01       | 1       |
| Euro OTC                   | Propylene glycol | 140101001        | 1       |
| Euro OTC                   | Propylene glycol | 1501013-01       | 17      |
| Euro OTC                   | Propylene glycol | 150403101        | 3       |
| Euro OTC                   | Propylene glycol | 15040301-01      | 1       |
| Euro OTC                   | Propylene glycol | 150903101        | 1       |
| Euro OTC                   | Propylene glycol | 1708002-01       | 29      |
| Euro OTC                   | Propylene glycol | 1809007          | 1       |
| Euro OTC                   | Propylene glycol | 19606034-01      | 1       |
| Euro OTC                   | Propylene glycol | 11C07-N06        | 1       |
| Euro OTC                   | Propylene glycol | 1504031-01       | 21      |
| Euro OTC                   | Propylene glycol | 5315HH9041       | 2       |
| Euro OTC                   | Propylene glycol | 17053809         | 1       |
| Euro OTC                   | Propylene glycol | 1401010-01       | 8       |
| Euro OTC                   | Propylene glycol | 1711023-01       | 35      |
| Euro OTC                   | Propylene glycol | 25697147G0       | 5       |
| Euro OTC                   | Propylene glycol | 1302002-01       | 9       |
| Euro OTC                   | Propylene glycol | 190603401        | 2       |
| Euro OTC                   | Propylene glycol | 1912001-1        | 1       |
| Euro OTC                   | Propylene glycol | 190006034-01     | 1       |
| Euro OTC                   | Propylene glycol | 171102301        | 2       |
| Euro OTC                   | Propylene glycol | 1000007047       | 2       |
| Euro OTC                   | Propylene glycol | 17423HH431       | 3       |
| Euro OTC                   | Propylene glycol | 1906034-01       | 34      |
| Euro OTC                   | Propylene glycol | 289078           | 1       |
| Euro OTC                   | Propylene glycol | 1901018-01       | 36      |
| Euro OTC                   | Propylene glycol | 1509031-031      | 1       |
| Euro OTC                   | Propylene glycol | 13256704         | 1       |
| Euro OTC                   | Propylene glycol | 1509031-01       | 21      |
| Euro OTC                   | Propylene glycol | 15355108         | 1       |
| Euro OTC                   | Propylene glycol | 2003060-02       | 1       |
| Euro OTC                   | Propylene glycol | 1405003-01       | 2       |
| Euro OTC                   | Propylene glycol | 190101801        | 3       |
| Euro OTC                   | Propylene glycol | 1606014-01       | 15      |
| Euro OTC                   | Propylene glycol | 190480705        | 1       |
| Euro OTC                   | Propylene glycol | 2003060-01       | 3       |
| Euro OTC                   | Propylene glycol | 1000002992       | 1       |
| Euro OTC                   | Propylene glycol | 1803023-01       | 7       |
| Euro PTC Pharma GmbH/Sa... | Propylene glycol | 1504031-01       | 1       |
| Euro/ Sanacorp             | Propylene glycol | 14248704         | 1       |
| Euro/ Sanacorp             | Propylene glycol | 1610031-01       | 1       |
| Euro/Noweda                | Propylene glycol | 1703024-01       | 1       |
| Euro OTC                   | Propylene glycol | 2003660-01       | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Euro OTC        | Propylene glycol | q603034-01        | 1              |
| Euro OTC        | Propylene glycol | 200749            | 1              |
| Euro OTC        | Propylene glycol | 1610031-01        | 23             |
| Euro OTC        | Propylene glycol | 125099            | 7              |
| Euro OTC        | Propylene glycol | 18532HH431        | 1              |
| Euro OTC        | Propylene glycol | 1603034-01        | 23             |
| Euro OTC        | Propylene glycol | 6509HH9041        | 4              |
| Euro OTC        | Propylene glycol | 160303401-01      | 1              |
| Euro OTC        | Propylene glycol | 1610031           | 1              |
| Europ. AB       | Propylene glycol | 5671401           | 1              |
| EuroPTC/Phönix  | Propylene glycol | 15901013-01       | 1              |
| Fa. Azelis      | Propylene glycol | 11824a            | 1              |
| Fa. Azelis      | Propylene glycol | 11824b            | 1              |
| Fa. Azelis      | Propylene glycol | 11824c1v2         | 1              |
| Fa. Azelis      | Propylene glycol | 11824c2v2         | 1              |
| Fagro / G       | Propylene glycol | 17H03-B04-344395  | 1              |
| Fagron          | Propylene glycol | 11K28-N01         | 7              |
| Fagron          | Propylene glycol | 12C06-N04         | 6              |
| Fagron          | Propylene glycol | 18081121          | 1              |
| Fagron          | Propylene glycol | 8121120           | 1              |
| Fagron          | Propylene glycol | 12G13-N07         | 30             |
| Fagron          | Propylene glycol | 12G13-N07         | 4              |
| Fagron          | Propylene glycol | 12g13-n07         | 2              |
| Fagron          | Propylene glycol | 2112212110        | 1              |
| Fagron          | Propylene glycol | 12088205          | 1              |
| Fagron          | Propylene glycol | 1301C004          | 5              |
| Fagron          | Propylene glycol | 9051220           | 6              |
| Fagron          | Propylene glycol | 1304C009          | 6              |
| Fagron          | Propylene glycol | 1304C010281099    | 1              |
| Fagron          | Propylene glycol | 181013prop        | 1              |
| Fagron          | Propylene glycol | 1304c009-281100   | 1              |
| Fagron          | Propylene glycol | 20122013B         | 1              |
| Fagron          | Propylene glycol | 13E22-B03-283450  | 22             |
| Fagron          | Propylene glycol | 1304C009-28       | 1              |
| Fagron          | Propylene glycol | 13E22B03          | 2              |
| Fagron          | Propylene glycol | 13040010-281099   | 1              |
| Fagron          | Propylene glycol | 13E22-B03-283451  | 2              |
| Fagron          | Propylene glycol | 14A09-B04-289600  | 1              |
| Fagron          | Propylene glycol | 200749-B04-289597 | 1              |
| Fagron          | Propylene glycol | 14a09-b04         | 1              |
| Fagron          | Propylene glycol | 280714C           | 1              |
| Fagron          | Propylene glycol | 13G09B01          | 2              |
| Fagron          | Propylene glycol | 14A09B04          | 4              |
| Fagron          | Propylene glycol | 1405003-01        | 1              |
| Fagron          | Propylene glycol | 14A09-B04-289598  | 5              |
| Fagron          | Propylene glycol | 14C05-B02-295787  | 10             |
| Fagron          | Propylene glycol | 14C05-B02         | 4              |
| Fagron          | Propylene glycol | 16C10-B04-319299  | 3              |
| Fagron          | Propylene glycol | 17A06-B03-332091  | 20             |
| Fagron          | Propylene glycol | 14C09-B02-289597  | 1              |
| Fagron          | Propylene glycol | 270114A           | 1              |
| Fagron          | Propylene glycol | 14H22-B02         | 2              |
| Fagron          | Propylene glycol | 15A07-B04-302969  | 10             |
| Fagron          | Propylene glycol | 14H22-B02-302506  | 7              |
| Fagron          | Propylene glycol | 15A07B04          | 3              |
| Fagron          | Propylene glycol | 15A07-B04-302970  | 22             |
| Fagron          | Propylene glycol | 14346608          | 1              |
| Fagron          | Propylene glycol | 15A07-B04         | 5              |
| Fagron          | Propylene glycol | 14C05B02295787    | 1              |
| Fagron          | Propylene glycol | 17082015A         | 1              |

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| Supplier | Substance        | Batch             | Spectra |
|----------|------------------|-------------------|---------|
| Fagron   | Propylene glycol | 15B24-B40-307379  | 5       |
| Fagron   | Propylene glycol | 15A07-B04_302970  | 1       |
| Fagron   | Propylene glycol | 15G28-B03-311889  | 8       |
| Fagron   | Propylene glycol | 15A07_B04_302970  | 1       |
| Fagron   | Propylene glycol | 15G28-B03         | 7       |
| Fagron   | Propylene glycol | 15G28-B03-314768  | 25      |
| Fagron   | Propylene glycol | 5021520           | 3       |
| Fagron   | Propylene glycol | 15L26-B01         | 1       |
| Fagron   | Propylene glycol | 15L23-B01-318036  | 17      |
| Fagron   | Propylene glycol | 15G28-803-314758  | 1       |
| Fagron   | Propylene glycol | 18091521          | 1       |
| Fagron   | Propylene glycol | 16C10-Bo4-321081  | 1       |
| Fagron   | Propylene glycol | 16C10-B04-323302  | 4       |
| Fagron   | Propylene glycol | 15430503          | 1       |
| Fagron   | Propylene glycol | 8021621           | 4       |
| Fagron   | Propylene glycol | 15L23-B01         | 1       |
| Fagron   | Propylene glycol | 16E09-B02-324     | 2       |
| Fagron   | Propylene glycol | 16G04-B01-328151  | 18      |
| Fagron   | Propylene glycol | 16E09-B02-3024843 | 1       |
| Fagron   | Propylene glycol | 16E09-B02-325331  | 4       |
| Fagron   | Propylene glycol | 15L23             | 1       |
| Fagron   | Propylene glycol | 16G04-B01-329687  | 4       |
| Fagron   | Propylene glycol | 16G04B01328151    | 3       |
| Fagron   | Propylene glycol | 16C10-B04-321082  | 1       |
| Fagron   | Propylene glycol | 17E22-B10-336830  | 16      |
| Fagron   | Propylene glycol | 15081620          | 7       |
| Fagron   | Propylene glycol | 17E22-B-10-336830 | 1       |
| Fagron   | Propylene glycol | 336830            | 2       |
| Fagron   | Propylene glycol | 17W22-B10         | 1       |
| Fagron   | Propylene glycol | 17E22-B10-338768  | 3       |
| Fagron   | Propylene glycol | 17a06b03332091    | 1       |
| Fagron   | Propylene glycol | 17E22             | 1       |
| Fagron   | Propylene glycol | 17A06-B03-334896  | 6       |
| Fagron   | Propylene glycol | 17E22-B10-3365666 | 1       |
| Fagron   | Propylene glycol | 1708002-01        | 1       |
| Fagron   | Propylene glycol | 17A06B03334896    | 1       |
| Fagron   | Propylene glycol | 17E22-B10336830   | 1       |
| Fagron   | Propylene glycol | 17H03-B04-344395  | 22      |
| Fagron   | Propylene glycol | 17h03b04344395    | 1       |
| Fagron   | Propylene glycol | 18A19-B01-346655  | 5       |
| Fagron   | Propylene glycol | 18A19-B01         | 3       |
| Fagron   | Propylene glycol | 17H03-B04_344395  | 1       |
| Fagron   | Propylene glycol | 18A19-B01-348338  | 12      |
| Fagron   | Propylene glycol | 18a19-b01-348338  | 1       |
| Fagron   | Propylene glycol | 18A19-B01-349128  | 1       |
| Fagron   | Propylene glycol | 18H07B01352662    | 2       |
| Fagron   | Propylene glycol | 18a19-b01-351127  | 1       |
| Fagron   | Propylene glycol | 1811028-05        | 1       |
| Fagron   | Propylene glycol | 18H07-B01-352703  | 31      |
| Fagron   | Propylene glycol | 18H0-B01-352662   | 1       |
| Fagron   | Propylene glycol | 18h07b01352703    | 1       |
| Fagron   | Propylene glycol | 18064902          | 1       |
| Fagron   | Propylene glycol | 1051821           | 2       |
| Fagron   | Propylene glycol | 18J03B07355043    | 1       |
| Fagron   | Propylene glycol | 18j03b07355043    | 2       |
| Fagron   | Propylene glycol | B01-351227        | 1       |
| Fagron   | Propylene glycol | 18J03-B07355043   | 1       |
| Fagron   | Propylene glycol | 18j03-b07-356433  | 1       |
| Fagron   | Propylene glycol | B09-361175        | 1       |
| Fagron   | Propylene glycol | 19A28             | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Fagron          | Propylene glycol | 19A28-B09-361176  | 2              |
| Fagron          | Propylene glycol | 12041920          | 6              |
| Fagron          | Propylene glycol | 18j03-b07-358066  | 1              |
| Fagron          | Propylene glycol | 19E20-B01-362177  | 9              |
| Fagron          | Propylene glycol | 19a8-b09-361175   | 1              |
| Fagron          | Propylene glycol | B01-3621706       | 4              |
| Fagron          | Propylene glycol | 19g04-b03-363220  | 1              |
| Fagron          | Propylene glycol | 19G04             | 1              |
| Fagron          | Propylene glycol | B01-3621707       | 2              |
| Fagron          | Propylene glycol | 19I27-F03         | 3              |
| Fagron          | Propylene glycol | F03-3651306       | 1              |
| Fagron          | Propylene glycol | 19127-F0-365557   | 1              |
| Fagron          | Propylene glycol | 19E20-B01-363217  | 1              |
| Fagron          | Propylene glycol | 20G14-F03-373219  | 2              |
| Fagron          | Propylene glycol | 365557            | 1              |
| Fagron          | Propylene glycol | 19127-f03-365558  | 1              |
| Fagron          | Propylene glycol | 25082020          | 1              |
| Fagron          | Propylene glycol | 20J05-F08-374460  | 1              |
| Fagron          | Propylene glycol | 17E22B10336830    | 3              |
| Fagron          | Propylene glycol | 11L22-N14         | 6              |
| Fagron          | Propylene glycol | 24041221          | 8              |
| Fagron          | Propylene glycol | 19A28-B09-361193  | 2              |
| Fagron          | Propylene glycol | 18J03-B07         | 11             |
| Fagron          | Propylene glycol | 11H04-N01         | 2              |
| Fagron          | Propylene glycol | 1304C010          | 1              |
| Fagron          | Propylene glycol | 3959/V02/15       | 1              |
| Fagron          | Propylene glycol | 1304c010-281099   | 4              |
| Fagron          | Propylene glycol | 1304C-010         | 1              |
| Fagron          | Propylene glycol | 1304C009-281100   | 3              |
| Fagron          | Propylene glycol | 6071520           | 4              |
| Fagron          | Propylene glycol | 19E20-B01         | 3              |
| Fagron          | Propylene glycol | 19127-F03-3651306 | 1              |
| Fagron          | Propylene glycol | TQ191812          | 3              |
| Fagron          | Propylene glycol | 19I27-F03-3651306 | 1              |
| Fagron          | Propylene glycol | 18H07-B01-353899  | 2              |
| Fagron          | Propylene glycol | 19/27-F03-365557  | 1              |
| Fagron          | Propylene glycol | 19I27-F03-365558  | 2              |
| Fagron          | Propylene glycol | B09-3611705       | 2              |
| Fagron          | Propylene glycol | 15262407          | 1              |
| Fagron          | Propylene glycol | 14H03-B04-340573  | 1              |
| Fagron          | Propylene glycol | 20J05-F08-3744654 | 1              |
| Fagron          | Propylene glycol | 1301C004-277798   | 16             |
| Fagron          | Propylene glycol | 15F25-B02-311890  | 6              |
| Fagron          | Propylene glycol | 19A28B09          | 1              |
| Fagron          | Propylene glycol | 19E20-b01-362176  | 1              |
| Fagron          | Propylene glycol | 18H07-B01-352662  | 11             |
| Fagron          | Propylene glycol | 11372007          | 2              |
| Fagron          | Propylene glycol | 13E22-B03         | 11             |
| Fagron          | Propylene glycol | 20G14-F03         | 1              |
| Fagron          | Propylene glycol | 12k13-n05         | 1              |
| Fagron          | Propylene glycol | 18061321          | 1              |
| Fagron          | Propylene glycol | 18061311          | 1              |
| Fagron          | Propylene glycol | TQ131410          | 2              |
| Fagron          | Propylene glycol | 19111421          | 5              |
| Fagron          | Propylene glycol | 15L23-B01-3108036 | 1              |
| Fagron          | Propylene glycol | 200749-0005       | 1              |
| Fagron          | Propylene glycol | F03-3655507       | 2              |
| Fagron          | Propylene glycol | 19A28-B09         | 7              |
| Fagron          | Propylene glycol | 20J05-F08         | 2              |
| Fagron          | Propylene glycol | 17H03-B03-340573  | 1              |

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| Supplier | Substance        | Batch             | Spectra |
|----------|------------------|-------------------|---------|
| Fagron   | Propylene glycol | 19E-B01-362176    | 1       |
| Fagron   | Propylene glycol | 19/27-F03-365136  | 1       |
| Fagron   | Propylene glycol | 19I27-F03-365136  | 7       |
| Fagron   | Propylene glycol | 19I27-F03-365557  | 7       |
| Fagron   | Propylene glycol | 20F04-F05-371328  | 3       |
| Fagron   | Propylene glycol | 20J05-F08-374464  | 1       |
| Fagron   | Propylene glycol | 13G09-B01         | 5       |
| Fagron   | Propylene glycol | 14C05-B02-295788  | 5       |
| Fagron   | Propylene glycol | 2021621           | 2       |
| Fagron   | Propylene glycol | 1301C003-277799   | 1       |
| Fagron   | Propylene glycol | 1314Q2110         | 1       |
| Fagron   | Propylene glycol | 13G09-B01-283456  | 24      |
| Fagron   | Propylene glycol | 14A09-B04         | 16      |
| Fagron   | Propylene glycol | 14A09-B04-289599  | 5       |
| Fagron   | Propylene glycol | 14C05-B02295788   | 1       |
| Fagron   | Propylene glycol | 16C10-B04-321081  | 25      |
| Fagron   | Propylene glycol | 16C10-B04-321659  | 1       |
| Fagron   | Propylene glycol | 200749-0001       | 1       |
| Fagron   | Propylene glycol | 30041621          | 1       |
| Fagron   | Propylene glycol | 1610031-01        | 1       |
| Fagron   | Propylene glycol | 17H03-B04-341721  | 1       |
| Fagron   | Propylene glycol | 10101720          | 3       |
| Fagron   | Propylene glycol | 18A19-B01-351227  | 17      |
| Fagron   | Propylene glycol | 4061821           | 2       |
| Fagron   | Propylene glycol | 18J03-B07-357162  | 1       |
| Fagron   | Propylene glycol | 19A28-B09-261175  | 1       |
| Fagron   | Propylene glycol | 1304C010-281099   | 21      |
| Fagron   | Propylene glycol | 13G09B01283456    | 1       |
| Fagron   | Propylene glycol | 13E22B0328345     | 1       |
| Fagron   | Propylene glycol | 23011420          | 1       |
| Fagron   | Propylene glycol | 50515PJK01        | 1       |
| Fagron   | Propylene glycol | 16E09-B02         | 2       |
| Fagron   | Propylene glycol | 18J03-B07-355043  | 22      |
| Fagron   | Propylene glycol | 19E20-B01-362176  | 29      |
| Fagron   | Propylene glycol | 16c10-b04-321081  | 1       |
| Fagron   | Propylene glycol | 17H03-B04-340573  | 25      |
| Fagron   | Propylene glycol | 17H0304           | 1       |
| Fagron   | Propylene glycol | 18H07-B01         | 5       |
| Fagron   | Propylene glycol | 2101820           | 4       |
| Fagron   | Propylene glycol | 19G04-B03         | 8       |
| Fagron   | Propylene glycol | 20J05-F08-374459  | 5       |
| Fagron   | Propylene glycol | 17A06-B03         | 6       |
| Fagron   | Propylene glycol | 12J04-N06         | 11      |
| Fagron   | Propylene glycol | 9031321           | 1       |
| Fagron   | Propylene glycol | 14A09-B04-289597  | 21      |
| Fagron   | Propylene glycol | 19G04-B03-363220  | 1       |
| Fagron   | Propylene glycol | 1307021-01        | 1       |
| Fagron   | Propylene glycol | 15G-28-B03-311889 | 1       |
| Fagron   | Propylene glycol | 15G28-B03-314769  | 3       |
| Fagron   | Propylene glycol | 15335407          | 1       |
| Fagron   | Propylene glycol | 16C10-B04         | 7       |
| Fagron   | Propylene glycol | 16E09-B02-324843  | 16      |
| Fagron   | Propylene glycol | 16C-10-B04        | 1       |
| Fagron   | Propylene glycol | 17A06-b03-332091  | 1       |
| Fagron   | Propylene glycol | 6031720           | 2       |
| Fagron   | Propylene glycol | 19I27-F03-365558  | 1       |
| Fagron   | Propylene glycol | 12K13-N05         | 13      |
| Fagron   | Propylene glycol | 12372403          | 1       |
| Fagron   | Propylene glycol | 13G09-B01-283452  | 1       |
| Fagron   | Propylene glycol | 14A09-B04-28959   | 1       |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|---------------------------|------------------|------------------|----------------|
| Fagron                    | Propylene glycol | 9031520          | 1              |
| Fagron                    | Propylene glycol | 15L23-B01-31803  | 1              |
| Fagron                    | Propylene glycol | 15B24-B40        | 4              |
| Fagron                    | Propylene glycol | 15051721         | 2              |
| Fagron                    | Propylene glycol | 18J03-B07-358066 | 2              |
| Fagron                    | Propylene glycol | 20f04f05371328   | 1              |
| Fagron                    | Propylene glycol | 13E22Bo3283450   | 1              |
| Fagron                    | Propylene glycol | 17053804         | 1              |
| Fagron                    | Propylene glycol | 1301C003         | 3              |
| Fagron                    | Propylene glycol | 150403101        | 1              |
| Fagron                    | Propylene glycol | 5115Q-02110      | 1              |
| Fagron                    | Propylene glycol | 17E22-B10        | 3              |
| Fagron                    | Propylene glycol | 17H03-B04        | 12             |
| Fagron                    | Propylene glycol | 18064904         | 1              |
| Fagron                    | Propylene glycol | 18J03-B07_356433 | 1              |
| Fagron                    | Propylene glycol | 19I27-F03        | 1              |
| Fagron                    | Propylene glycol | 20F04-F05        | 1              |
| Fagron                    | Propylene glycol | 15052021         | 1              |
| Fagron                    | Propylene glycol | 1304C010         | 10             |
| Fargon                    | Propylene glycol | 12K13-N05        | 2              |
| Fargon                    | Propylene glycol | 16C10-B04-321081 | 1              |
| Fargon                    | Propylene glycol | 17A06-B03-332091 | 1              |
| Fargon                    | Propylene glycol | 17E22-B10-336830 | 1              |
| Fargon                    | Propylene glycol | 17A06-B03-332091 | 1              |
| Fargon                    | Propylene glycol | 17A06-B03-334896 | 1              |
| Fargon/AHD                | Propylene glycol | 18H07-B01        | 1              |
| Fargon/AHD                | Propylene glycol | 18H07-B01-352703 | 1              |
| Fargon/Noweda             | Propylene glycol | 18J03-B07-356433 | 1              |
| Fargon/Noweda             | Propylene glycol | 19A28-B09-361175 | 2              |
| Fargron                   | Propylene glycol | 16G04-B01        | 1              |
| Fgron / Alliance Healthc. | Propylene glycol | 17A06-B03-334896 | 1              |
| Fiebig                    | Propylene glycol | 12099            | 1              |
| Fiebig                    | Propylene glycol | 1000002768       | 1              |
| Fiebig                    | Propylene glycol | 8002520002       | 4              |
| Fiebig                    | Propylene glycol | 8003093001       | 4              |
| Fiebig                    | Propylene glycol | 1000007047       | 6              |
| Fiebig                    | Propylene glycol | 18064908         | 1              |
| Fiebig                    | Propylene glycol | 6012897001       | 7              |
| Fiebig                    | Propylene glycol | 6016860001       | 2              |
| Fiebig/Lamotte            | Propylene glycol | 6016860001       | 3              |
| fischar                   | Propylene glycol | 13G09B01         | 1              |
| Fischbar                  | Propylene glycol | 18091201         | 1              |
| Fragon/Gehe               | Propylene glycol | 19A28-B09-361175 | 1              |
| Fragon/Phoenix            | Propylene glycol | 18A19-B01        | 1              |
| Fragon/Sana               | Propylene glycol | 18H07-B01        | 1              |
| fragron/Gehe              | Propylene glycol | 18H07-B01-352703 | 1              |
| Gatt-Koller               | Propylene glycol | 1801516          | 3              |
| gehe                      | Propylene glycol | 8002520002       | 1              |
| Gehe                      | Propylene glycol | 11300506         | 1              |
| Gehe                      | Propylene glycol | 11372007         | 3              |
| Gehe                      | Propylene glycol | 12088207         | 1              |
| Gehe                      | Propylene glycol | 11372009         | 1              |
| Gehe                      | Propylene glycol | 12169802         | 1              |
| Gehe                      | Propylene glycol | 12372405         | 2              |
| Gehe                      | Propylene glycol | 13100908         | 3              |
| Gehe                      | Propylene glycol | 13167003         | 2              |
| Gehe                      | Propylene glycol | 13256704         | 2              |
| Gehe                      | Propylene glycol | 14051802         | 1              |
| Gehe                      | Propylene glycol | 14C05-B02-295787 | 1              |
| Gehe                      | Propylene glycol | 15A07-B04-302969 | 1              |

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| Supplier               | Substance        | Batch            | Spectra |
|------------------------|------------------|------------------|---------|
| Gehe                   | Propylene glycol | 14346602         | 3       |
| Gehe                   | Propylene glycol | 15069202         | 1       |
| Gehe                   | Propylene glycol | 15181604         | 1       |
| Gehe                   | Propylene glycol | 15181605         | 1       |
| Gehe                   | Propylene glycol | 15262406         | 1       |
| Gehe                   | Propylene glycol | 15335403         | 1       |
| Gehe                   | Propylene glycol | 15335404         | 1       |
| Gehe                   | Propylene glycol | 15355108         | 1       |
| Gehe                   | Propylene glycol | 15430508         | 2       |
| Gehe                   | Propylene glycol | 1000002992       | 2       |
| Gehe                   | Propylene glycol | 1540508          | 1       |
| Gehe                   | Propylene glycol | 15430512         | 1       |
| Gehe                   | Propylene glycol | 16251201         | 4       |
| Gehe                   | Propylene glycol | 16251202         | 2       |
| Gehe                   | Propylene glycol | 8002520002       | 2       |
| Gehe                   | Propylene glycol | 16251207         | 1       |
| Gehe                   | Propylene glycol | 16251205         | 2       |
| Gehe                   | Propylene glycol | 17053804         | 1       |
| Gehe                   | Propylene glycol | 8003093001       | 2       |
| Gehe                   | Propylene glycol | 17053809         | 2       |
| Gehe                   | Propylene glycol | 17053806         | 1       |
| Gehe                   | Propylene glycol | 17321705         | 1       |
| Gehe                   | Propylene glycol | 17321703         | 1       |
| Gehe                   | Propylene glycol | 18065904         | 1       |
| Gehe                   | Propylene glycol | 6012897001       | 3       |
| Gehe                   | Propylene glycol | 18064915         | 4       |
| Gehe                   | Propylene glycol | 18H07-B01-352703 | 2       |
| Gehe                   | Propylene glycol | 18J03-B07-356433 | 1       |
| Gehe                   | Propylene glycol | 18219101         | 1       |
| Gehe                   | Propylene glycol | 19A28-B09-361175 | 1       |
| Gehe                   | Propylene glycol | 19E20-B01        | 1       |
| Gehe                   | Propylene glycol | 6016860001       | 2       |
| Gehe                   | Propylene glycol | 19I27-F03-365557 | 1       |
| Gehe                   | Propylene glycol | 8006970001       | 2       |
| GEHE                   | Propylene glycol | 11372007         | 1       |
| GEHE                   | Propylene glycol | 16G04-B01-328151 | 1       |
| GEHE                   | Propylene glycol | 17A06-B03-332091 | 1       |
| GEHE                   | Propylene glycol | 17053804         | 1       |
| GEHE                   | Propylene glycol | 17053809         | 2       |
| GEHE                   | Propylene glycol | 17321703         | 1       |
| GEHE                   | Propylene glycol | 17H03-B04-340573 | 1       |
| GEHE                   | Propylene glycol | 1000007047       | 2       |
| GEHE                   | Propylene glycol | 6012897001       | 7       |
| GEHE                   | Propylene glycol | 6016860001       | 1       |
| GEHE 06.05.2014        | Propylene glycol | 13256705         | 2       |
| Gehe 3.3.15            | Propylene glycol | 14C05-B02-295787 | 1       |
| Gehe amax              | Propylene glycol | 15262409         | 1       |
| Gehe amax              | Propylene glycol | 16251201         | 1       |
| Gehe amax              | Propylene glycol | 16251205         | 3       |
| Gehe amax              | Propylene glycol | 17053804         | 1       |
| Gehe amax              | Propylene glycol | 17321703         | 2       |
| Gehe amax              | Propylene glycol | 18064904         | 1       |
| Gehe amax              | Propylene glycol | 18064915         | 1       |
| Gehe amax              | Propylene glycol | 19246101         | 3       |
| GEHE Kassel 11.04.2019 | Propylene glycol | 18J03-B07-355043 | 2       |
| Gehe, 01.03.19         | Propylene glycol | 1000007047       | 1       |
| Caelo                  | Propylene glycol | 18j03-B07        | 1       |
| Fagron                 | Propylene glycol | 19G04-B03-363220 | 31      |
| Caelo                  | Propylene glycol | 1428706          | 1       |
| Caelo                  | Propylene glycol | 19111421         | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caelo                      | Propylene glycol | 16251201/1060217 | 1              |
| Caelo                      | Propylene glycol | 1070318/17053809 | 1              |
| Caelo                      | Propylene glycol | 11372007         | 9              |
| GEHE/Caesar & Loretz GmbH  | Propylene glycol | 19230103         | 1              |
| Gehe/EuRho                 | Propylene glycol | 1906034-01       | 1              |
| Euro OTC                   | Propylene glycol | 17538HH431       | 3              |
| Euro OTC                   | Propylene glycol | 14346602         | 2              |
| Euro OTC                   | Propylene glycol | 16060114-01      | 1              |
| Euro OTC                   | Propylene glycol | 16016014-01      | 1              |
| Fagron                     | Propylene glycol | 16G04-B01        | 2              |
| Fagron                     | Propylene glycol | 23021320         | 1              |
| Fagron                     | Propylene glycol | 19e20-b01-362176 | 2              |
| Gehe/Henry Lamotte         | Propylene glycol | 8002520002       | 1              |
| Gehe/Lamotte               | Propylene glycol | 8003093001       | 2              |
| H.Lamotte                  | Propylene glycol | 1000002768       | 2              |
| H.Lamotte                  | Propylene glycol | 8002520002       | 2              |
| H.Lamotte                  | Propylene glycol | 8003093001       | 1              |
| H.Lamotte                  | Propylene glycol | 1000007047       | 2              |
| H.Lamotte 19.03.20         | Propylene glycol | 6016860001       | 1              |
| H.Lamotte/Anzag 10.12.2... | Propylene glycol | 6012897001       | 1              |
| H.Lamotte/Anzag 16.05.17   | Propylene glycol | 8002520002       | 2              |
| H.Lamotte/Anzag 21.11.17   | Propylene glycol | 8003093001       | 1              |
| H.Lamotte/anzag 30.12.16   | Propylene glycol | 1000002992       | 1              |
| H.Lamotte/Jenne            | Propylene glycol | 6016860001       | 2              |
| H.Lamotte/Jenne            | Propylene glycol | 8006970001       | 1              |
| Hedinger                   | Propylene glycol | 29625B           | 1              |
| Hedinger                   | Propylene glycol | 29702B           | 1              |
| Hedinger                   | Propylene glycol | 29775B           | 1              |
| Hedinger                   | Propylene glycol | 29797B           | 2              |
| Hedinger                   | Propylene glycol | 29823B           | 1              |
| Hedinger                   | Propylene glycol | 29837B           | 1              |
| Hedinger                   | Propylene glycol | 29859B           | 1              |
| Hedinger                   | Propylene glycol | 29897B           | 1              |
| Hedinger                   | Propylene glycol | 29859BP          | 1              |
| Hedinger                   | Propylene glycol | 29905B           | 1              |
| Hedinger                   | Propylene glycol | 29930B           | 2              |
| Hedinger                   | Propylene glycol | 29945B           | 1              |
| Hedinger                   | Propylene glycol | 18064915         | 2              |
| Hedinger                   | Propylene glycol | 29975B           | 2              |
| Hedinger                   | Propylene glycol | 2994B            | 1              |
| Hedinger                   | Propylene glycol | 291037B          | 3              |
| Hedinger vdL               | Propylene glycol | 16251202         | 2              |
| Hedinger / Noweda          | Propylene glycol | 291005B          | 1              |
| Hedinger / Phönix          | Propylene glycol | 29934B           | 3              |
| Hedinger / Phönix          | Propylene glycol | 29945B           | 3              |
| Hedinger / Phönix          | Propylene glycol | 29963B           | 3              |
| Hedinger GmbH              | Propylene glycol | 29905b           | 1              |
| Hedinger/ Sanacorp         | Propylene glycol | 29743B           | 1              |
| Hedinger/Alliance          | Propylene glycol | 29897B           | 1              |
| Hedinger/Alliance          | Propylene glycol | 29905B           | 1              |
| Hedinger/Alliance          | Propylene glycol | 29934B           | 1              |
| Hedinger/Alliance Heath... | Propylene glycol | 29775B           | 1              |
| Hedinger/Phoenix           | Propylene glycol | 29762B           | 2              |
| Hedinger/Phoenix           | Propylene glycol | 291020B          | 1              |
| Hedinger/phönix            | Propylene glycol | 29859B           | 1              |
| Hedinger/Phönix            | Propylene glycol | 29775B           | 1              |
| Hedinger/Phönix            | Propylene glycol | 29797B           | 1              |
| Hedinger/Phönix            | Propylene glycol | 29847B           | 1              |
| Hedinger/Phönix            | Propylene glycol | 29934B           | 1              |
| Hedinger/Phönix            | Propylene glycol | 29994B           | 3              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Hedinger/Phönix            | Propylene glycol | 291005B          | 1              |
| Hedinger/Phönix            | Propylene glycol | 192461006        | 1              |
| Hedinger/Phönix            | Propylene glycol | 291020B          | 1              |
| Hedinger/Sanacorp          | Propylene glycol | 1304C010-281099  | 1              |
| Hedinger/Sanacorp          | Propylene glycol | 29823B           | 1              |
| Hedinger/Sanacorp          | Propylene glycol | 15A07-B04-302969 | 1              |
| Hedinger/Sanacorp          | Propylene glycol | 29945B           | 1              |
| Hedinger/VDL               | Propylene glycol | 29847B           | 1              |
| Hedinger/VDL               | Propylene glycol | 29859B           | 1              |
| Henr                       | Propylene glycol | 1000002768       | 1              |
| henry                      | Propylene glycol | 8003093001       | 2              |
| henry                      | Propylene glycol | 1000007047       | 1              |
| Henry Lam./ Phönix         | Propylene glycol | 123095           | 1              |
| Henry Lamortte             | Propylene glycol | 125099           | 1              |
| Henry Lamortte             | Propylene glycol | 1000002992       | 1              |
| Henry Lamortte             | Propylene glycol | 6012897001       | 3              |
| henry lamotte              | Propylene glycol | 125099           | 1              |
| henry lamotte              | Propylene glycol | 1000001132       | 1              |
| henry lamotte              | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte              | Propylene glycol | 123095           | 14             |
| Henry Lamotte              | Propylene glycol | 5671401          | 4              |
| Henry Lamotte              | Propylene glycol | 125099           | 4              |
| Henry Lamotte              | Propylene glycol | 1000001132       | 18             |
| Henry Lamotte              | Propylene glycol | 1000002768       | 6              |
| Henry Lamotte              | Propylene glycol | 2992             | 1              |
| Henry Lamotte              | Propylene glycol | 1000002992       | 6              |
| Henry Lamotte              | Propylene glycol | 8002520002       | 10             |
| Henry Lamotte              | Propylene glycol | 8003093001       | 7              |
| Henry Lamotte              | Propylene glycol | 800252002        | 1              |
| Henry Lamotte              | Propylene glycol | 1000007047       | 3              |
| Henry Lamotte              | Propylene glycol | 60128597001      | 1              |
| Henry Lamotte              | Propylene glycol | 6016860001       | 6              |
| Henry Lamotte              | Propylene glycol | 8006970001       | 1              |
| Henry Lamotte / Allianc... | Propylene glycol | 125099           | 1              |
| Henry Lamotte / Allianc... | Propylene glycol | 1000001132       | 2              |
| Henry Lamotte / Anzag      | Propylene glycol | 120(6012897001)  | 1              |
| henry lamotte / Gehe       | Propylene glycol | 1000007047       | 3              |
| Henry Lamotte / GEHE       | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte / Jenne      | Propylene glycol | 118(1000007047)  | 1              |
| Henry Lamotte / Krieger    | Propylene glycol | 6016860001       | 1              |
| Henry Lamotte / Noweda     | Propylene glycol | 1000002768       | 1              |
| Henry Lamotte / Noweda     | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte / Noweda     | Propylene glycol | 1000007047       | 1              |
| Henry Lamotte / Noweda     | Propylene glycol | 6016860001       | 1              |
| Henry Lamotte / Sanacorp   | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte / Sanacorp   | Propylene glycol | 8003093001       | 1              |
| Henry Lamotte /Gehe        | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte /Jenne       | Propylene glycol | 117(1000007047)  | 1              |
| Henry Lamotte /Jenne       | Propylene glycol | 119(6012897001)  | 1              |
| Henry Lamotte /Jenne       | Propylene glycol | 121(6012897001)  | 1              |
| Henry Lamotte Bremen /A... | Propylene glycol | 8006970001       | 1              |
| Henry Lamotte Bremen/Al... | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte GmbH         | Propylene glycol | 1000002768       | 1              |
| Henry Lamotte GmbH         | Propylene glycol | 1000002992       | 1              |
| Henry Lamotte GmbH         | Propylene glycol | 125099           | 1              |
| Henry Lamotte GmbH/Phönix  | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte Oels GmbH    | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte oils         | Propylene glycol | 6016860001       | 4              |
| Henry Lamotte Oils         | Propylene glycol | 122880           | 1              |
| Henry Lamotte Oils         | Propylene glycol | 123095           | 3              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Henry Lamotte Oils         | Propylene glycol | 7021401      | 1              |
| Henry Lamotte Oils         | Propylene glycol | 125099       | 2              |
| Henry Lamotte Oils         | Propylene glycol | 8002520002   | 6              |
| Henry Lamotte Oils         | Propylene glycol | 1000002992   | 1              |
| Henry Lamotte Oils         | Propylene glycol | 1000007047   | 4              |
| Henry Lamotte Oils         | Propylene glycol | 8003093001   | 2              |
| Henry Lamotte Oils         | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils         | Propylene glycol | 6016860001   | 4              |
| Henry Lamotte Oils / No... | Propylene glycol | 125099       | 2              |
| Henry Lamotte Oils / No... | Propylene glycol | 1000001132   | 1              |
| henry lamotte oils gmbh    | Propylene glycol | 8002520002   | 1              |
| Henry Lamotte oils GmbH    | Propylene glycol | 123095       | 1              |
| Henry Lamotte oils GmbH    | Propylene glycol | 125099       | 1              |
| Henry Lamotte oils GmbH    | Propylene glycol | 8003093001   | 1              |
| Henry Lamotte oils GmbH    | Propylene glycol | 1000007047   | 1              |
| Henry Lamotte oils GmbH    | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 123095       | 2              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 5671401      | 11             |
| Henry Lamotte Oils GmbH    | Propylene glycol | 5471401      | 1              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 125099       | 4              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 1000001132   | 6              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 1000002768   | 4              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 1000002992   | 3              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 8002520002   | 6              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 8003093001   | 5              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 1000007047   | 11             |
| Henry Lamotte Oils GmbH    | Propylene glycol | 6012897001   | 11             |
| Henry Lamotte Oils GmbH    | Propylene glycol | 60129897001  | 1              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 6016860001   | 5              |
| Henry Lamotte Oils GmbH    | Propylene glycol | 8007215001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 125099       | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 123095       | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000002992   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 125099       | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6016860001   | 4              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH/   | Propylene glycol | 8003093001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047   | 3              |
| Henry Lamotte Oils GMBH... | Propylene glycol | 8002520002   | 4              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000001132   | 3              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8003093001   | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 4              |
| Henry Lamotte Oils GMBH... | Propylene glycol | 6016860001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 3              |
| Henry Lamotte Oils GMBH... | Propylene glycol | 1000007047   | 5              |
| Henry Lamotte Oils GMBH... | Propylene glycol | 6012897001   | 4              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001   | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002   | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8003093001   | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047   | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000001132   | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|----------------------------|------------------|----------------------|----------------|
| Henry Lamotte Oils GmbH... | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 5671401              | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 123095               | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047           | 4              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001           | 3              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6012897001           | 1              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 6016860001           | 2              |
| Henry Lamotte Oils GmbH... | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte Oils/ Gehe   | Propylene glycol | 1000002992           | 1              |
| Henry Lamotte Oils/ Gehe   | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte Oils/ Gehe   | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Oils/ Gehe   | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte Oils/ NOW... | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Oils/ San... | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte Oils/Gehe    | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Oils/GEHE    | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte oils/noweda  | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte Oils/Noweda  | Propylene glycol | 6012897001           | 2              |
| Henry Lamotte Oils/Noweda  | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte Oils/Noweda  | Propylene glycol | 8006970001           | 1              |
| Henry Lamotte Oils/Phoe... | Propylene glycol | 6012897001           | 1              |
| Henry Lamotte Oils/Phönix  | Propylene glycol | 1000002768           | 1              |
| Henry Lamotte Oils/Phönix  | Propylene glycol | 8002520002           | 2              |
| Henry Lamotte Oils/Phönix  | Propylene glycol | 1000007047           | 2              |
| Henry Lamotte Oils/Phönix  | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Olis GmbH    | Propylene glycol | 1000001132           | 1              |
| Henry Lamotte Olis GmbH    | Propylene glycol | 1000002768           | 1              |
| Henry Lamotte Olis GmbH    | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte Olis GmbH    | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte Olis GmbH... | Propylene glycol | 1000001132           | 1              |
| Henry Lamotte,Gehe 08.1... | Propylene glycol | 1000007047-P20190115 | 1              |
| Henry Lamotte,Gehe 3.4.18  | Propylene glycol | 8003093001-20180404M | 1              |
| Henry Lamotte,Phönix       | Propylene glycol | 123095               | 2              |
| Henry Lamotte/ AHD         | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte/ AHD         | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte/ Alliance    | Propylene glycol | 1000002768           | 1              |
| Henry Lamotte/ Alliance    | Propylene glycol | 1000002992           | 1              |
| Henry Lamotte/ Alliance    | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte/ Alliance    | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte/ Alliance    | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte/ Alliance... | Propylene glycol | 1000007047           | 1              |
| Henry Lamotte/ Gehe        | Propylene glycol | 6012897001           | 2              |
| Henry Lamotte/ Krieger     | Propylene glycol | 1000002992           | 1              |
| Henry Lamotte/ Noweda      | Propylene glycol | 1000001132           | 2              |
| Henry Lamotte/ Noweda      | Propylene glycol | 6012897001           | 5              |
| Henry Lamotte/ Noweda      | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte/ Sanacorp    | Propylene glycol | 6012897001           | 1              |
| Henry Lamotte/ Sanacorp    | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte/ Spangro     | Propylene glycol | 8003093001           | 1              |
| Henry Lamotte/AHD          | Propylene glycol | 113(8003093001)      | 1              |
| Henry Lamotte/AHD          | Propylene glycol | 448(8003093001)      | 1              |
| Henry Lamotte/AHD          | Propylene glycol | 6016860001           | 1              |
| Henry Lamotte/AHD          | Propylene glycol | 8006970001           | 1              |
| Henry Lamotte/AHD/ 03.0... | Propylene glycol | 8006970001           | 1              |
| Henry Lamotte/Alliance     | Propylene glycol | 8002520002           | 1              |
| Henry Lamotte/Alliance     | Propylene glycol | 6012897001           | 1              |
| Henry Lamotte/Allianz H.   | Propylene glycol | 6016860001           | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Henry Lamotte/Anzag        | Propylene glycol | 5671401          | 1              |
| Henry Lamotte/Anzag        | Propylene glycol | 6016860001       | 1              |
| Henry Lamotte/EJ           | Propylene glycol | 1000007047       | 4              |
| Henry Lamotte/Fiebig       | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte/Fiebig       | Propylene glycol | 6016860001       | 1              |
| henry lamotte/gehe         | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte/Gehe         | Propylene glycol | 1000007047       | 3              |
| Henry Lamotte/Gehe         | Propylene glycol | 6012897001       | 2              |
| Henry Lamotte/Gehe         | Propylene glycol | 6016860001       | 2              |
| Henry Lamotte/Gehe         | Propylene glycol | 8006970001       | 1              |
| Henry Lamotte/Jenne        | Propylene glycol | 111(8003093001)  | 1              |
| Henry Lamotte/Jenne        | Propylene glycol | 112(8003093001)  | 1              |
| Henry Lamotte/Jenne        | Propylene glycol | 115(1000007047)  | 1              |
| Henry Lamotte/Jenne        | Propylene glycol | 8003093001       | 3              |
| Henry Lamotte/Jenne        | Propylene glycol | 6012897001       | 2              |
| Henry Lamotte/Jenne        | Propylene glycol | 6016860001       | 2              |
| Henry Lamotte/Jenne        | Propylene glycol | 8006397001       | 1              |
| Henry Lamotte/Kehr         | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte/Noweda       | Propylene glycol | 125099           | 5              |
| Henry Lamotte/Noweda       | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte/Noweda       | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte/Noweda       | Propylene glycol | 6016860001       | 2              |
| Henry Lamotte/Noweda       | Propylene glycol | 8006970001       | 1              |
| Henry Lamotte/Noweda       | Propylene glycol | 8007215001       | 2              |
| Henry Lamotte/Phoenix      | Propylene glycol | 125099           | 2              |
| Henry Lamotte/Phönix       | Propylene glycol | 8002520002       | 1              |
| Henry Lamotte/Phönix       | Propylene glycol | 8003093001       | 1              |
| Henry Lamotte/Phönix       | Propylene glycol | 1000007047       | 1              |
| Henry Lamotte/Phönix       | Propylene glycol | 6016860001       | 1              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 100001132        | 1              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 1000002992       | 2              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 8002520002       | 2              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 8003093001       | 3              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 6012897001       | 1              |
| Henry Lamotte/Sanacorp     | Propylene glycol | 6016860001       | 5              |
| Henry Lamotte676996        | Propylene glycol | 8003093001       | 2              |
| Henry LamotteAlliance H... | Propylene glycol | 6016960001       | 1              |
| Henry LamotteAlliance H... | Propylene glycol | 6016860001       | 1              |
| Henry/Geibo                | Propylene glycol | 125099           | 1              |
| Henry/Geibo                | Propylene glycol | 8002520002       | 2              |
| Henry/Phoenix              | Propylene glycol | 8002520002       | 1              |
| Henry/Phoenix              | Propylene glycol | 6012897001       | 1              |
| Henry/Sanacorp             | Propylene glycol | 6012897001       | 1              |
| HenryLamotte/Phönix        | Propylene glycol | 6016860001       | 2              |
| HenryLamotte/Sanacorp      | Propylene glycol | 6012897001       | 1              |
| HenryLamotteOilsGmbH       | Propylene glycol | 123095           | 1              |
| HenryNoweda                | Propylene glycol | 1000007047       | 1              |
| Herbasinica                | Propylene glycol | 12088206         | 2              |
| Caelo                      | Propylene glycol | 122882           | 1              |
| Hubertus Apotheke          | Propylene glycol | 16G04-B01-328151 | 1              |
| Ichthyol-Gesellschaft      | Propylene glycol | 18064902         | 1              |
| Jenne                      | Propylene glycol | 1000007047       | 2              |
| Jenne                      | Propylene glycol | 18219102         | 1              |
| Jenne                      | Propylene glycol | 8003093001       | 1              |
| Jenne/Lamotte              | Propylene glycol | 6012897001       | 1              |
| Kehr                       | Propylene glycol | 17053801         | 1              |
| Kehr                       | Propylene glycol | 17275502         | 2              |
| Kehr                       | Propylene glycol | 18264908         | 1              |
| Kehr                       | Propylene glycol | 18064908         | 1              |
| Kehr                       | Propylene glycol | 1906034-01       | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|---------------------------|------------------|---------------|----------------|
| Kehr                      | Propylene glycol | 1912001       | 1              |
| Klosterring               | Propylene glycol | 1625121       | 1              |
| Klosterring               | Propylene glycol | 18064915      | 1              |
| Kögl                      | Propylene glycol | 399511164816  | 1              |
| Kögl                      | Propylene glycol | 4796011170417 | 1              |
| Kögl                      | Propylene glycol | 23302171117   | 1              |
| Kögl                      | Propylene glycol | 1700381       | 3              |
| Kögl                      | Propylene glycol | 1702176       | 1              |
| Kögl                      | Propylene glycol | 1800370       | 1              |
| Krieger                   | Propylene glycol | 18064901      | 1              |
| Krieger                   | Propylene glycol | 18219105      | 1              |
| L10                       | Propylene glycol | 16251206      | 4              |
| L10                       | Propylene glycol | 17053801      | 1              |
| L12                       | Propylene glycol | 17053806      | 2              |
| L12                       | Propylene glycol | 18064901      | 4              |
| L12                       | Propylene glycol | 18064908      | 1              |
| L12                       | Propylene glycol | 18064902      | 1              |
| L12                       | Propylene glycol | 180648913     | 1              |
| L30                       | Propylene glycol | 16251202      | 1              |
| Laborchemie Apolda/Phönix | Propylene glycol | 18064901      | 1              |
| lamotte                   | Propylene glycol | 5671401       | 2              |
| lamotte                   | Propylene glycol | 8002520002    | 5              |
| lamotte                   | Propylene glycol | 8003093001    | 1              |
| Lamotte                   | Propylene glycol | 123095        | 1              |
| Lamotte                   | Propylene glycol | 5671401       | 13             |
| Lamotte                   | Propylene glycol | 125099        | 2              |
| Lamotte                   | Propylene glycol | 1000001132    | 3              |
| Lamotte                   | Propylene glycol | 1000002768    | 2              |
| Lamotte                   | Propylene glycol | 1000002992    | 1              |
| Lamotte                   | Propylene glycol | 8002520002    | 4              |
| Lamotte                   | Propylene glycol | 8003093001    | 3              |
| Lamotte / AHD             | Propylene glycol | 1000001132    | 1              |
| Lamotte / AHD             | Propylene glycol | 6016860001    | 1              |
| Lamotte / Gehe            | Propylene glycol | 1000007047    | 1              |
| Lamotte / Gehe            | Propylene glycol | 6016860001    | 1              |
| Lamotte / GEHE            | Propylene glycol | 6012897001    | 1              |
| Lamotte / GEHE            | Propylene glycol | 6016860001    | 2              |
| Lamotte / Kehr            | Propylene glycol | 6016860001    | 1              |
| Lamotte / Noweda          | Propylene glycol | 1000002768    | 1              |
| Lamotte / Noweda          | Propylene glycol | 6012897001    | 2              |
| Lamotte / Phönix          | Propylene glycol | 8003093001    | 1              |
| Lamotte /Alliance         | Propylene glycol | 6016860001    | 2              |
| Lamotte /Sanacorp         | Propylene glycol | 1000007047    | 1              |
| Lamotte 004               | Propylene glycol | 122882        | 1              |
| Lamotte Ebert             | Propylene glycol | 6012897001    | 2              |
| Lamotte Gmbh              | Propylene glycol | 125099        | 1              |
| Lamotte Gmbh/ Kehr        | Propylene glycol | 8003093001    | 1              |
| Lamotte Noweda            | Propylene glycol | 6012897001    | 1              |
| Lamotte Oils GmbH         | Propylene glycol | 123095        | 1              |
| Lamotte Sanacorp          | Propylene glycol | 1000001132    | 1              |
| Lamotte/ AHD              | Propylene glycol | 6012897001    | 1              |
| lamotte/ Phoenix          | Propylene glycol | 15335405      | 2              |
| Lamotte/ Phönix           | Propylene glycol | 15430503      | 1              |
| Lamotte/ Sanacorp         | Propylene glycol | 1000002992    | 1              |
| Lamotte/ Sanacorp         | Propylene glycol | 8002520002    | 3              |
| Lamotte/ Sanacorp         | Propylene glycol | 6016860001    | 4              |
| Lamotte/ Vedono           | Propylene glycol | 8003093001    | 2              |
| Lamotte/3                 | Propylene glycol | 14346607      | 1              |
| Lamotte/AHCA              | Propylene glycol | 8003093001    | 3              |
| Lamotte/AHCA              | Propylene glycol | 1000007047    | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Lamotte/AHCA               | Propylene glycol | 6012897001   | 2              |
| Lamotte/AHD                | Propylene glycol | 8002520002   | 2              |
| Lamotte/AHD                | Propylene glycol | 8003093001   | 3              |
| Lamotte/AHD                | Propylene glycol | 1000007047   | 1              |
| Lamotte/Alliance Health... | Propylene glycol | 8003093001   | 1              |
| Lamotte/Alliance Health... | Propylene glycol | 10000007047  | 1              |
| Lamotte/Alliance Health... | Propylene glycol | 1000007047   | 1              |
| Lamotte/Anzag              | Propylene glycol | 5671401      | 1              |
| Lamotte/Anzag              | Propylene glycol | 8002520002   | 1              |
| Lamotte/Anzag              | Propylene glycol | 8003093001   | 5              |
| Lamotte/Anzag              | Propylene glycol | 1000007047   | 4              |
| Lamotte/Anzag              | Propylene glycol | 6012897001   | 2              |
| Lamotte/Anzag              | Propylene glycol | 800309001    | 1              |
| Lamotte/ANZAG              | Propylene glycol | 1000007047   | 1              |
| Lamotte/Anzag11            | Propylene glycol | 1000001132   | 3              |
| Lamotte/Ebert              | Propylene glycol | 1000002992   | 1              |
| Lamotte/Ebert              | Propylene glycol | 8002520002   | 3              |
| Lamotte/Ebert              | Propylene glycol | 80002520002  | 1              |
| Lamotte/Ebert              | Propylene glycol | 8003093001   | 5              |
| Lamotte/Ebert+Jacobi       | Propylene glycol | 1000007047   | 1              |
| Lamotte/Fiebig             | Propylene glycol | 1000002768   | 1              |
| Lamotte/Fiebig             | Propylene glycol | 8002520002   | 3              |
| Lamotte/Fiebig             | Propylene glycol | 8003093001   | 1              |
| Lamotte/Fiebig             | Propylene glycol | 6012897001   | 3              |
| Lamotte/Gehe 20.07.2020    | Propylene glycol | 6016860001   | 2              |
| Lamotte/Ge-HH              | Propylene glycol | 8006970001   | 4              |
| Lamotte/GE-HH              | Propylene glycol | 6012897001   | 1              |
| Lamotte/Jenne              | Propylene glycol | 6012897001   | 1              |
| Lamotte/Kehr               | Propylene glycol | 8002520002   | 1              |
| Lamotte/Kehr               | Propylene glycol | 8003093001   | 1              |
| Lamotte/Noweda             | Propylene glycol | 5671401      | 1              |
| Lamotte/Noweda             | Propylene glycol | 100007047    | 1              |
| Lamotte/Noweda             | Propylene glycol | 6012897001   | 7              |
| Lamotte/Noweda             | Propylene glycol | 6016860001   | 2              |
| Lamotte/NOWEDA             | Propylene glycol | 8003093001   | 1              |
| Lamotte/Ph-GH              | Propylene glycol | 6016860001   | 23             |
| Lamotte/Phoenix            | Propylene glycol | 1000002768   | 1              |
| Lamotte/Phoenix            | Propylene glycol | 8003093001   | 2              |
| Lamotte/Phoenix            | Propylene glycol | 1000007047   | 2              |
| Lamotte/Phoenix            | Propylene glycol | 10000007047  | 1              |
| Lamotte/Phoenix            | Propylene glycol | 6012897001   | 1              |
| Lamotte/Phoenix            | Propylene glycol | 6016860001   | 1              |
| Lamotte/Phönix             | Propylene glycol | 2768         | 2              |
| Lamotte/Phönix             | Propylene glycol | 1000002768   | 2              |
| Lamotte/Phönix             | Propylene glycol | 1000007047   | 2              |
| Lamotte/Phönix             | Propylene glycol | 6012897001   | 1              |
| Lamotte/Phönix             | Propylene glycol | 6016860001   | 5              |
| Lamotte/Sana               | Propylene glycol | 8003093001   | 1              |
| Lamotte/Sanacorp           | Propylene glycol | 1000002768   | 1              |
| Lamotte/Sanacorp           | Propylene glycol | 8002520002   | 2              |
| Lamotte/Sanacorp           | Propylene glycol | 800250002    | 1              |
| Lamotte/Sanacorp           | Propylene glycol | 8003093001   | 4              |
| Lamotte/Sanacorp           | Propylene glycol | 1000007047   | 4              |
| Lamotte/Sanacorp           | Propylene glycol | 6012897001   | 5              |
| Lamotte/Sanacorp           | Propylene glycol | 601680001    | 1              |
| lamotte-phönix             | Propylene glycol | 601686001    | 1              |
| Lamtte/Sanacorp            | Propylene glycol | 1000007047   | 4              |
| Linden-Apo                 | Propylene glycol | 1501013-01   | 1              |
| Merck                      | Propylene glycol | K51362178920 | 1              |
| Midas                      | Propylene glycol | 17053809     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Midas                      | Propylene glycol | 17321703         | 2              |
| Midas                      | Propylene glycol | 18064904         | 1              |
| nachprüfung C 1301         | Propylene glycol | 122882           | 1              |
| Nachprüfung 12.02.2019     | Propylene glycol | 18064908         | 1              |
| Fagron                     | Propylene glycol | 18005448         | 1              |
| noweda                     | Propylene glycol | 14051802         | 1              |
| Noweda                     | Propylene glycol | 1313HH9041       | 1              |
| Noweda                     | Propylene glycol | 1112004-01       | 2              |
| Noweda                     | Propylene glycol | 11372005         | 2              |
| Noweda                     | Propylene glycol | 12088205         | 3              |
| Noweda                     | Propylene glycol | 1302002-01       | 1              |
| Noweda                     | Propylene glycol | 13167003         | 1              |
| Noweda                     | Propylene glycol | 13256704         | 1              |
| Noweda                     | Propylene glycol | 13256705         | 3              |
| Noweda                     | Propylene glycol | 15069202         | 1              |
| Noweda                     | Propylene glycol | 15262402         | 1              |
| Noweda                     | Propylene glycol | 15262409         | 1              |
| Noweda                     | Propylene glycol | 15335405         | 1              |
| Noweda                     | Propylene glycol | 17053804         | 1              |
| Noweda                     | Propylene glycol | 15430508         | 1              |
| Noweda                     | Propylene glycol | 16251202         | 1              |
| Noweda                     | Propylene glycol | 17321704         | 1              |
| Noweda                     | Propylene glycol | 17275502         | 1              |
| Noweda                     | Propylene glycol | 8003093001       | 1              |
| Noweda                     | Propylene glycol | 17E22-B10        | 1              |
| Noweda                     | Propylene glycol | 17053890         | 1              |
| Noweda                     | Propylene glycol | 18003479         | 2              |
| Noweda                     | Propylene glycol | 18064901         | 1              |
| Noweda                     | Propylene glycol | 1000007047       | 1              |
| Noweda                     | Propylene glycol | 1809007-01       | 1              |
| Noweda                     | Propylene glycol | 18064904         | 1              |
| Noweda                     | Propylene glycol | 18064908         | 1              |
| Noweda                     | Propylene glycol | 18064907         | 1              |
| Noweda                     | Propylene glycol | 18064909         | 1              |
| Noweda                     | Propylene glycol | 6012897001       | 5              |
| Noweda                     | Propylene glycol | 15J03-B07-356433 | 1              |
| Noweda                     | Propylene glycol | 18064912         | 1              |
| Noweda                     | Propylene glycol | 18219102         | 1              |
| Noweda                     | Propylene glycol | 19A28-B09-361175 | 1              |
| Noweda                     | Propylene glycol | 18H07-B01        | 1              |
| Noweda                     | Propylene glycol | 18219106         | 1              |
| Noweda                     | Propylene glycol | 19G04-B03-363220 | 1              |
| Noweda                     | Propylene glycol | 19230103         | 1              |
| Noweda                     | Propylene glycol | 19G04-B03-363220 | 1              |
| Noweda                     | Propylene glycol | 19243601         | 1              |
| Noweda                     | Propylene glycol | 19243602         | 2              |
| Noweda                     | Propylene glycol | 19E20-B01        | 2              |
| Noweda                     | Propylene glycol | 6016860001       | 1              |
| Noweda                     | Propylene glycol | 19E20-B01        | 1              |
| Noweda                     | Propylene glycol | 192461006        | 2              |
| Noweda                     | Propylene glycol | 20J05-F08        | 1              |
| Noweda                     | Propylene glycol | 20G14-F03        | 1              |
| Noweda / Henry Lamotte     | Propylene glycol | 122882           | 1              |
| Noweda / Henry Lamotte     | Propylene glycol | 6012897001       | 1              |
| Noweda 29.09.2014          | Propylene glycol | 1304C010-281099  | 1              |
| Noweda/ Henry Lamotte O... | Propylene glycol | 8003093001       | 1              |
| Bombastus                  | Propylene glycol | 19001345         | 2              |
| Bombastus                  | Propylene glycol | 19003047         | 2              |
| Bombastus                  | Propylene glycol | 20000737         | 1              |
| Caelo                      | Propylene glycol | 20000779006      | 3              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Noweda/Euro                | Propylene glycol | 1610031-01       | 1              |
| Noweda/Euro                | Propylene glycol | 1603034-01       | 1              |
| Fagron                     | Propylene glycol | 19E20-B01-362176 | 1              |
| Fagron                     | Propylene glycol | 18H07-B01_352703 | 1              |
| Noweda/Henry Lamotte Oi... | Propylene glycol | 1000007047       | 1              |
| Euro OTC                   | Propylene glycol | 15430508         | 2              |
| Otto FischerGmbH / Alli... | Propylene glycol | 5671401          | 1              |
| Pala                       | Propylene glycol | 18064913         | 1              |
| Pala                       | Propylene glycol | 18064916         | 1              |
| Ph/Henry Lamotte           | Propylene glycol | 601686000        | 1              |
| Pharmachem GmbH / Phönix   | Propylene glycol | 18J03-B07-355043 | 1              |
| phoenix                    | Propylene glycol | 16251201         | 1              |
| Phoenix                    | Propylene glycol | 13100907         | 1              |
| Phoenix                    | Propylene glycol | 1301C004-277798  | 1              |
| Phoenix                    | Propylene glycol | 1304C010-281099  | 1              |
| Phoenix                    | Propylene glycol | 13256705         | 1              |
| Phoenix                    | Propylene glycol | 13E22B03283450   | 1              |
| Phoenix                    | Propylene glycol | 18061321         | 1              |
| Phoenix                    | Propylene glycol | 14a09-b04-289597 | 1              |
| Phoenix                    | Propylene glycol | 29722B           | 1              |
| Phoenix                    | Propylene glycol | 14051805         | 1              |
| Phoenix                    | Propylene glycol | 14A09-B04-289597 | 1              |
| Phoenix                    | Propylene glycol | 15181602         | 1              |
| Phoenix                    | Propylene glycol | 125099           | 1              |
| Phoenix                    | Propylene glycol | 1000001132       | 1              |
| Phoenix                    | Propylene glycol | 16251205         | 1              |
| Phoenix                    | Propylene glycol | 17053801         | 1              |
| Phoenix                    | Propylene glycol | 307185           | 2              |
| Phoenix                    | Propylene glycol | 3046             | 1              |
| Phoenix                    | Propylene glycol | 3051             | 1              |
| Phoenix                    | Propylene glycol | 1708002-01       | 1              |
| Phoenix                    | Propylene glycol | 3099             | 1              |
| Phoenix                    | Propylene glycol | 3112             | 1              |
| Phoenix                    | Propylene glycol | 3121             | 1              |
| Phoenix                    | Propylene glycol | 1711023-01       | 3              |
| Phoenix                    | Propylene glycol | 3195             | 1              |
| Phoenix                    | Propylene glycol | 18064906         | 1              |
| Phoenix                    | Propylene glycol | 1809007-01       | 2              |
| Phoenix                    | Propylene glycol | 1901018-01       | 3              |
| Phoenix                    | Propylene glycol | 18005449         | 1              |
| Phoenix                    | Propylene glycol | 19003049         | 1              |
| Phoenix                    | Propylene glycol | 19230101         | 2              |
| Phoenix                    | Propylene glycol | 1906034-01       | 1              |
| Phoenix                    | Propylene glycol | 19A28-B09        | 1              |
| Phoenix                    | Propylene glycol | 200313103        | 1              |
| Phoenix                    | Propylene glycol | 200552306        | 1              |
| Phoenix 22.02.2017 2,84EUR | Propylene glycol | 16251201         | 1              |
| Phoenix am 10.03.2014      | Propylene glycol | 13256709         | 1              |
| Caelo                      | Propylene glycol | 18H07-352662     | 1              |
| Phoenix/Cealo              | Propylene glycol | 16C10-B04-319299 | 1              |
| Fagron                     | Propylene glycol | 120C004-277798   | 1              |
| Fagron                     | Propylene glycol | 18J03-b07-356433 | 1              |
| phönix                     | Propylene glycol | AKD30            | 1              |
| phönix                     | Propylene glycol | 15335405         | 1              |
| phönix                     | Propylene glycol | 15430502         | 1              |
| phönix                     | Propylene glycol | 15430504         | 2              |
| phönix                     | Propylene glycol | 16251202         | 4              |
| phönix                     | Propylene glycol | 17053801         | 1              |
| phönix                     | Propylene glycol | 17053806         | 2              |
| Phönix                     | Propylene glycol | 29595B           | 1              |

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| Supplier           | Substance        | Batch            | Spectra |
|--------------------|------------------|------------------|---------|
| Phönix             | Propylene glycol | 12372405         | 1       |
| Phönix             | Propylene glycol | Retest03083      | 1       |
| Phönix             | Propylene glycol | 13167004         | 1       |
| Phönix             | Propylene glycol | 13167006         | 1       |
| Phönix             | Propylene glycol | 13167003         | 2       |
| Phönix             | Propylene glycol | 114113102        | 1       |
| Phönix             | Propylene glycol | 141113102        | 1       |
| Phönix             | Propylene glycol | 14113102         | 1       |
| Phönix             | Propylene glycol | 16E09-B02-324843 | 1       |
| Phönix             | Propylene glycol | 17053804         | 1       |
| Phönix             | Propylene glycol | 1708002-01       | 1       |
| Phönix             | Propylene glycol | 8002520002       | 1       |
| Phönix             | Propylene glycol | 3153             | 1       |
| Phönix             | Propylene glycol | 3162             | 1       |
| Phönix             | Propylene glycol | 18064904         | 2       |
| Phönix             | Propylene glycol | 18A19-B01-348338 | 1       |
| Phönix             | Propylene glycol | 1809007          | 1       |
| Phönix             | Propylene glycol | 1809007-01       | 1       |
| Phönix             | Propylene glycol | 19230103         | 1       |
| Phönix             | Propylene glycol | 1906034-01       | 2       |
| Phönix             | Propylene glycol | 19230101         | 1       |
| Phönix             | Propylene glycol | 19A28-B09-361175 | 1       |
| Phönix             | Propylene glycol | 192461006        | 2       |
| Phönix             | Propylene glycol | 200712007        | 1       |
| PHÖNIX             | Propylene glycol | 8003093001       | 2       |
| Phönix / 2         | Propylene glycol | 19E20-B01-362176 | 1       |
| Caelo              | Propylene glycol | 17053801         | 59      |
| Phönix 4.3.15      | Propylene glycol | 1405003-01       | 1       |
| Phönix Gotha       | Propylene glycol | 11372011         | 1       |
| Phönix Gotha       | Propylene glycol | 1301C004-277798  | 1       |
| Phönix Gotha       | Propylene glycol | 14C05-B02-295787 | 1       |
| Phönix Gotha       | Propylene glycol | 15A07-B04-302970 | 2       |
| Phönix Gotha       | Propylene glycol | 1809007-01       | 1       |
| Phönix Gotha       | Propylene glycol | 18J03-B07-355043 | 1       |
| Phönix Gotha       | Propylene glycol | 19A28-B09-361175 | 1       |
| Fagron             | Propylene glycol | 19G04-803-363220 | 1       |
| Caelo              | Propylene glycol | 1533405          | 2       |
| Phytocomm          | Propylene glycol | 12088207         | 1       |
| Repsol Quimica     | Propylene glycol | 15G28-B03-311889 | 1       |
| Rondell Apotheke   | Propylene glycol | 29797B           | 2       |
| Sana 21.12.17 5.75 | Propylene glycol | 17423HH431       | 1       |
| sanacorb           | Propylene glycol | 17053809         | 1       |
| Sanacorp           | Propylene glycol | 1206038-01       | 1       |
| Sanacorp           | Propylene glycol | 1302002-01       | 1       |
| Sanacorp           | Propylene glycol | 123095           | 3       |
| Sanacorp           | Propylene glycol | 1307021-01       | 3       |
| Sanacorp           | Propylene glycol | 13167006         | 1       |
| Sanacorp           | Propylene glycol | 13256706         | 1       |
| Sanacorp           | Propylene glycol | AKD70            | 1       |
| Sanacorp           | Propylene glycol | 49/AKD1          | 1       |
| Sanacorp           | Propylene glycol | 14113103         | 1       |
| Sanacorp           | Propylene glycol | 14346607         | 1       |
| Sanacorp           | Propylene glycol | 14248706         | 1       |
| Sanacorp           | Propylene glycol | 50/AKD3          | 1       |
| Sanacorp           | Propylene glycol | 14248703         | 1       |
| Sanacorp           | Propylene glycol | 125099           | 5       |
| Sanacorp           | Propylene glycol | 5671401          | 1       |
| Sanacorp           | Propylene glycol | 15069201         | 1       |
| Sanacorp           | Propylene glycol | 1000001132       | 2       |
| Sanacorp           | Propylene glycol | 15335405         | 1       |

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| Supplier                      | Substance        | Batch            | Spectra |
|-------------------------------|------------------|------------------|---------|
| Sanacorp                      | Propylene glycol | 15335404         | 1       |
| Sanacorp                      | Propylene glycol | 8002520002       | 3       |
| Sanacorp                      | Propylene glycol | 17053804         | 1       |
| Sanacorp                      | Propylene glycol | 17053802         | 1       |
| Sanacorp                      | Propylene glycol | 8003093001       | 3       |
| Sanacorp                      | Propylene glycol | 17053814         | 1       |
| Sanacorp                      | Propylene glycol | 1000007047       | 5       |
| Sanacorp                      | Propylene glycol | 17053809x2       | 1       |
| Sanacorp                      | Propylene glycol | 18064902         | 1       |
| Sanacorp                      | Propylene glycol | 10000007047      | 1       |
| Sanacorp                      | Propylene glycol | 18064906         | 2       |
| Sanacorp                      | Propylene glycol | 6012897001       | 3       |
| Sanacorp                      | Propylene glycol | 18064913         | 1       |
| Sanacorp                      | Propylene glycol | 18064920         | 2       |
| Sanacorp                      | Propylene glycol | 19230103         | 1       |
| Sanacorp                      | Propylene glycol | 1906034-01       | 1       |
| Sanacorp                      | Propylene glycol | 19246101         | 1       |
| Caelo                         | Propylene glycol | 15430508         | 31      |
| sanacorp, 3,87EUR , 12.09...  | Propylene glycol | 154305025        | 1       |
| Bombastus                     | Propylene glycol | 19004748         | 6       |
| Caelo                         | Propylene glycol | 12C06-N04        | 1       |
| Caelo                         | Propylene glycol | 1206038-01       | 1       |
| Caelo                         | Propylene glycol | 1821910501       | 1       |
| Sanacorp/Caesar & Loret...    | Propylene glycol | 18064912         | 1       |
| siehe Protokoll               | Propylene glycol | 303788           | 1       |
| Sonnen-Apotheke Wefensl...    | Propylene glycol | 20/16            | 1       |
| Sonnen-Apotheke Wefensl...    | Propylene glycol | Defektur03/18    | 1       |
| Sonnen-Apotheke Wefensl...    | Propylene glycol | 11/18            | 1       |
| Sonnen-Apotheke Wefensl...    | Propylene glycol | 7/19             | 1       |
| Fagron                        | Propylene glycol | 12G13-No7        | 1       |
| Fagron                        | Propylene glycol | 13E22-B03-28350  | 1       |
| Taoasis                       | Propylene glycol | 18064916         | 1       |
| VDL                           | Propylene glycol | 13256709         | 1       |
| VDL                           | Propylene glycol | 14113103         | 1       |
| VDL 14.05.14; Preis 3.07      | Propylene glycol | 14051804         | 2       |
| VDL Nachlieferung; 11.7.15... | Propylene glycol | 15181602         | 1       |
| Wepa/Jenne                    | Propylene glycol | 18064908         | 1       |
| Wolf-Apotheke                 | Propylene glycol | 15430506         | 1       |
| Fagron                        | Propylene glycol | 18J03-B07-356433 | 22      |
| Bombastus                     | Propylene glycol | 301162           | 19      |
| Bombastus                     | Propylene glycol | 18003480         | 11      |
| Caelo                         | Propylene glycol | 12372405         | 15      |
| Caelo                         | Propylene glycol | 14346604         | 16      |
| Caelo                         | Propylene glycol | 15335403         | 38      |
| Caelo                         | Propylene glycol |                  | 4       |
| Caelo                         | Propylene glycol | 15355108         | 19      |
| Euro OTC                      | Propylene glycol | 1603034          | 1       |
| Euro OTC                      | Propylene glycol |                  | 1       |
| Fagron                        | Propylene glycol | 19A28-B09-361175 | 26      |
| Henry Lamotte                 | Propylene glycol | 6012897001       | 12      |
| Henry Lamotte /Jenne          | Propylene glycol |                  | 1       |
| Henry Lamotte,Gehe 4.4.17     | Propylene glycol |                  | 1       |
| Phagron                       | Propylene glycol |                  | 1       |
| Sanacorp                      | Propylene glycol |                  | 1       |
| Fagron                        | Propylene glycol |                  | 2       |
| Sonnen-Apotheke Wefensl...    | Propylene glycol |                  | 1       |
| VDL 14.05.14; Preis 3.07      | Propylene glycol |                  | 1       |

- 233 970 spectra from 1121 *Apo-Ident* customers from a total of 46 175 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Propylene glycol* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Propylene glycol* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 560           | 0              | 63 379        |
| <b>Type B</b> | 0              | 450           | 0              | 91 041        |
| <b>Type C</b> | 0              | 7167          | 226            | 233 970       |

The substance/substance group *Propylene glycol* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.9286 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.6667 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 96.9431 % (> 96.9025 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Propylene glycol* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                    | Distance in main model | Distance in second-stage model |
|------------------------------|------------------------|--------------------------------|
| Dexpanthenol concentrate 50% | 16.55                  | —                              |
| Dexpanthenol                 | 36.93                  | —                              |
| Ethanol 90%                  | 128.06                 | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Propylene glycol* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30872     | 31738               | 3.44                         | 50.85                           |
| 30920     | 30920               | 0.00                         | 51.10                           |
| 31663     | 31663               | 0.00                         | 52.93                           |
| 31738     | 31738               | 0.00                         | 48.73                           |
| 32074     | 31663               | 3.80                         | 56.11                           |
| 32190     | 32190               | 0.00                         | 49.61                           |
| 32466     | 32466               | 0.00                         | 52.52                           |
| 32486     | 31663               | 5.18                         | 59.25                           |
| 32728     | 31663               | 5.08                         | 48.75                           |
| 34513     | 31738               | 4.54                         | 49.81                           |
| 34514     | 32466               | 4.21                         | 50.28                           |
| 34515     | 31738               | 4.88                         | 49.22                           |
| 34516     | 31663               | 4.83                         | 49.75                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Psorisol base cream Audor<sup>®</sup>**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31109-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Psorisol base cream Audor<sup>®</sup>

### Special notes

When selecting the *Psorisol base cream Audor<sup>®</sup>* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group              | Type A | Type B | Type C |
|----------------------------------------|--------|--------|--------|
| Psorisol base cream Audor <sup>®</sup> | 3      | 3      | 16     |

## Second-stage model

For differentiation of the substance/substance group *Psorisol base cream Audor®* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Psorisol base cream Audor®*:

| Supplier     | Substance           | Batch       | Sample ID | Spectra | Certificate |
|--------------|---------------------|-------------|-----------|---------|-------------|
| Audor Pharma | Psorisol base cr... | AP101943PB  | 31109     | 40      | 1404015     |
| Audor Pharma | Psorisol base cr... | AP101943PB  | 31233     | 40      | 20130522    |
| Audor Pharma | Psorisol base cr... | AP45001.2PB | 31674     | 60      | 20141230    |
| Audor Pharma | Psorisol base cr... | AP45001.2PB | 32274     | 40      | 20141230    |
| Euro OTC     | Psorisol base cr... | 2104015     | 35495     | 40      | 20210518*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Psorisol base cream Audor®*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 719 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Psorisol base cream Audor®*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier     | Substance                              | Batch     | Sample ID | Spectra |
|--------------|----------------------------------------|-----------|-----------|---------|
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP55201PB | 32275     | 40      |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP70601PB | 34037     | 40      |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP81601PB | 34662     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 37 spectra from 15 *Apo-Ident* customers from 20 batches from the substance/substance group *Psorisol base cream Audor<sup>®</sup>*.
- Among them are spectra of independent samples from 17 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier     | Substance                              | Batch         | Spectra |
|--------------|----------------------------------------|---------------|---------|
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP70601PB5451 | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP70601PB5516 | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP100472PB    | 2       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP11943PB     | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP70601PB     | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP102844PB    | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 101943        | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 102844        | 2       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 102891        | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 102891PB      | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | Ap102891PB    | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 1417E-07016   | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP55201PB     | 6       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP102891PB    | 2       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP81601PB     | 5       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | 91201         | 1       |
| Caelo        | Psorisol base cream Audor <sup>®</sup> | AP102844PB    | 2       |
| Caelo        | Psorisol base cream Audor <sup>®</sup> | AP81601PB     | 1       |
| Caelo        | Psorisol base cream Audor <sup>®</sup> | AP70601       | 1       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> | AP101943PB    | 3       |
| Audor Pharma | Psorisol base cream Audor <sup>®</sup> |               | 2       |

- 241 326 spectra from 1121 *Apo-Ident* customers from a total of 46 986 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Psorisol base cream Audor<sup>®</sup>* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Psorisol base cream*

*Audor*<sup>®</sup> and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 25            | 12             | 241 326       |

The substance/substance group *Psorisol base cream Audor*<sup>®</sup> can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6851 %) | 67.5676 % (> 59.4595 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Psorisol base cream Audor*<sup>®</sup> in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Base cream DAC                            | 11.77                  | —                              |
| Non-ionic hydrophil ointment              | 14.34                  | —                              |
| Eucerin <sup>®</sup> cum Aqua             | 25.52                  | —                              |
| Lanette <sup>®</sup> ointment (conserved) | 30.33                  | —                              |
| Anionic hydrophilic cream with propyle... | 34.10                  | —                              |
| Wool alcohol cream SR                     | 34.28                  | —                              |
| Anionic hydrophilic cream DAB             | 37.43                  | —                              |
| Base cream, hydrophobic DAC               | 38.93                  | —                              |
| Anionic hydrophilic cream SR (NRF p.27)   | 44.06                  | —                              |
| Potash soap DAC                           | 44.69                  | —                              |
| Glycolic acid 70%                         | 50.49                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Psorisol base cream Audor*<sup>®</sup> is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested

reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31109     | 31109               | 0.00                         | 24.57                           |
| 31233     | 31109               | 4.24                         | 24.91                           |
| 31674     | 31109               | 4.51                         | 25.67                           |
| 32274     | 31109               | 7.10                         | 21.59                           |
| 35495     | 35495               | 0.00                         | 25.47                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Rose oil (genuine / artificial)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30111-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Rose oil (genuine / artificial); Oleum rosae (verum / artificiale)

### Special notes

When selecting the *Rose oil (genuine / artificial)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group       | Type A | Type B | Type C |
|---------------------------------|--------|--------|--------|
| Rose oil (genuine / artificial) | 6      | 2      | 98     |

## Second-stage model

For differentiation of the substance/substance group *Rose oil (genuine / artificial)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Rose oil (genuine / artificial)*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate |
|----------|---------------------|------------------|-----------|---------|-------------|
| Caelo    | Rose oil (genuin... | 12164308         | 31021     | 40      | 1502254     |
| Caelo    | Rose oil (genuin... | 11287117         | 31022     | 40      | 20111011    |
| Caelo    | Rose oil (genuin... | 13335012         | 31301     | 20      | 20131009    |
| Caelo    | Rose oil (genuin... | 13252710         | 31412     | 40      | 1502252     |
| Caelo    | Rose oil (genuin... | 13335012         | 31425     | 60      | 20131009    |
| Caelo    | Rose oil (genuin... | 13335012         | 31426     | 60      | 20131009    |
| Fagron   | Rose oil (genuin... | 13J17-B01        | 31290     | 40      | 1507614     |
| Fagron   | Rose oil (genuin... | 14I25-B01-302286 | 31752     | 60      | 20141006    |
| Fagron   | Rose oil (genuin... | 14I25-B01-302286 | 31842     | 60      | 20141006    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 420 spectra of 9 reference samples from the substance/substance group *Rose oil (genuine / artificial)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 519 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Rose oil (genuine / artificial)*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Rose oil (genuine / artifici... | 162311 | 32332     | 40      |
| Caelo    | Rose oil (genuine / artifici... | 173537 | 33907     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 243 spectra from 125 *Apo-Ident* customers from 103 batches from the substance/substance group *Rose oil (genuine / artificial)*.
- Among them are spectra of independent samples from 98 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| AHD      | Rose oil (genuine / artifici... | 15G29-B12-327364 | 1       |
| AHD      | Rose oil (genuine / artifici... | 16H16-B04-342284 | 1       |
| Caelo    | Rose oil (genuine / artifici... | 17101412         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 15G29-B12-332094 | 1       |
| Caelo    | Rose oil (genuine / artifici... | 1352710          | 1       |
| Caelo    | Rose oil (genuine / artifici... | 19011502         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 13252723         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 14300712         | 6       |
| Caelo    | Rose oil (genuine / artifici... | 887963           | 1       |
| Caelo    | Rose oil (genuine / artifici... | 15197206         | 5       |
| Caelo    | Rose oil (genuine / artifici... | 15197211         | 8       |
| Caelo    | Rose oil (genuine / artifici... | 15187202         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 16231111         | 3       |
| Caelo    | Rose oil (genuine / artifici... | 17353704         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 16231112         | 2       |
| Caelo    | Rose oil (genuine / artifici... | 17353703         | 5       |
| Caelo    | Rose oil (genuine / artifici... | 17353705         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 17353709         | 4       |
| Caelo    | Rose oil (genuine / artifici... | 16H16-B04-351564 | 1       |
| Caelo    | Rose oil (genuine / artifici... | 17353712         | 4       |
| Caelo    | Rose oil (genuine / artifici... | 18330901         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 18330904         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 11178601         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 14300719         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 15197202         | 11      |
| Caelo    | Rose oil (genuine / artifici... | 16H16-B04-342284 | 3       |
| Caelo    | Rose oil (genuine / artifici... | 13252701         | 2       |
| Caelo    | Rose oil (genuine / artifici... | 15449108         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 15G29-B12-314833 | 1       |
| Caelo    | Rose oil (genuine / artifici... | 17111411         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 18330909         | 3       |
| Caelo    | Rose oil (genuine / artifici... | 183309003        | 1       |
| Caelo    | Rose oil (genuine / artifici... | 54(17353703)     | 1       |
| Caelo    | Rose oil (genuine / artifici... | 11287114         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 19022501         | 1       |
| Caelo    | Rose oil (genuine / artifici... | 16231113         | 5       |

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| Supplier                 | Substance                       | Batch             | Spectra |
|--------------------------|---------------------------------|-------------------|---------|
| Caelo                    | Rose oil (genuine / artifici... | 1623113           | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 14300703          | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 17258204          | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 13252722          | 4       |
| Caelo                    | Rose oil (genuine / artifici... | 16231104          | 2       |
| Caelo                    | Rose oil (genuine / artifici... | 315A-02011        | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 15G29-B12-312961  | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 19218301          | 2       |
| Caelo                    | Rose oil (genuine / artifici... | 11287123          | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 14300704          | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 1353709           | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 12164306          | 1       |
| Caelo                    | Rose oil (genuine / artifici... | 13044608          | 3       |
| Caeolo                   | Rose oil (genuine / artifici... | 779579            | 1       |
| Caesar & Loretz GmbH     | Rose oil (genuine / artifici... | 18330904          | 1       |
| Caleo Caesar & Laurentio | Rose oil (genuine / artifici... | 15197202          | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 15G29-B12-312961  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 11E04-N04         | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 11H05-N02         | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 12C19-N05         | 4       |
| Fagron                   | Rose oil (genuine / artifici... | 511I-02011        | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 12G25-N02         | 8       |
| Fagron                   | Rose oil (genuine / artifici... | 688292            | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 7091301           | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 12H16-B01-286704  | 3       |
| Fagron                   | Rose oil (genuine / artifici... | 713371            | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 2188              | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 13J17-B01-293574  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 836899            | 3       |
| Fagron                   | Rose oil (genuine / artifici... | 14I25-B01         | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 14I25-B01         | 6       |
| Fagron                   | Rose oil (genuine / artifici... | 14/25-B01-302286  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 1425-01-309676    | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 887963            | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 15G29-B12-327263  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 16H16-B04-332931  | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 1951824           | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 16H16B04342284    | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 951824            | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 18I17-B08-355554  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 12H16-B01         | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 13J17-B01-296955  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 13J17-801         | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 698884            | 3       |
| Fagron                   | Rose oil (genuine / artifici... | 1817-B08-359738   | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 1425-B01-302287   | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 18/17-B08-364702  | 3       |
| Fagron                   | Rose oil (genuine / artifici... | 13C21-N04         | 10      |
| Fagron                   | Rose oil (genuine / artifici... | 15G29-B12-314833  | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 18I17-B08-359738  | 4       |
| Fagron                   | Rose oil (genuine / artifici... | 14I25-B01-309676  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 15/25-B01-302286  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 14/25-B01-309675  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 12G25-N01         | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 13JU17-B01-296955 | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 14/25-B01-302287  | 1       |
| Fagron                   | Rose oil (genuine / artifici... | 15G29-B12         | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 16H16-B04-342284  | 4       |
| Fagron                   | Rose oil (genuine / artifici... | 18I17-B08         | 2       |
| Fagron                   | Rose oil (genuine / artifici... | 18I17-B08-364702  | 1       |

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| Supplier               | Substance                       | Batch            | Spectra |
|------------------------|---------------------------------|------------------|---------|
| Fagron                 | Rose oil (genuine / artifici... | 4717Q-02011      | 1       |
| Fargon/Phoenix         | Rose oil (genuine / artifici... | 9/28-N14         | 1       |
| Fiebig                 | Rose oil (genuine / artifici... | 15197202         | 2       |
| Fiebig                 | Rose oil (genuine / artifici... | 16231111         | 1       |
| Fiebig                 | Rose oil (genuine / artifici... | 17353703         | 2       |
| Fiebig                 | Rose oil (genuine / artifici... | 17353712         | 1       |
| Frey & Lau / Gehe      | Rose oil (genuine / artifici... | 18I17-B08-359738 | 1       |
| Frey & Lau / Gehe      | Rose oil (genuine / artifici... | 18I17-B08-364702 | 1       |
| Frey & Lau GmbH/Noweda | Rose oil (genuine / artifici... | 15G29-B12        | 1       |
| Jenne                  | Rose oil (genuine / artifici... | 18I17-Bo8-359738 | 1       |
| Jenne                  | Rose oil (genuine / artifici... | 17353712         | 2       |
| Kehr                   | Rose oil (genuine / artifici... | 16H16-B04-332931 | 1       |
| Klosterring            | Rose oil (genuine / artifici... | 15G29-B12        | 1       |
| Caelo                  | Rose oil (genuine / artifici... | 16h16b04348745   | 1       |
| Noweda                 | Rose oil (genuine / artifici... | 15G29-B12-327364 | 1       |
| Fagron                 | Rose oil (genuine / artifici... | 16H16-B04-348745 | 2       |
| Caelo                  | Rose oil (genuine / artifici... | 13335006         | 1       |
| Fagron                 | Rose oil (genuine / artifici... | 16H16-B04-351564 | 1       |
| Fagron                 | Rose oil (genuine / artifici... | 15G29-B12-321984 | 5       |
| Phönix                 | Rose oil (genuine / artifici... | 12G25-N02        | 2       |
| Phönix                 | Rose oil (genuine / artifici... | 12C19-N05        | 1       |
| Phönix                 | Rose oil (genuine / artifici... | 13C21-N04        | 2       |
| Fagron                 | Rose oil (genuine / artifici... | 18/17-B08-359738 | 1       |
| Sanacorp               | Rose oil (genuine / artifici... | 183309006        | 1       |
| Fagron                 | Rose oil (genuine / artifici... | 15G29-B12-327364 | 4       |
| Caelo                  | Rose oil (genuine / artifici... | 13252710         | 3       |
| Caelo                  | Rose oil (genuine / artifici... | 11287117         | 2       |
| Fagron                 | Rose oil (genuine / artifici... | 13J17-B01        | 2       |
| Fagron                 | Rose oil (genuine / artifici... |                  | 2       |

- 241 120 spectra from 1121 *Apo-Ident* customers from a total of 46 903 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Rose oil (genuine / artificial)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Rose oil (genuine / artificial)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 420           | 0              | 63 519        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 235           | 8              | 241 120       |

The substance/substance group *Rose oil (genuine / artificial)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.5714 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 96.7078 % (> 95.4733 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Rose oil (genuine / artificial)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Geranium oil, genuine                     | 30.69                  | —                              |
| Citronella oil                            | 47.65                  | —                              |
| Matricaria oil, rich in (-)-alpha-bisa... | 96.50                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Rose oil (genuine / artificial)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31021     | 31021               | 0.00                         | 54.67                           |
| 31022     | 31412               | 9.23                         | 41.94                           |
| 31290     | 31290               | 0.00                         | 148.04                          |
| 31301     | 31021               | 9.84                         | 53.31                           |
| 31412     | 31412               | 0.00                         | 38.65                           |
| 31425     | 31021               | 5.68                         | 50.85                           |
| 31426     | 31021               | 4.49                         | 51.92                           |
| 31752     | 31290               | 3.08                         | 144.35                          |
| 31842     | 31290               | 4.08                         | 141.74                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Sage oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30578-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Sage oil; Salviae officinalis aetherolea

### Special notes

When selecting the *Sage oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Sage oil                  | 5      | 3      | 64     |

## Second-stage model

For differentiation of the substance/substance group *Sage oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Sage oil*:

| Supplier  | Substance | Batch    | Sample ID | Spectra | Certificate |
|-----------|-----------|----------|-----------|---------|-------------|
| Bombastus | Sage oil  | 305303   | 33292     | 40      | 1709470     |
| Bombastus | Sage oil  | 305303   | 33453     | 40      | 20161025    |
| Bombastus | Sage oil  | 17001385 | 34524     | 40      | 117774      |
| Bombastus | Sage oil  | 21000548 | 35468     | 40      | 20210126    |
| Caelo     | Sage oil  | 13146901 | 31597     | 60      | 20130522    |
| Caelo     | Sage oil  | 183022   | 34991     | 40      | 20181203*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 260 spectra of 6 reference samples from the substance/substance group *Sage oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 679 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Sage oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Sage oil  | 16051006 | 33601     | 40      |
| Caelo    | Sage oil  | 16051012 | 33949     | 40      |
| Caelo    | Sage oil  | 19000708 | 34993     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 217 spectra from 132 *Apo-Ident* customers from 67 batches from the substance/substance group *Sage oil*.
- Among them are spectra of independent samples from 64 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance | Batch             | Spectra |
|-----------------------|-----------|-------------------|---------|
| alliance healthcare   | Sage oil  | 17310007          | 1       |
| Anzag 10.8.12 ek:4,42 | Sage oil  | 11287305          | 1       |
| Bombastus             | Sage oil  | 274447            | 1       |
| Bombastus             | Sage oil  | 298189            | 1       |
| Bombastus             | Sage oil  | 20000495          | 1       |
| Bombastus             | Sage oil  | 18001280          | 1       |
| Caelo                 | Sage oil  | 11287312          | 1       |
| Caelo                 | Sage oil  | 11287311          | 2       |
| Caelo                 | Sage oil  | 11287315          | 1       |
| Caelo                 | Sage oil  | 10248206          | 1       |
| Caelo                 | Sage oil  | 28051312          | 1       |
| Caelo                 | Sage oil  | 5x11287317        | 1       |
| Caelo                 | Sage oil  | 11287320          | 4       |
| Caelo                 | Sage oil  | 11287314          | 2       |
| Caelo                 | Sage oil  | 13146904          | 1       |
| Caelo                 | Sage oil  | 21111301          | 1       |
| Caelo                 | Sage oil  | 31011401          | 1       |
| Caelo                 | Sage oil  | 14345517          | 12      |
| Caelo                 | Sage oil  | 14345506          | 1       |
| Caelo                 | Sage oil  | 14345512          | 3       |
| Caelo                 | Sage oil  | 14345518          | 2       |
| Caelo                 | Sage oil  | 1702080S/14345517 | 1       |
| Caelo                 | Sage oil  | 16051006          | 8       |
| Caelo                 | Sage oil  | 16051009          | 4       |
| Caelo                 | Sage oil  | 17310004          | 3       |
| Caelo                 | Sage oil  | 18302201          | 1       |
| Caelo                 | Sage oil  | 17310001          | 18      |
| Caelo                 | Sage oil  | 18302202          | 4       |
| Caelo                 | Sage oil  | 1024214           | 1       |
| Caelo                 | Sage oil  | 13146918          | 1       |
| Caelo                 | Sage oil  | 4117A-02014       | 1       |
| Caelo                 | Sage oil  | 11287317          | 9       |
| Caelo                 | Sage oil  | 1704030S/14345517 | 1       |
| Caelo                 | Sage oil  | 11287323          | 6       |
| Caelo                 | Sage oil  | 10(17310001)      | 1       |

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| Supplier                   | Substance | Batch         | Spectra |
|----------------------------|-----------|---------------|---------|
| Caelo                      | Sage oil  | 14345511      | 3       |
| Caelo                      | Sage oil  | 160510125684  | 1       |
| Caelo                      | Sage oil  | 16051012      | 9       |
| Caelo                      | Sage oil  | 183022005     | 2       |
| Caelo                      | Sage oil  | 2716M-02014   | 1       |
| Caelo                      | Sage oil  | 3518M-02014   | 1       |
| Caelo                      | Sage oil  | 1731001       | 1       |
| Caelo                      | Sage oil  | 14345514      | 1       |
| Caelo                      | Sage oil  | 14345505      | 8       |
| Caelo                      | Sage oil  | 5017A-02014   | 1       |
| Caelo                      | Sage oil  | 305303        | 1       |
| Caelo                      | Sage oil  | 18302206      | 10      |
| Caelo                      | Sage oil  | 1435517       | 1       |
| Caelo                      | Sage oil  | 13146903      | 2       |
| Caelo                      | Sage oil  | 11287306      | 1       |
| Caelo                      | Sage oil  | 18302208      | 2       |
| Caelo                      | Sage oil  | 183022004     | 2       |
| Caelo                      | Sage oil  | 183022001     | 1       |
| Caelo                      | Sage oil  | 17310007      | 10      |
| Caelo                      | Sage oil  | 16051016      | 2       |
| Caesaer/Jenne              | Sage oil  | 17310001      | 1       |
| Caesar & Loretz GmbH       | Sage oil  | 17310004      | 3       |
| Caesar & Loretz GmbH       | Sage oil  | 17310007      | 2       |
| Caesar & Loretz GmbH       | Sage oil  | 18302202      | 3       |
| Caesar & Loretz GmbH       | Sage oil  | 18302206      | 3       |
| Caesar & Loretz GmbH, 4... | Sage oil  | 11287317      | 1       |
| Caesar & Loretz GmbH/An... | Sage oil  | 18302202      | 1       |
| Caesar & Loretz GmbH/Je... | Sage oil  | 18302202      | 1       |
| Caesar & Loretz GmbH/Sa... | Sage oil  | 18302206      | 1       |
| Cealo                      | Sage oil  | 14345517      | 1       |
| Cealo/ Noweda              | Sage oil  | 13146901      | 3       |
| Gehe                       | Sage oil  | 11287318      | 1       |
| gehe 19.11.2013            | Sage oil  | 13146901      | 2       |
| Gehe amax                  | Sage oil  | 18302202      | 1       |
| Caelo                      | Sage oil  | 13146914      | 6       |
| Caelo                      | Sage oil  | 306897        | 1       |
| L12                        | Sage oil  | 16051012      | 2       |
| L12                        | Sage oil  | 17310007      | 1       |
| L30                        | Sage oil  | 17310001      | 1       |
| Caelo                      | Sage oil  | 11287318      | 1       |
| Caelo                      | Sage oil  | 13146908      | 2       |
| phoenix                    | Sage oil  | 18001280      | 1       |
| Phönix                     | Sage oil  | 16051006      | 1       |
| Phönix                     | Sage oil  | 17310001      | 2       |
| Phönix                     | Sage oil  | 17310007      | 1       |
| Phönix 07.11.2019          | Sage oil  | 17310004      | 1       |
| Sanacorp                   | Sage oil  | 282545        | 1       |
| Caelo                      | Sage oil  | 14345502      | 1       |
| Caelo                      | Sage oil  | 13146907      | 1       |
| Taoasis                    | Sage oil  | 498780-106211 | 1       |
| Taoasis                    | Sage oil  | 530771-108279 | 1       |
| Taoasis                    | Sage oil  | 526975-111295 | 1       |
| Taoasis GmbH               | Sage oil  | 526975-110409 | 1       |
| Toasis                     | Sage oil  | 526975-110409 | 1       |
| Caelo                      | Sage oil  | 13146901      | 5       |
| Taoasis/Phönix             | Sage oil  |               | 1       |

- 241 146 spectra from 1121 *Apo-Ident* customers from a total of 46 940 batches from a further



342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Sage oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Sage oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 260           | 0              | 63 679        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 211           | 6              | 241 146       |

The substance/substance group *Sage oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6923 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 97.2350 % (> 95.8525 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Sage oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Spruce needle oil | 11.10                  | —                              |
| Eucalyptus oil    | 24.91                  | —                              |
| Rosemary oil      | 33.49                  | —                              |
| Myrtle oil        | 33.58                  | —                              |
| Turpentine oil    | 33.62                  | —                              |
| Dwarf pine oil    | 53.80                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Sage oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31597     | 34991               | 7.94                         | 20.61                           |
| 33292     | 33292               | 0.00                         | 11.10                           |
| 33453     | 33292               | 5.23                         | 13.30                           |
| 34524     | 33292               | 5.74                         | 11.35                           |
| 34991     | 34991               | 0.00                         | 21.14                           |
| 35468     | 33292               | 6.65                         | 17.22                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Salicylic acid 50% (paraffin)                                    |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30496-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Salicylic acid 50% (paraffin); Acidum salicylicum cum vaselino alba 50%

### Special notes

When selecting the *Salicylic acid 50% (paraffin)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group     | Type A | Type B | Type C |
|-------------------------------|--------|--------|--------|
| Salicylic acid 50% (paraffin) | 8      | 10     | 248    |

## Second-stage model

For differentiation of the substance/substance group *Salicylic acid 50% (paraffin)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Salicylic acid 50% (paraffin)*:

| Supplier      | Substance           | Batch      | Sample ID | Spectra | Certificate        |
|---------------|---------------------|------------|-----------|---------|--------------------|
| Caelo         | Salicylic acid 5... | 12305902   | 30883     | 40      | 20121107           |
| Caelo         | Salicylic acid 5... | 15231801   | 31727     | 60      | AR-15-FG-015411-01 |
| Caelo         | Salicylic acid 5... | 153729     | 31901     | 60      | 20151029*          |
| Caelo         | Salicylic acid 5... | 153730     | 31902     | 60      | 20151029*          |
| Caelo         | Salicylic acid 5... | 153731     | 31903     | 60      | 20151103*          |
| Caelo         | Salicylic acid 5... | 162761     | 32520     | 40      | 20160923*          |
| Henry Lamotte | Salicylic acid 5... | 5375300    | 30927     | 40      | 20121003           |
| Henry Lamotte | Salicylic acid 5... | 6001023001 | 32176     | 40      | 20150630           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 400 spectra of 8 reference samples from the substance/substance group *Salicylic acid 50% (paraffin)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 8 different batches.
- 63 539 spectra from a total of 1299 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 450 spectra of 10 reference samples from the substance/substance group *Salicylic acid 50% (paraffin)*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 10 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                     | Batch    | Sample ID | Spectra |
|----------|-------------------------------|----------|-----------|---------|
| Caelo    | Salicylic acid 50% (paraffin) | 153732   | 31904     | 60      |
| Caelo    | Salicylic acid 50% (paraffin) | 153733   | 31905     | 60      |
| Caelo    | Salicylic acid 50% (paraffin) | 171454   | 33357     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 171055   | 33358     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 171727   | 33359     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 182109   | 34266     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 182864   | 34309     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 191673   | 34777     | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 21001617 | 35508     | 50      |
| Caelo    | Salicylic acid 50% (paraffin) | 21002050 | 35631     | 40      |

- 91 041 spectra from a total of 2006 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1829 spectra from 572 *Apo-Ident* customers from 257 batches from the substance/substance group *Salicylic acid 50% (paraffin)*.
- Among them are spectra of independent samples from 247 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| 08.05.19/Gehe/apomix       | Salicylic acid 50% (paraffin) | 2A200219     | 1       |
| A.H.D.                     | Salicylic acid 50% (paraffin) | 1228301      | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | 200035316001 | 1       |
| AHD/ Henry Lamotte         | Salicylic acid 50% (paraffin) | 5763800      | 2       |
| AHD/ Henry Lamotte         | Salicylic acid 50% (paraffin) | 6001023001   | 4       |
| AHD/ Lamotte               | Salicylic acid 50% (paraffin) | 8005713005   | 2       |
| ahd/lamotte                | Salicylic acid 50% (paraffin) | 6004854001   | 1       |
| AHDE08.05.2015             | Salicylic acid 50% (paraffin) | 5763800      | 1       |
| Alliance Healthcare Deu... | Salicylic acid 50% (paraffin) | 5235330      | 1       |
| Allianz Healthcare         | Salicylic acid 50% (paraffin) | 17017401     | 1       |
| Anzag                      | Salicylic acid 50% (paraffin) | 6001023001   | 2       |
| Anzag                      | Salicylic acid 50% (paraffin) | 6001862002   | 1       |
| Anzag                      | Salicylic acid 50% (paraffin) | 6004854001   | 2       |
| Anzag                      | Salicylic acid 50% (paraffin) | 6007886001   | 2       |
| Anzag 15.10.12             | Salicylic acid 50% (paraffin) | 12201901     | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 6a050813     | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 7a160913     | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 1a180214     | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 10a181114    | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 3a100512     | 2       |
| apomix                     | Salicylic acid 50% (paraffin) | 7a161012     | 2       |
| apomix                     | Salicylic acid 50% (paraffin) | 3a040413     | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 2A260115     | 2       |

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| Supplier                   | Substance                     | Batch     | Spectra |
|----------------------------|-------------------------------|-----------|---------|
| apomix                     | Salicylic acid 50% (paraffin) | 7A230615  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 9A150715  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 12A130815 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 13A240915 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 9a150715  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 1A150116  | 2       |
| apomix                     | Salicylic acid 50% (paraffin) | 2A280116  | 2       |
| apomix                     | Salicylic acid 50% (paraffin) | 5A070416  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 6A270416  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 11A290716 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 9A140716  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 12A050916 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 13A121016 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 14A121016 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 17A121218 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 16A281118 | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 2a200219  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 6A170719  | 1       |
| apomix                     | Salicylic acid 50% (paraffin) | 13A210818 | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 1A240113  | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 5A250713  | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 6A150615  | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 14A031115 | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 10A290716 | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 9A270717  | 2       |
| Apomix                     | Salicylic acid 50% (paraffin) | 16A131217 | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 5A230418  | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 17A121218 | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 3A090519  | 1       |
| Apomix                     | Salicylic acid 50% (paraffin) | 6A170719  | 1       |
| Apomix (AMH)               | Salicylic acid 50% (paraffin) | 2A030320  | 1       |
| Apomix / 11                | Salicylic acid 50% (paraffin) | 4A200613  | 1       |
| Apomix / 11                | Salicylic acid 50% (paraffin) | 1A180214  | 2       |
| Apomix / 11                | Salicylic acid 50% (paraffin) | 10A181114 | 1       |
| Apomix / 11                | Salicylic acid 50% (paraffin) | 4A080515  | 1       |
| Apomix / 11                | Salicylic acid 50% (paraffin) | 8A240616  | 1       |
| Apomix / Alliance Haelt... | Salicylic acid 50% (paraffin) | 9A300819  | 1       |
| apomix / Gehe              | Salicylic acid 50% (paraffin) | 13A210818 | 1       |
| Apomix / Noweda            | Salicylic acid 50% (paraffin) | 8A220518  | 1       |
| Apomix / Noweda            | Salicylic acid 50% (paraffin) | 13A210818 | 1       |
| Apomix / Phönix            | Salicylic acid 50% (paraffin) | 6B110714  | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 8A240616  | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 15A251116 | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 1A080217  | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 10A110817 | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 17A131217 | 1       |
| apomix AMH Niemann GmbH... | Salicylic acid 50% (paraffin) | 2A200219  | 1       |
| Apomix PKH                 | Salicylic acid 50% (paraffin) | 15A251116 | 1       |
| apomix, PKH GmbH           | Salicylic acid 50% (paraffin) | 7A160913  | 1       |
| apomix/ Anzag 04.07.19     | Salicylic acid 50% (paraffin) | 5A170619  | 1       |
| Apomix/AHD                 | Salicylic acid 50% (paraffin) | 12A050916 | 1       |
| Apomix/Gehe                | Salicylic acid 50% (paraffin) | 11A290716 | 1       |
| Apomix/Gehe                | Salicylic acid 50% (paraffin) | 2A200219  | 1       |
| Apomix/Gehe                | Salicylic acid 50% (paraffin) | 4A310519  | 1       |
| Apomix/Gehe                | Salicylic acid 50% (paraffin) | 1A040220  | 1       |
| Apomix/N/PZN:6639275       | Salicylic acid 50% (paraffin) | 9A171213  | 1       |
| apomix/Noweda              | Salicylic acid 50% (paraffin) | 162796101 | 1       |
| Apomix/Phoenix             | Salicylic acid 50% (paraffin) | 3A070316  | 1       |
| Apomix/Phönix              | Salicylic acid 50% (paraffin) | 13A210818 | 1       |
| apomix/VDL                 | Salicylic acid 50% (paraffin) | 7A090819  | 1       |

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| Supplier         | Substance                     | Batch        | Spectra |
|------------------|-------------------------------|--------------|---------|
| bionorica ethics | Salicylic acid 50% (paraffin) | 17261401     | 1       |
| Bombastus        | Salicylic acid 50% (paraffin) | 12228301     | 1       |
| Bombastus        | Salicylic acid 50% (paraffin) | 16197401     | 1       |
| Bombastus        | Salicylic acid 50% (paraffin) | 60091680001  | 1       |
| Brückenapotheke  | Salicylic acid 50% (paraffin) | 1715Q-07018  | 1       |
| Caeanlo          | Salicylic acid 50% (paraffin) | 16197401     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13278701     | 12      |
| Caelo            | Salicylic acid 50% (paraffin) | 15373101     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 15373001     | 17      |
| Caelo            | Salicylic acid 50% (paraffin) | 11226801     | 3       |
| Caelo            | Salicylic acid 50% (paraffin) | 1506211046   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 1309211046   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 126061201    | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 12201901     | 4       |
| Caelo            | Salicylic acid 50% (paraffin) | 20310812-6   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 613I-01046   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 2002311046   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13052502     | 9       |
| Caelo            | Salicylic acid 50% (paraffin) | 12061301     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 12305901     | 2       |
| Caelo            | Salicylic acid 50% (paraffin) | 12228402     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13087201     | 2       |
| Caelo            | Salicylic acid 50% (paraffin) | 11333602     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13160101     | 5       |
| Caelo            | Salicylic acid 50% (paraffin) | 13278601     | 7       |
| Caelo            | Salicylic acid 50% (paraffin) | 13278501     | 10      |
| Caelo            | Salicylic acid 50% (paraffin) | 13278801     | 4       |
| Caelo            | Salicylic acid 50% (paraffin) | 14017501     | 18      |
| Caelo            | Salicylic acid 50% (paraffin) | 15231501     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | s-100513-1   | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13067201     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 15231601     | 15      |
| Caelo            | Salicylic acid 50% (paraffin) | 15305901     | 18      |
| Caelo            | Salicylic acid 50% (paraffin) | 8728         | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 2783         | 2       |
| Caelo            | Salicylic acid 50% (paraffin) | 1612301      | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 16121301     | 7       |
| Caelo            | Salicylic acid 50% (paraffin) | 6121401      | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 16197302     | 5       |
| Caelo            | Salicylic acid 50% (paraffin) | 15373201     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 17014401     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 171017501    | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 17172702     | 16      |
| Caelo            | Salicylic acid 50% (paraffin) | 17145401     | 28      |
| Caelo            | Salicylic acid 50% (paraffin) | 17105602     | 3       |
| Caelo            | Salicylic acid 50% (paraffin) | 171454015424 | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 17326201     | 26      |
| Caelo            | Salicylic acid 50% (paraffin) | 18034201     | 13      |
| Caelo            | Salicylic acid 50% (paraffin) | 18115101     | 17      |
| Caelo            | Salicylic acid 50% (paraffin) | 18211002     | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 19209302     | 21      |
| Caelo            | Salicylic acid 50% (paraffin) | 20000847002  | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 20003024002  | 4       |
| Caelo            | Salicylic acid 50% (paraffin) | 16197401     | 26      |
| Caelo            | Salicylic acid 50% (paraffin) | 20003023001  | 1       |
| Caelo            | Salicylic acid 50% (paraffin) | 13052401     | 4       |
| Caelo            | Salicylic acid 50% (paraffin) | 18114901     | 45      |
| Caelo            | Salicylic acid 50% (paraffin) | 17017401     | 24      |
| Caelo            | Salicylic acid 50% (paraffin) | 13087301     | 9       |
| Caelo            | Salicylic acid 50% (paraffin) | 17017301     | 12      |

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| Supplier | Substance                     | Batch             | Spectra |
|----------|-------------------------------|-------------------|---------|
| Caelo    | Salicylic acid 50% (paraffin) | 15373301          | 17      |
| Caelo    | Salicylic acid 50% (paraffin) | 19167201          | 25      |
| Caelo    | Salicylic acid 50% (paraffin) | 17105501          | 11      |
| Caelo    | Salicylic acid 50% (paraffin) | 2001803001        | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 13160102          | 11      |
| Caelo    | Salicylic acid 50% (paraffin) | 11226601          | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 13087401          | 7       |
| Caelo    | Salicylic acid 50% (paraffin) | 16121404          | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 170801SV/17172701 | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 20002468001       | 3       |
| Caelo    | Salicylic acid 50% (paraffin) | 3263              | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 14204302          | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 15247101          | 32      |
| Caelo    | Salicylic acid 50% (paraffin) | 107105801         | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 20000895001       | 4       |
| Caelo    | Salicylic acid 50% (paraffin) | 11333801          | 4       |
| Caelo    | Salicylic acid 50% (paraffin) | 5375300           | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 15305801          | 11      |
| Caelo    | Salicylic acid 50% (paraffin) | 20001803001       | 11      |
| Caelo    | Salicylic acid 50% (paraffin) | 20002467001       | 10      |
| Caelo    | Salicylic acid 50% (paraffin) | 15247201          | 11      |
| Caelo    | Salicylic acid 50% (paraffin) | 16121203          | 2       |
| Caelo    | Salicylic acid 50% (paraffin) | 17145502          | 8       |
| Caelo    | Salicylic acid 50% (paraffin) | 18034402          | 16      |
| Caelo    | Salicylic acid 50% (paraffin) | 18115002          | 6       |
| Caelo    | Salicylic acid 50% (paraffin) | 18286401          | 31      |
| Caelo    | Salicylic acid 50% (paraffin) | 18286502          | 2       |
| Caelo    | Salicylic acid 50% (paraffin) | 6001862001        | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 20003781002       | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 17261301          | 15      |
| Caelo    | Salicylic acid 50% (paraffin) | 20000459002       | 19      |
| Caelo    | Salicylic acid 50% (paraffin) | 17172701          | 9       |
| Caelo    | Salicylic acid 50% (paraffin) | 14017601          | 2       |
| Caelo    | Salicylic acid 50% (paraffin) | 16197202          | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 17105801          | 33      |
| Caelo    | Salicylic acid 50% (paraffin) | 18034301          | 43      |
| Caelo    | Salicylic acid 50% (paraffin) | 19082701          | 28      |
| Caelo    | Salicylic acid 50% (paraffin) | 12201701          | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 12061201          | 7       |
| Caelo    | Salicylic acid 50% (paraffin) | 180342201         | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 1401761           | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 5809400           | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 16121401          | 24      |
| Caelo    | Salicylic acid 50% (paraffin) | 6001023001        | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 1710501           | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 17326301          | 2       |
| Caelo    | Salicylic acid 50% (paraffin) | 1811490           | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 21001617002       | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 20000459001       | 7       |
| Caelo    | Salicylic acid 50% (paraffin) | 6001023002        | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 16276101          | 35      |
| Caelo    | Salicylic acid 50% (paraffin) | 1117M-01046       | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 601004001         | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 18210903          | 40      |
| Caelo    | Salicylic acid 50% (paraffin) | 19010901          | 30      |
| Caelo    | Salicylic acid 50% (paraffin) | 19010802          | 8       |
| Caelo    | Salicylic acid 50% (paraffin) | 190101901         | 1       |
| Caelo    | Salicylic acid 50% (paraffin) | 19167302          | 10      |
| Caelo    | Salicylic acid 50% (paraffin) | 20003516001       | 8       |
| Caelo    | Salicylic acid 50% (paraffin) | 6020091001        | 1       |

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| <b>Supplier</b>             | <b>Substance</b>              | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|-------------------------------|--------------|----------------|
| Caelo                       | Salicylic acid 50% (paraffin) | 6001862002   | 3              |
| Caelo                       | Salicylic acid 50% (paraffin) | 15394602     | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 16121302     | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 173260201    | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 6010004001   | 2              |
| Caelo                       | Salicylic acid 50% (paraffin) | 19274001     | 3              |
| Caelo                       | Salicylic acid 50% (paraffin) | 20001058001  | 12             |
| Caelo                       | Salicylic acid 50% (paraffin) | 13160002     | 2              |
| Caelo                       | Salicylic acid 50% (paraffin) | 15277001     | 6              |
| Caelo                       | Salicylic acid 50% (paraffin) | 15372901     | 10             |
| Caelo                       | Salicylic acid 50% (paraffin) | AKD9         | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 15305601     | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 17017501     | 3              |
| Caelo                       | Salicylic acid 50% (paraffin) | 17261401     | 41             |
| Caelo                       | Salicylic acid 50% (paraffin) | 17105702     | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 18286301     | 11             |
| Caelo                       | Salicylic acid 50% (paraffin) | 8004748001   | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 600103001    | 1              |
| Caelo                       | Salicylic acid 50% (paraffin) | 4717A-01046  | 1              |
| Caelo/Phoenix               | Salicylic acid 50% (paraffin) | 18114901     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 17330802     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 15A281118    | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19010901     | 6              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18286301     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18114901     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18286401     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18115101     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19010802     | 3              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18211002     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19082701     | 8              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19082801     | 4              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19167201     | 9              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 18286502     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19209302     | 7              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19274001     | 4              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19082601     | 2              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 19167302     | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20000459001  | 3              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20000459002  | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20000847003  | 2              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20001058001  | 2              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20000895001  | 3              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20000847002  | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20001325002  | 2              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20001803001  | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20001804002  | 1              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20003023001  | 3              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 20003516001  | 3              |
| Caesar & Loretz GmbH        | Salicylic acid 50% (paraffin) | 21001617002  | 1              |
| Caesar & Loretz GmbH / ...  | Salicylic acid 50% (paraffin) | 19010901     | 1              |
| Caesar & Loretz GmbH / ...  | Salicylic acid 50% (paraffin) | 19082701     | 1              |
| Caesar & Loretz GmbH / ...  | Salicylic acid 50% (paraffin) | 20001058001  | 1              |
| Caesar & Loretz GmbH / G    | Salicylic acid 50% (paraffin) | 19010901     | 1              |
| Caesar & Loretz GmbH / A... | Salicylic acid 50% (paraffin) | 19010901     | 1              |
| Caesar & Loretz GmbH / A... | Salicylic acid 50% (paraffin) | 19209302     | 1              |
| Caesar & Loretz GmbH / P... | Salicylic acid 50% (paraffin) | 19010901     | 1              |
| Caesar & Loretz GmbH / AHD  | Salicylic acid 50% (paraffin) | 20000459002  | 1              |
| Caesar & Loretz GmbH / Gehe | Salicylic acid 50% (paraffin) | 19082701     | 2              |
| Caesar & Loretz GmbH / Gehe | Salicylic acid 50% (paraffin) | 19209302     | 1              |
| Caesar & Loretz GmbH / Gehe | Salicylic acid 50% (paraffin) | 20000847003  | 1              |

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| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| Caesar & Loretz GmbH/je... | Salicylic acid 50% (paraffin) | 20003023001  | 1       |
| Caesar & Loretz GmbH/Je... | Salicylic acid 50% (paraffin) | 8005713005   | 2       |
| Caesar & Loretz GmbH/Kr... | Salicylic acid 50% (paraffin) | 19167201     | 1       |
| Caesar & Loretz GmbH/no... | Salicylic acid 50% (paraffin) | 20000459002  | 1       |
| Caesar & Loretz GmbH/No... | Salicylic acid 50% (paraffin) | 20000895001  | 1       |
| Caesar & Loretz GmbH/No... | Salicylic acid 50% (paraffin) | 200002468001 | 1       |
| Caesar & Loretz GmbH/No... | Salicylic acid 50% (paraffin) | 20002468001  | 1       |
| Caesar & Loretz GmbH/Ph... | Salicylic acid 50% (paraffin) | 20001804002  | 1       |
| Caesar & Loretz GmbH/Ph... | Salicylic acid 50% (paraffin) | 19082701     | 1       |
| Caesar & Loretz GmbH/Ph... | Salicylic acid 50% (paraffin) | 1319A-01046  | 1       |
| Caesar & Loretz GmbH/Sa... | Salicylic acid 50% (paraffin) | 19082601     | 1       |
| Caesar & Loretz GmbH/Sa... | Salicylic acid 50% (paraffin) | 20000847002  | 1       |
| Caesar & Loretz GmbH/sp... | Salicylic acid 50% (paraffin) | 18286301     | 1       |
| Caesar & Loretz/ Noweda    | Salicylic acid 50% (paraffin) | 17326201     | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | 15231701     | 7       |
| Caesar&Loretz GmbH         | Salicylic acid 50% (paraffin) | 15305901     | 1       |
| Caesar&Loretz GmbH         | Salicylic acid 50% (paraffin) | 17105801     | 1       |
| Caesar/Gehe                | Salicylic acid 50% (paraffin) | 20000459002  | 1       |
| Caeser und Loretz GmbH     | Salicylic acid 50% (paraffin) | 19082701     | 2       |
| Caleo                      | Salicylic acid 50% (paraffin) | 17261401     | 1       |
| cealo                      | Salicylic acid 50% (paraffin) | 13278501     | 3       |
| Cealo                      | Salicylic acid 50% (paraffin) | 17172701     | 1       |
| Cealo/ AHD                 | Salicylic acid 50% (paraffin) | 16121301     | 1       |
| Ceasar & Lorentz GmbH      | Salicylic acid 50% (paraffin) | 20000459002  | 1       |
| DAC 2005                   | Salicylic acid 50% (paraffin) | 4960200      | 1       |
| Defektur                   | Salicylic acid 50% (paraffin) | 46/13        | 1       |
| Ebert & Jacobi             | Salicylic acid 50% (paraffin) | 18034301     | 1       |
| Ebert-Jacobi               | Salicylic acid 50% (paraffin) | 17105501     | 1       |
| Euro OTC                   | Salicylic acid 50% (paraffin) | 11333801     | 1       |
| Euro OTC                   | Salicylic acid 50% (paraffin) | 15305801     | 1       |
| Fagron                     | Salicylic acid 50% (paraffin) | 17105801     | 2       |
| Fagron                     | Salicylic acid 50% (paraffin) | 15373301     | 1       |
| Fargon / AHD               | Salicylic acid 50% (paraffin) | 8005713005   | 1       |
| Fiebig                     | Salicylic acid 50% (paraffin) | 5763800      | 1       |
| Fiebig                     | Salicylic acid 50% (paraffin) | 18034402     | 1       |
| Fiebig                     | Salicylic acid 50% (paraffin) | 19082701     | 1       |
| Fiebig                     | Salicylic acid 50% (paraffin) | 18286301     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 12228301     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 12305902     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 4313M-07018  | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 13278501     | 2       |
| Gehe                       | Salicylic acid 50% (paraffin) | 17105801     | 3       |
| Gehe                       | Salicylic acid 50% (paraffin) | 17145401     | 2       |
| Gehe                       | Salicylic acid 50% (paraffin) | 17261301     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 18034402     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 18034301     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 18034201     | 2       |
| Gehe                       | Salicylic acid 50% (paraffin) | 19082801     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 19274001     | 1       |
| Gehe                       | Salicylic acid 50% (paraffin) | 20000847003  | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 2A270217     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 3A070417     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 10A110817    | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 13A041017    | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 3A050318     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 4A050318     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 18034301     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 19010901     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 18286502     | 1       |
| GEHE                       | Salicylic acid 50% (paraffin) | 19082601     | 1       |

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| <b>Supplier</b>            | <b>Substance</b>              | <b>Batch</b>   | <b>Spectra</b> |
|----------------------------|-------------------------------|----------------|----------------|
| Euro OTC                   | Salicylic acid 50% (paraffin) | 17105801       | 1              |
| Gehe/Lamotte               | Salicylic acid 50% (paraffin) | 6004854001     | 1              |
| Gehe/Lamotte               | Salicylic acid 50% (paraffin) | 6009168001     | 1              |
| Gehe/Lamotte               | Salicylic acid 50% (paraffin) | 8005713005     | 2              |
| H. Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 6004854001     | 1              |
| H. Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 6007886001     | 1              |
| H. Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 8004748001     | 1              |
| H. Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6010101001     | 1              |
| Henri Lamotte/Noweda       | Salicylic acid 50% (paraffin) | 6004854001     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6020091001     | 1              |
| henry Lamotte              | Salicylic acid 50% (paraffin) | 8004748001     | 1              |
| henry Lamotte              | Salicylic acid 50% (paraffin) | 8005713005     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 4960200        | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 5253300        | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 5448100        | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 5809400        | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 5763800        | 4              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6001023002     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6001862002     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6004854001     | 4              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6007886001     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6007886002     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6009168001     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 8004748001     | 8              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6010101001     | 1              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 8005713005     | 4              |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6020091001     | 1              |
| HENRY LAMOTTE              | Salicylic acid 50% (paraffin) | 6010101001     | 1              |
| HENRY LAMOTTE              | Salicylic acid 50% (paraffin) | 8004748001     | 1              |
| HENRY LAMOTTE              | Salicylic acid 50% (paraffin) | 8005713005     | 2              |
| HENRY LAMOTTE              | Salicylic acid 50% (paraffin) | 6020091001     | 2              |
| Henry Lamotte / Kehr       | Salicylic acid 50% (paraffin) | 6001023002     | 2              |
| henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6004854001     | 1              |
| henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6007886001     | 1              |
| Henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6001023002     | 1              |
| Henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6001862001     | 1              |
| Henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6009168001     | 1              |
| Henry Lamotte / Noweda     | Salicylic acid 50% (paraffin) | 6020091001     | 1              |
| Henry Lamotte / Sana       | Salicylic acid 50% (paraffin) | 5809400        | 1              |
| Henry Lamotte / Sanacorp   | Salicylic acid 50% (paraffin) | 8005713005     | 1              |
| Henry Lamotte / Jenne      | Salicylic acid 50% (paraffin) | 19(8004748001) | 1              |
| Henry Lamotte GmbH         | Salicylic acid 50% (paraffin) | 6010004001     | 2              |
| Henry Lamotte GmbH Bremen  | Salicylic acid 50% (paraffin) | 6020091001     | 1              |
| Henry Lamotte GmbH/ Now... | Salicylic acid 50% (paraffin) | 8004748001     | 4              |
| Henry Lamotte Noweda 6...  | Salicylic acid 50% (paraffin) | 8005713005     | 1              |
| Henry Lamotte Oils         | Salicylic acid 50% (paraffin) | 6001023002     | 1              |
| Henry Lamotte Oils         | Salicylic acid 50% (paraffin) | 6009168001     | 1              |
| Henry Lamotte Oils         | Salicylic acid 50% (paraffin) | 8004748001     | 2              |
| henry lamotte oils / Al... | Salicylic acid 50% (paraffin) | 800478001      | 1              |
| henry lamotte oils gmbh    | Salicylic acid 50% (paraffin) | 6004854001     | 2              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6001862002     | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 5253300        | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 5375300        | 2              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 5763800        | 2              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 5809400        | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 5448100        | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6001023001     | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6001023002     | 1              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6001862002     | 4              |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6004854001     | 3              |

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| Supplier                   | Substance                     | Batch               | Spectra |
|----------------------------|-------------------------------|---------------------|---------|
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6007886001          | 1       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6009168001          | 1       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6010101001          | 7       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6010004001          | 2       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 8004748001          | 6       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 8005713005          | 5       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 6020091001          | 4       |
| Henry Lamotte Oils GMBH    | Salicylic acid 50% (paraffin) | 6001862001/161014SV | 1       |
| Henry Lamotte Oils GMBH    | Salicylic acid 50% (paraffin) | 6001862001/170307SV | 1       |
| Henry Lamotte Oils GMBH    | Salicylic acid 50% (paraffin) | 6007886001          | 1       |
| Henry Lamotte Oils GMBH    | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| HENRY LAMOTTE OILS GmbH    | Salicylic acid 50% (paraffin) | 5375300             | 3       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6010102001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8005713005          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8005713005          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8004748001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8004748001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8005713005          | 7       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 8005713005          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6001023002          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6009168001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6020091001          | 2       |
| Henry Lamotte Oils/ Gehe   | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| Henry Lamotte Oils/Ebert   | Salicylic acid 50% (paraffin) | 6010004001          | 2       |
| Henry Lamotte Oils/Gehe    | Salicylic acid 50% (paraffin) | 6010004001          | 1       |
| Henry Lamotte Oils/Noveda  | Salicylic acid 50% (paraffin) | 8004748001          | 2       |
| Henry Lamotte Oils/Noweda  | Salicylic acid 50% (paraffin) | 6007886002          | 2       |
| Henry Lamotte Oils/Sana... | Salicylic acid 50% (paraffin) | 6007886002          | 1       |
| Henry Lamotte Oils GmbH    | Salicylic acid 50% (paraffin) | 8004748001          | 1       |
| Henry Lamotte Oils GMBH... | Salicylic acid 50% (paraffin) | 80047488001         | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 5763800             | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6001023001          | 1       |
| Henry Lamotte Oils GmbH... | Salicylic acid 50% (paraffin) | 6001862002          | 1       |
| Henry Lamotte Phoenix      | Salicylic acid 50% (paraffin) | 8005713005          | 1       |
| Henry Lamotte/ AHD         | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| Henry Lamotte/ Alliance... | Salicylic acid 50% (paraffin) | 6001862002          | 1       |
| Henry Lamotte/ Alliance... | Salicylic acid 50% (paraffin) | 8004748001          | 1       |
| Henry Lamotte/ Anzag       | Salicylic acid 50% (paraffin) | 5065800             | 1       |
| Henry Lamotte/ Gehe        | Salicylic acid 50% (paraffin) | 6010101001          | 1       |
| Henry Lamotte/ Noweda      | Salicylic acid 50% (paraffin) | 6001023001          | 1       |
| Henry Lamotte/ Sanacorp    | Salicylic acid 50% (paraffin) | 6009168001          | 1       |
| Henry Lamotte/AHD          | Salicylic acid 50% (paraffin) | 6020091001          | 1       |
| Henry Lamotte/Anzag        | Salicylic acid 50% (paraffin) | 5253300             | 1       |
| Henry Lamotte/Anzag        | Salicylic acid 50% (paraffin) | 5448100             | 1       |
| Henry Lamotte/Anzag        | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte/Anzag        | Salicylic acid 50% (paraffin) | 17 (6009168001)     | 1       |
| Henry Lamotte/Ebert        | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte/Gehe         | Salicylic acid 50% (paraffin) | 8005713005          | 2       |
| Henry Lamotte/Jenne        | Salicylic acid 50% (paraffin) | 16 (6007886001)     | 1       |
| Henry Lamotte/Kehr         | Salicylic acid 50% (paraffin) | 5809400             | 1       |
| Henry Lamotte/Kehr         | Salicylic acid 50% (paraffin) | 6004854001          | 1       |
| Henry Lamotte/L12          | Salicylic acid 50% (paraffin) | 3917822             | 1       |
| Henry Lamotte/L12          | Salicylic acid 50% (paraffin) | 6001023002          | 1       |
| Henry Lamotte/Noweda       | Salicylic acid 50% (paraffin) | 6001862002          | 1       |
| Henry Lamotte/Noweda       | Salicylic acid 50% (paraffin) | 6004854001          | 4       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Henry Lamotte/Noweda       | Salicylic acid 50% (paraffin) | 6007886001  | 1       |
| Henry Lamotte/Noweda 02... | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Henry Lamotte/Phoenix      | Salicylic acid 50% (paraffin) | 6001862001  | 1       |
| Henry Lamotte/Phoenix      | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Henry Lamotte/Phoenix      | Salicylic acid 50% (paraffin) | 60101022001 | 1       |
| Henry Lamotte/Phoenix      | Salicylic acid 50% (paraffin) | 8004748001  | 2       |
| Henry Lamotte/Sanacorp     | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Henry Lamotte/Sanacorp     | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Henry LamotteAlliance H... | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| HenryLamotte               | Salicylic acid 50% (paraffin) | 5763800     | 1       |
| HenryLamotte               | Salicylic acid 50% (paraffin) | 6001023001  | 1       |
| HenryLamotte               | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| HenryLamotte/Gehe          | Salicylic acid 50% (paraffin) | 6001862001  | 1       |
| HenryLamotte/Gehe          | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| HenryLamotte/noweda        | Salicylic acid 50% (paraffin) | 6001023001  | 2       |
| HenryLamotte/noweda        | Salicylic acid 50% (paraffin) | 3716I-01046 | 1       |
| HenryLamotte/Noweda        | Salicylic acid 50% (paraffin) | 6004854001  | 2       |
| Hochhaus-Apotheke          | Salicylic acid 50% (paraffin) | 16197302    | 1       |
| Ichthyol Gesellschaft/C... | Salicylic acid 50% (paraffin) | 18210903    | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Kehr                       | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Kehr/Henry Lamotte         | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| L12                        | Salicylic acid 50% (paraffin) | 6001862001  | 1       |
| L12                        | Salicylic acid 50% (paraffin) | 17105801    | 1       |
| L12                        | Salicylic acid 50% (paraffin) | 18034402    | 2       |
| L12/Henry Lamotte          | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| lamotte                    | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 5375300     | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 5065800     | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 5763800     | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6001023002  | 3       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6001023001  | 3       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6001862002  | 9       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 60011862002 | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6001862001  | 2       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6004854001  | 2       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6007886001  | 2       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 8004748001  | 3       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 8005713005  | 3       |
| Lamotte                    | Salicylic acid 50% (paraffin) | 6020091001  | 1       |
| lamotte phönix             | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| lamotte / AHC              | Salicylic acid 50% (paraffin) | 6004854001  | 1       |
| Lamotte / AHC              | Salicylic acid 50% (paraffin) | 8004748001  | 2       |
| Lamotte / Phoenix          | Salicylic acid 50% (paraffin) | 6009168001  | 2       |
| Lamotte / Phönix           | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Lamotte/ AHD               | Salicylic acid 50% (paraffin) | 6020091001  | 1       |
| Lamotte/ Noweda            | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Lamotte/ Sanacorp          | Salicylic acid 50% (paraffin) | 8004748001  | 1       |
| Lamotte/ Sanacorp          | Salicylic acid 50% (paraffin) | 602009001   | 1       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 6001862001  | 1       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 6004854001  | 3       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 6007886001  | 2       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 6009168001  | 2       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 6010101001  | 3       |
| Lamotte/AHD                | Salicylic acid 50% (paraffin) | 8004748001  | 3       |
| Lamotte/alliance           | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Lamotte/Alliance           | Salicylic acid 50% (paraffin) | 6007886001  | 2       |

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| Supplier                | Substance                     | Batch       | Spectra |
|-------------------------|-------------------------------|-------------|---------|
| Lamotte/Alliance        | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Lamotte/Alliance        | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Lamotte/Anzag           | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Lamotte/Anzag           | Salicylic acid 50% (paraffin) | 60007886002 | 1       |
| Lamotte/Anzag           | Salicylic acid 50% (paraffin) | 6007886002  | 3       |
| Lamotte/Ebert           | Salicylic acid 50% (paraffin) | 6001862001  | 1       |
| Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 5763800     | 1       |
| Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 6004854001  | 2       |
| Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 6007886001  | 1       |
| Lamotte/Gehe            | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte/K               | Salicylic acid 50% (paraffin) | 6001023001  | 1       |
| Lamotte/Kehr            | Salicylic acid 50% (paraffin) | 6004854001  | 1       |
| Lamotte/Kehr            | Salicylic acid 50% (paraffin) | 8004748001  | 2       |
| Lamotte/Kehr            | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Lamotte/Nowed           | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Lamotte/Noweda          | Salicylic acid 50% (paraffin) | 6004854001  | 2       |
| Lamotte/Noweda          | Salicylic acid 50% (paraffin) | 6009168001  | 2       |
| Lamotte/NOWEDA          | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte/Otto            | Salicylic acid 50% (paraffin) | 8004748001  | 1       |
| Lamotte/PH              | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Lamotte/PH              | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Lamotte/Phoenix         | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte/Phoenix         | Salicylic acid 50% (paraffin) | 8004748001  | 1       |
| lamotte/phönix          | Salicylic acid 50% (paraffin) | 6010101001  | 2       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6001023001  | 2       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6001862002  | 1       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6004854001  | 3       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6007886001  | 2       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Lamotte/Phönix          | Salicylic acid 50% (paraffin) | 8004748001  | 2       |
| Lamotte/PX              | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Lamotte/Sanacorp        | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Lamotte/Sanacorp        | Salicylic acid 50% (paraffin) | 6004854001  | 1       |
| Lamotte/Sanacorp        | Salicylic acid 50% (paraffin) | 6009168001  | 1       |
| Lamotte/Sanacorp        | Salicylic acid 50% (paraffin) | 19209302    | 1       |
| Lamotte/Sanacorp(Grafi) | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| LaMotte/Spangro         | Salicylic acid 50% (paraffin) | 6007886001  | 1       |
| Lamotte/VDL             | Salicylic acid 50% (paraffin) | 5375300     | 1       |
| Linden-Apo              | Salicylic acid 50% (paraffin) | 2615M-01046 | 1       |
| Midas                   | Salicylic acid 50% (paraffin) | 17105501    | 1       |
| Midas                   | Salicylic acid 50% (paraffin) | 17261301    | 1       |
| Midas                   | Salicylic acid 50% (paraffin) | 18034201    | 1       |
| Midas                   | Salicylic acid 50% (paraffin) | 18286301    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 12201901    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 6001023002  | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 16276101    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 17105501    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 6007886001  | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 6A230418    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 18034301    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 17326201    | 3       |
| Noweda                  | Salicylic acid 50% (paraffin) | 18115002    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 19274001    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 19167201    | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 20000895001 | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 20001325002 | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 20003516001 | 1       |
| Noweda                  | Salicylic acid 50% (paraffin) | 20001804002 | 1       |

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| Supplier                     | Substance                     | Batch       | Spectra |
|------------------------------|-------------------------------|-------------|---------|
| noweda / lamotte             | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Noweda / Lamotte Oil         | Salicylic acid 50% (paraffin) | 8005713005  | 1       |
| Noweda 26.08.15              | Salicylic acid 50% (paraffin) | 15231801    | 1       |
| Caelo                        | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Caelo                        | Salicylic acid 50% (paraffin) | 20000847003 | 3       |
| Noweda/apomix                | Salicylic acid 50% (paraffin) | 5A020615    | 1       |
| Noweda/Apomix                | Salicylic acid 50% (paraffin) | 8A250914    | 1       |
| Noweda/Apomix                | Salicylic acid 50% (paraffin) | 7A230615    | 1       |
| Noweda/Apomix                | Salicylic acid 50% (paraffin) | 5A170619    | 1       |
| Caelo                        | Salicylic acid 50% (paraffin) | 6004854001  | 2       |
| Noweda/Lamotte               | Salicylic acid 50% (paraffin) | 6004854001  | 1       |
| P. W. Beyvers GmbH           | Salicylic acid 50% (paraffin) | 17017301    | 1       |
| Pala                         | Salicylic acid 50% (paraffin) | 18034402    | 2       |
| Pala                         | Salicylic acid 50% (paraffin) | 19082801    | 1       |
| phoenix                      | Salicylic acid 50% (paraffin) | 19082801    | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 15373101    | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 3090        | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 6007886002  | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 16A131217   | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 6007886001  | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 18114901    | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 6010101001  | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 3381        | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 19010901    | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 8004748001  | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 19082701    | 1       |
| Phoenix                      | Salicylic acid 50% (paraffin) | 19167201    | 1       |
| Phoenix 08.08.2018 9,...     | Salicylic acid 50% (paraffin) | 17326201    | 1       |
| Phoenix (PKH Halle)          | Salicylic acid 50% (paraffin) | 2A040313    | 1       |
| Phoenix 02.04.2019 9,90EUR   | Salicylic acid 50% (paraffin) | 19010901    | 1       |
| Phoenix 18.09.2017           | Salicylic acid 50% (paraffin) | 17105801    | 1       |
| Caelo                        | Salicylic acid 50% (paraffin) | 12228301    | 12      |
| Phoenix/ Henry Lamotte       | Salicylic acid 50% (paraffin) | 6004854001  | 1       |
| Phönix                       | Salicylic acid 50% (paraffin) | 12201801    | 1       |
| Phönix                       | Salicylic acid 50% (paraffin) | 5375300     | 1       |
| Phönix                       | Salicylic acid 50% (paraffin) | 11274301    | 1       |
| Phönix                       | Salicylic acid 50% (paraffin) | 17261401    | 1       |
| Phönix                       | Salicylic acid 50% (paraffin) | 20000895001 | 1       |
| PHÖNIX                       | Salicylic acid 50% (paraffin) | 17326301    | 2       |
| Phönix Gotha                 | Salicylic acid 50% (paraffin) | 13052401    | 1       |
| Phönix Gotha                 | Salicylic acid 50% (paraffin) | 14017601    | 1       |
| Phönix Gotha                 | Salicylic acid 50% (paraffin) | 19167201    | 1       |
| Caelo                        | Salicylic acid 50% (paraffin) | 19082801    | 13      |
| Phönix/Apomix                | Salicylic acid 50% (paraffin) | 17A131217   | 1       |
| Euro OTC                     | Salicylic acid 50% (paraffin) | 17017401    | 1       |
| PKH / 11                     | Salicylic acid 50% (paraffin) | 2A280116    | 1       |
| PKH GmbH/ Alliance Heal. . . | Salicylic acid 50% (paraffin) | 15A281118   | 1       |
| PKH Halle (Apomix)           | Salicylic acid 50% (paraffin) | 6A280820    | 1       |
| PKH Halle/Noweda             | Salicylic acid 50% (paraffin) | 9A171213    | 1       |
| PKH Halle/Phönix             | Salicylic acid 50% (paraffin) | 14A031115   | 1       |
| sanacorb                     | Salicylic acid 50% (paraffin) | 16197401    | 2       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 1305202     | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 5809400     | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 15373301    | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 17145401    | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 17261401    | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 17172702    | 1       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 18034301    | 2       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 8004748001  | 2       |
| Sanacorp                     | Salicylic acid 50% (paraffin) | 8005713005  | 6       |

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| Supplier                   | Substance                     | Batch          | Spectra |
|----------------------------|-------------------------------|----------------|---------|
| Sanacorp                   | Salicylic acid 50% (paraffin) | 20001058001    | 1       |
| Sanacorp                   | Salicylic acid 50% (paraffin) | 6020091001     | 1       |
| Sanacorp, 22.09.2016       | Salicylic acid 50% (paraffin) | 16197401       | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | AKD2           | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | 1058001        | 1       |
| SanacorpWE:18.10.17 EK...  | Salicylic acid 50% (paraffin) | 17172702       | 1       |
| WE:Sanacorp 29.10.2016 ... | Salicylic acid 50% (paraffin) | 1612401        | 1       |
| Wolf Apotheke              | Salicylic acid 50% (paraffin) | 18(6010101001) | 1       |
| Caelo                      | Salicylic acid 50% (paraffin) | 15231801       | 17      |
| Caelo                      | Salicylic acid 50% (paraffin) |                | 1       |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 5375300        | 2       |
| Henry Lamotte              | Salicylic acid 50% (paraffin) | 6001023001     | 1       |
|                            | Salicylic acid 50% (paraffin) | 6004854001     | 1       |

- 239 534 spectra from 1121 *Apo-Ident* customers from a total of 46 755 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Salicylic acid 50% (paraffin)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Salicylic acid 50% (paraffin)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 400           | 0              | 63 539        |
| <b>Type B</b> | 0              | 450           | 0              | 91 041        |
| <b>Type C</b> | 0              | 1827          | 2              | 239 534       |

The substance/substance group *Salicylic acid 50% (paraffin)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 98.6667 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.8907 % (> 99.7266 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Salicylic acid 50% (paraffin)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis*

*certificate*). Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance               | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------|---------------------------|-----------------------------------|
| Permethrin 25% solution | 111.54                    | –                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Salicylic acid 50% (paraffin)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30883     | 31903                  | 1.73                            | 134.10                             |
| 30927     | 31727                  | 5.77                            | 143.74                             |
| 31727     | 31727                  | 0.00                            | 141.55                             |
| 31901     | 31901                  | 0.00                            | 129.93                             |
| 31902     | 31902                  | 0.00                            | 135.60                             |
| 31903     | 31903                  | 0.00                            | 132.01                             |
| 32176     | 31727                  | 4.80                            | 144.01                             |
| 32520     | 32520                  | 0.00                            | 128.42                             |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Salicylic acid concentrate 10%, white paraffin basis**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 32310-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Salicylic acid concentrate 10%, white paraffin basis; Unguentum Acidi salicylici 10% c. Vaseline album

### Special notes

When selecting the *Salicylic acid concentrate 10%, white paraffin basis* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                            | Type A | Type B | Type C |
|------------------------------------------------------|--------|--------|--------|
| Salicylic acid concentrate 10%, white paraffin basis | 2      | 1      | 0      |

## Second-stage model

For differentiation of the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Salicylic acid c... | 20003377 | 35153     | 40      | 20201111*   |
| Caelo    | Salicylic acid c... | 21002592 | 35608     | 50      | 20210816*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 90 spectra of 2 reference samples from the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 849 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Salicylic acid concentrate 1... | 153947 | 32310     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Salicylic acid concentrate 10%, white paraffin basis* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 90            | 0              | 63 849        |
| <b>Type B</b> | 0              | 17            | 23             | 91 451        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Salicylic acid concentrate 10%, white paraffin basis* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9800 %) | 100.0000 % (> 93.3333 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 42.5000 % (> 35.0000 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Metronidazole 25% in white petrolatum     | 23.63                  | —                              |
| Permethrin 25% solution                   | 24.73                  | —                              |
| Salicylic acid concentrate 5%, white p... | 27.36                  | —                              |
| Shea butter, refined                      | 41.82                  | —                              |
| Pasta Cordes <sup>®</sup>                 | 46.04                  | —                              |
| Softisan <sup>®</sup> 378                 | 46.76                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Salicylic acid concentrate 10%, white paraffin basis* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 35153     | 35153               | 0.00                         | 58.37                           |
| 35608     | 35608               | 0.00                         | 62.11                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Salicylic acid concentrate 5%, white paraffin basis</b>       |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 32309-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Salicylic acid concentrate 5%, white paraffin basis; Unguentum Acidi salicylici 5% c. Vaseline album

### Special notes

When selecting the *Salicylic acid concentrate 5%, white paraffin basis* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group                           | Type A | Type B | Type C |
|-----------------------------------------------------|--------|--------|--------|
| Salicylic acid concentrate 5%, white paraffin basis | 2      | 1      | 0      |

## Second-stage model

For differentiation of the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Salicylic acid c... | 191442   | 34800     | 40      | 20190529*   |
| Caelo    | Salicylic acid c... | 20003375 | 35152     | 40      | 20201111*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 80 spectra of 2 reference samples from the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 2 different batches.
- 63 859 spectra from a total of 1305 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis*.
- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Salicylic acid concentrate 5... | 153946 | 32309     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 0 spectra from 0 *Apo-Ident* customers from 0 batches from the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis*.
- Among them are spectra of independent samples from 0 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.
- 241 363 spectra from 1121 *Apo-Ident* customers from a total of 47 006 batches from a further 343 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Salicylic acid concentrate 5%, white paraffin basis* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 80            | 0              | 63 859        |
| <b>Type B</b> | 0              | 27            | 13             | 91 451        |
| <b>Type C</b> | 0              | 0             | 0              | 241 363       |

The substance/substance group *Salicylic acid concentrate 5%, white paraffin basis* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9800 %) | 100.0000 % (> 92.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9658 %) | 67.5000 % (> 60.0000 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6873 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Softisan <sup>®</sup> 378                 | 16.97                     | —                                 |
| Paraffin, yellow                          | 25.52                     | —                                 |
| Shea butter, refined                      | 25.69                     | —                                 |
| Wool alcohol ointment DAB                 | 25.73                     | —                                 |
| Paraffin, white                           | 27.28                     | —                                 |
| Permethrin 25% solution                   | 27.60                     | —                                 |
| Metronidazole 25% in white petrolatum     | 35.23                     | —                                 |
| Pasta Cordes <sup>®</sup>                 | 35.86                     | —                                 |
| Unguentum Cordes <sup>®</sup>             | 36.68                     | —                                 |
| Wool alcohol ointment SR with white pa... | 38.02                     | —                                 |
| Eye paraffin                              | 40.63                     | —                                 |
| Eye ointment, emulsifying DAC             | 43.11                     | —                                 |
| Wool fat                                  | 44.04                     | —                                 |
| Hydrophilic ointment DAB                  | 46.54                     | —                                 |
| Wool alcohol ointment SR/DAC              | 46.56                     | —                                 |
| Emulsifying hydrophobic base gel DAC      | 49.54                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Salicylic acid concentrate 5%, white paraffin basis* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 34800     | 34800                  | 0.00                            | 31.02                              |
| 35152     | 35152                  | 0.00                            | 28.78                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Sodium lactate solution 50%**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30136-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Sodium lactate solution 50%; Natrii lactatis solutio 50%

### Special notes

When selecting the *Sodium lactate solution 50%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group   | Type A | Type B | Type C |
|-----------------------------|--------|--------|--------|
| Sodium lactate solution 50% | 4      | 3      | 165    |



## Second-stage model

For differentiation of the substance/substance group *Sodium lactate solution 50%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Sodium lactate solution 50%*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate        |
|----------|---------------------|----------|-----------|---------|--------------------|
| Caelo    | Sodium lactate s... | 12027310 | 30621     | 80      | 20120131           |
| Caelo    | Sodium lactate s... | 14039503 | 31321     | 40      | 20140207           |
| Caelo    | Sodium lactate s... | 16056201 | 32586     | 40      | 20160315           |
| Caelo    | Sodium lactate s... | 16056201 | 32839     | 40      | AR-17-FG-006366-01 |
| Caelo    | Sodium lactate s... | 16056201 | 32917     | 40      | 20160315           |
| Caelo    | Sodium lactate s... | 191667   | 34729     | 40      | 20190829*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 280 spectra of 6 reference samples from the substance/substance group *Sodium lactate solution 50%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 659 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Sodium lactate solution 50%*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                   | Batch    | Sample ID | Spectra |
|----------|-----------------------------|----------|-----------|---------|
| Caelo    | Sodium lactate solution 50% | 170977   | 33319     | 40      |
| Caelo    | Sodium lactate solution 50% | 173153   | 34231     | 40      |
| Caelo    | Sodium lactate solution 50% | 20000467 | 34996     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1687 spectra from 728 *Apo-Ident* customers from 172 batches from the substance/substance group *Sodium lactate solution 50%*.
- Among them are spectra of independent samples from 165 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                   | Batch       | Spectra |
|---------------------|-----------------------------|-------------|---------|
| Caelo               | Sodium lactate solution 50% | 191667001   | 9       |
| AHD                 | Sodium lactate solution 50% | 1916679002  | 1       |
| AHD                 | Sodium lactate solution 50% | 191667007   | 7       |
| AHD 19.02.15        | Sodium lactate solution 50% | 14353202    | 1       |
| Alliance H.         | Sodium lactate solution 50% | 18314501    | 1       |
| Alliance health     | Sodium lactate solution 50% | 14353205    | 1       |
| Alliance Healthcare | Sodium lactate solution 50% | 18135702    | 1       |
| Anzag               | Sodium lactate solution 50% | 16056201    | 1       |
| Anzag               | Sodium lactate solution 50% | 18135803    | 1       |
| Anzag               | Sodium lactate solution 50% | 18314501    | 1       |
| Anzag 27.02.2013    | Sodium lactate solution 50% | 12294603    | 1       |
| Bombastus           | Sodium lactate solution 50% | 13111704    | 1       |
| Caelo               | Sodium lactate solution 50% | 3041410     | 1       |
| Caelo               | Sodium lactate solution 50% | 15135505    | 34      |
| Caelo               | Sodium lactate solution 50% | 17315307    | 9       |
| Caelo               | Sodium lactate solution 50% | 11238712    | 2       |
| Caelo               | Sodium lactate solution 50% | 507213157   | 1       |
| Caelo               | Sodium lactate solution 50% | 3111Q-03157 | 1       |
| Caelo               | Sodium lactate solution 50% | 12180404    | 5       |
| Caelo               | Sodium lactate solution 50% | 11238707    | 2       |
| Caelo               | Sodium lactate solution 50% | 12180407    | 7       |
| Caelo               | Sodium lactate solution 50% | 11024009    | 6       |
| Caelo               | Sodium lactate solution 50% | 20310511-1  | 1       |
| Caelo               | Sodium lactate solution 50% | 12294603    | 7       |
| Caelo               | Sodium lactate solution 50% | 1218407     | 1       |
| Caelo               | Sodium lactate solution 50% | 11024001    | 1       |
| Caelo               | Sodium lactate solution 50% | 12294604    | 6       |
| Caelo               | Sodium lactate solution 50% | 12294605    | 6       |
| Caelo               | Sodium lactate solution 50% | 12027301    | 1       |
| Caelo               | Sodium lactate solution 50% | 12180406    | 2       |

*continued on the next page*

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| Supplier | Substance                   | Batch        | Spectra |
|----------|-----------------------------|--------------|---------|
| Caelo    | Sodium lactate solution 50% | 12294610     | 5       |
| Caelo    | Sodium lactate solution 50% | 13111704     | 12      |
| Caelo    | Sodium lactate solution 50% | N-260313-3   | 1       |
| Caelo    | Sodium lactate solution 50% | 13267001     | 22      |
| Caelo    | Sodium lactate solution 50% | 13267003     | 7       |
| Caelo    | Sodium lactate solution 50% | 13267005     | 1       |
| Caelo    | Sodium lactate solution 50% | 14011301     | 1       |
| Caelo    | Sodium lactate solution 50% | 13111707     | 1       |
| Caelo    | Sodium lactate solution 50% | 13330304     | 2       |
| Caelo    | Sodium lactate solution 50% | 13330305     | 11      |
| Caelo    | Sodium lactate solution 50% | 13330306     | 1       |
| Caelo    | Sodium lactate solution 50% | 133305       | 1       |
| Caelo    | Sodium lactate solution 50% | 14039507     | 3       |
| Caelo    | Sodium lactate solution 50% | 13330308     | 1       |
| Caelo    | Sodium lactate solution 50% | 14271901     | 18      |
| Caelo    | Sodium lactate solution 50% | 14271906     | 2       |
| Caelo    | Sodium lactate solution 50% | 14271903     | 1       |
| Caelo    | Sodium lactate solution 50% | 14271904     | 11      |
| Caelo    | Sodium lactate solution 50% | 14353201     | 5       |
| Caelo    | Sodium lactate solution 50% | 1435207      | 1       |
| Caelo    | Sodium lactate solution 50% | 14271908     | 2       |
| Caelo    | Sodium lactate solution 50% | 15251102     | 12      |
| Caelo    | Sodium lactate solution 50% | 8705         | 1       |
| Caelo    | Sodium lactate solution 50% | 15135508     | 2       |
| Caelo    | Sodium lactate solution 50% | 14271902     | 1       |
| Caelo    | Sodium lactate solution 50% | 15135501     | 1       |
| Caelo    | Sodium lactate solution 50% | 15375805     | 1       |
| Caelo    | Sodium lactate solution 50% | 15375808     | 14      |
| Caelo    | Sodium lactate solution 50% | 2804         | 1       |
| Caelo    | Sodium lactate solution 50% | 2822         | 1       |
| Caelo    | Sodium lactate solution 50% | 1537806      | 1       |
| Caelo    | Sodium lactate solution 50% | 2889         | 1       |
| Caelo    | Sodium lactate solution 50% | 16056206     | 33      |
| Caelo    | Sodium lactate solution 50% | 16321004     | 1       |
| Caelo    | Sodium lactate solution 50% | 16321002     | 20      |
| Caelo    | Sodium lactate solution 50% | 16056207     | 6       |
| Caelo    | Sodium lactate solution 50% | 16321003     | 6       |
| Caelo    | Sodium lactate solution 50% | 16321008     | 42      |
| Caelo    | Sodium lactate solution 50% | 163210       | 1       |
| Caelo    | Sodium lactate solution 50% | 170977045365 | 1       |
| Caelo    | Sodium lactate solution 50% | 2415I-03157  | 1       |
| Caelo    | Sodium lactate solution 50% | 17097709     | 49      |
| Caelo    | Sodium lactate solution 50% | 17315301     | 64      |
| Caelo    | Sodium lactate solution 50% | 170977095567 | 1       |
| Caelo    | Sodium lactate solution 50% | 3051805      | 1       |
| Caelo    | Sodium lactate solution 50% | 17315306     | 87      |
| Caelo    | Sodium lactate solution 50% | 1731506      | 1       |
| Caelo    | Sodium lactate solution 50% | 18135803     | 58      |
| Caelo    | Sodium lactate solution 50% | 180135803    | 1       |
| Caelo    | Sodium lactate solution 50% | 19135702     | 1       |
| Caelo    | Sodium lactate solution 50% | 18135806     | 7       |
| Caelo    | Sodium lactate solution 50% | 18314505     | 32      |
| Caelo    | Sodium lactate solution 50% | 183145501    | 1       |
| Caelo    | Sodium lactate solution 50% | 1831455      | 1       |
| Caelo    | Sodium lactate solution 50% | 18314507     | 39      |
| Caelo    | Sodium lactate solution 50% | 3429         | 1       |
| Caelo    | Sodium lactate solution 50% | 18314508     | 2       |
| Caelo    | Sodium lactate solution 50% | 1831505      | 1       |
| Caelo    | Sodium lactate solution 50% | 191667002    | 31      |
| Caelo    | Sodium lactate solution 50% | 20000467006  | 3       |

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| Supplier | Substance                   | Batch                | Spectra |
|----------|-----------------------------|----------------------|---------|
| Caelo    | Sodium lactate solution 50% | 14271905             | 2       |
| Caelo    | Sodium lactate solution 50% | 11238701             | 4       |
| Caelo    | Sodium lactate solution 50% | 191667007            | 8       |
| Caelo    | Sodium lactate solution 50% | 10094060             | 2       |
| Caelo    | Sodium lactate solution 50% | 14353202             | 11      |
| Caelo    | Sodium lactate solution 50% | 17097704             | 70      |
| Caelo    | Sodium lactate solution 50% | 16321001             | 11      |
| Caelo    | Sodium lactate solution 50% | 18135802             | 12      |
| Caelo    | Sodium lactate solution 50% | 18173903             | 1       |
| Caelo    | Sodium lactate solution 50% | 14039508             | 1       |
| Caelo    | Sodium lactate solution 50% | 18314501             | 62      |
| Caelo    | Sodium lactate solution 50% | 12294607             | 6       |
| Caelo    | Sodium lactate solution 50% | 12180408             | 2       |
| Caelo    | Sodium lactate solution 50% | 14353210             | 11      |
| Caelo    | Sodium lactate solution 50% | 191667002P-200407-5  | 1       |
| Caelo    | Sodium lactate solution 50% | 14182903             | 2       |
| Caelo    | Sodium lactate solution 50% | 18135702-N20190115Ma | 1       |
| Caelo    | Sodium lactate solution 50% | 16056201-20170704Ma1 | 1       |
| Caelo    | Sodium lactate solution 50% | 1525110              | 1       |
| Caelo    | Sodium lactate solution 50% | 13267002             | 2       |
| Caelo    | Sodium lactate solution 50% | 14182904             | 7       |
| Caelo    | Sodium lactate solution 50% | 3351                 | 1       |
| Caelo    | Sodium lactate solution 50% | 14353207             | 13      |
| Caelo    | Sodium lactate solution 50% | 191667006            | 32      |
| Caelo    | Sodium lactate solution 50% | 13330303             | 2       |
| Caelo    | Sodium lactate solution 50% | 13267009             | 11      |
| Caelo    | Sodium lactate solution 50% | 18314506             | 9       |
| Caelo    | Sodium lactate solution 50% | 2014U-03157          | 1       |
| Caelo    | Sodium lactate solution 50% | 2516A-03157          | 1       |
| Caelo    | Sodium lactate solution 50% | 17097701             | 10      |
| Caelo    | Sodium lactate solution 50% | 2918E-03157          | 1       |
| Caelo    | Sodium lactate solution 50% | 2119I-03157          | 1       |
| Caelo    | Sodium lactate solution 50% | 16321009             | 4       |
| Caelo    | Sodium lactate solution 50% | 14039511             | 4       |
| Caelo    | Sodium lactate solution 50% | 1814501              | 1       |
| Caelo    | Sodium lactate solution 50% | 12/18-M04            | 1       |
| Caelo    | Sodium lactate solution 50% | 13330302             | 6       |
| Caelo    | Sodium lactate solution 50% | 14353205             | 21      |
| Caelo    | Sodium lactate solution 50% | 5(17315301)          | 1       |
| Caelo    | Sodium lactate solution 50% | 11238706             | 2       |
| Caelo    | Sodium lactate solution 50% | 13267006             | 3       |
| Caelo    | Sodium lactate solution 50% | 14271907             | 7       |
| Caelo    | Sodium lactate solution 50% | 14A21-B10-295977     | 1       |
| Caelo    | Sodium lactate solution 50% | 17097708             | 11      |
| Caelo    | Sodium lactate solution 50% | 1414Q03157           | 1       |
| Caelo    | Sodium lactate solution 50% | 1513505              | 1       |
| Caelo    | Sodium lactate solution 50% | 20000467002          | 18      |
| Caelo    | Sodium lactate solution 50% | 21000068002          | 3       |
| Caelo    | Sodium lactate solution 50% | 183145001            | 4       |
| Caelo    | Sodium lactate solution 50% | 20000467004          | 12      |
| Caelo    | Sodium lactate solution 50% | 13330307             | 11      |
| Caelo    | Sodium lactate solution 50% | 15251101             | 62      |
| Caelo    | Sodium lactate solution 50% | 173153065758         | 1       |
| Caelo    | Sodium lactate solution 50% | 14182902             | 10      |
| Caelo    | Sodium lactate solution 50% | 10/AKD7              | 1       |
| Caelo    | Sodium lactate solution 50% | 11/AKD16             | 1       |
| Caelo    | Sodium lactate solution 50% | 17315302             | 16      |
| Caelo    | Sodium lactate solution 50% | 181357002            | 1       |
| Caelo    | Sodium lactate solution 50% | 13111705             | 5       |
| Caelo    | Sodium lactate solution 50% | 12027303             | 2       |

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| Supplier                     | Substance                   | Batch       | Spectra |
|------------------------------|-----------------------------|-------------|---------|
| Caerol                       | Sodium lactate solution 50% | 18314507    | 2       |
| Caerol/Noweda                | Sodium lactate solution 50% | 18314507    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 71014/1     | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 177097704   | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314507    | 1       |
| Caelo                        | Sodium lactate solution 50% | 19167006    | 1       |
| Caesar & Lorentz             | Sodium lactate solution 50% | 16056206    | 1       |
| Caesar & Lorentz             | Sodium lactate solution 50% | 16321002    | 1       |
| Caesar & Lorentz             | Sodium lactate solution 50% | 17315301    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 14271901    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 14353205    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 17097704    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18135702    | 5       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18135803    | 4       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314501    | 10      |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18135802    | 3       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18135806    | 5       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314505    | 4       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314507    | 5       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314508    | 3       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 183145001   | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314502    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 18314509    | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 191667002   | 6       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 191667006   | 5       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 191667005   | 1       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 191667001   | 2       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 20000467002 | 2       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 191667007   | 3       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 20000467006 | 3       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 20000467004 | 3       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 21000068002 | 2       |
| Caesar & Lorentz GmbH        | Sodium lactate solution 50% | 20000467005 | 2       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 16321008    | 1       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 14271901    | 1       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 191667006   | 1       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 18314507    | 1       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 18135702    | 2       |
| Caesar & Lorentz GmbH / ...  | Sodium lactate solution 50% | 18314507    | 1       |
| Caesar & Lorentz GmbH / J... | Sodium lactate solution 50% | 20000467004 | 1       |
| Caesar & Lorentz GmbH / P... | Sodium lactate solution 50% | 18135806    | 1       |
| Caesar & Lorentz GmbH/AEP    | Sodium lactate solution 50% | 18314501    | 1       |
| Caesar & Lorentz GmbH/AEP    | Sodium lactate solution 50% | 191667006   | 1       |
| Caesar & Lorentz GmbH/AHD    | Sodium lactate solution 50% | 18135803    | 1       |
| Caesar & Lorentz GmbH/An...  | Sodium lactate solution 50% | 191667001   | 1       |
| Caesar & Lorentz GmbH/Gehe   | Sodium lactate solution 50% | 18314501    | 1       |
| Caesar & Lorentz GmbH/Gehe   | Sodium lactate solution 50% | 191667006   | 1       |
| Caesar & Lorentz GmbH/Ge...  | Sodium lactate solution 50% | 191667007   | 1       |
| Caesar & Lorentz GmbH/ph...  | Sodium lactate solution 50% | 18314506    | 3       |
| Caesar & Lorentz GmbH/Ph...  | Sodium lactate solution 50% | 18135803    | 1       |
| Caesar & Lorentz GmbH/Px     | Sodium lactate solution 50% | 18135803    | 1       |
| Caesar & Lorentz GmbH/Sa...  | Sodium lactate solution 50% | 191667002   | 1       |
| Caesar & Lorentz Hilden      | Sodium lactate solution 50% | 18135702    | 2       |
| Caesar & Lorentz Hilden      | Sodium lactate solution 50% | 18314505    | 1       |
| Caesar & Lorentz Hilden      | Sodium lactate solution 50% | 191667002   | 1       |
| Caesar & Lorentz/Gehe        | Sodium lactate solution 50% | 18314505    | 1       |
| Caesar & Lorentz/Noweda      | Sodium lactate solution 50% | 15375806    | 1       |
| Caesar & Lorentz/Sanacorp    | Sodium lactate solution 50% | 15251101    | 1       |
| Caesar & Lorentz/Sanacorp    | Sodium lactate solution 50% | 17097708    | 1       |
| Caesar und Lorentz GmbH      | Sodium lactate solution 50% | 17315301    | 1       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Caesar&Loretz              | Sodium lactate solution 50% | 15251101         | 1       |
| Caesar&Loretz GmbH         | Sodium lactate solution 50% | 15375806         | 1       |
| Caesar&Loretz GmbH/ San... | Sodium lactate solution 50% | 17097704         | 2       |
| Caesar&Loretz,Phoenix      | Sodium lactate solution 50% | 14182902         | 1       |
| Caesar&LoretzGmbH, Phoe... | Sodium lactate solution 50% | 18135803         | 1       |
| Caesar/Lorenz              | Sodium lactate solution 50% | 12294610         | 1       |
| Caleo/ Noweda              | Sodium lactate solution 50% | 17315306         | 1       |
| Caleo/ Noweda              | Sodium lactate solution 50% | 18135803         | 1       |
| Cealo / Otto Geilenkirc... | Sodium lactate solution 50% | 18314505         | 2       |
| Cealo/Phönix               | Sodium lactate solution 50% | 17315301         | 1       |
| Cealo/Sanacorp             | Sodium lactate solution 50% | 18135803         | 1       |
| Ebert 02.08.2016           | Sodium lactate solution 50% | 15375808         | 1       |
| EuRho                      | Sodium lactate solution 50% | 18314501         | 1       |
| Euro OTC                   | Sodium lactate solution 50% | 18135803         | 1       |
| Euro OTC                   | Sodium lactate solution 50% | 14271907         | 1       |
| Fagron                     | Sodium lactate solution 50% | 14/13            | 1       |
| Fagron                     | Sodium lactate solution 50% | 14A21-B10        | 4       |
| Fagron                     | Sodium lactate solution 50% | 14A21-B10-290492 | 2       |
| Fagron                     | Sodium lactate solution 50% | 14A21-810-295977 | 1       |
| Fagron                     | Sodium lactate solution 50% | 1453202          | 1       |
| Fagron                     | Sodium lactate solution 50% | 17315301         | 1       |
| Fagron                     | Sodium lactate solution 50% | 1317I-03157      | 1       |
| Fagron                     | Sodium lactate solution 50% | 12J18-M04        | 6       |
| Fagron                     | Sodium lactate solution 50% | 14a21-b10-295977 | 1       |
| Fagron                     | Sodium lactate solution 50% | K40875122        | 1       |
| Fiebig                     | Sodium lactate solution 50% | 17315302         | 2       |
| Gehe                       | Sodium lactate solution 50% | 13267009         | 1       |
| Gehe                       | Sodium lactate solution 50% | 10094060         | 1       |
| Gehe                       | Sodium lactate solution 50% | 16056206         | 1       |
| Gehe                       | Sodium lactate solution 50% | 17097709         | 2       |
| Gehe                       | Sodium lactate solution 50% | 17097701         | 1       |
| Gehe                       | Sodium lactate solution 50% | 18135702         | 4       |
| Gehe                       | Sodium lactate solution 50% | 18135803         | 1       |
| Gehe                       | Sodium lactate solution 50% | 18314501         | 1       |
| Gehe                       | Sodium lactate solution 50% | 18314507         | 1       |
| Gehe                       | Sodium lactate solution 50% | 191667002        | 1       |
| Gehe                       | Sodium lactate solution 50% | 20000467005      | 2       |
| GEHE                       | Sodium lactate solution 50% | 17315301         | 1       |
| GEHE                       | Sodium lactate solution 50% | 18135702         | 1       |
| GEHE                       | Sodium lactate solution 50% | 17315306         | 1       |
| GEHE                       | Sodium lactate solution 50% | 18135803         | 3       |
| GEHE                       | Sodium lactate solution 50% | 18314501         | 2       |
| Fagron                     | Sodium lactate solution 50% | 1311002383       | 1       |
| Gehe 12.1.15               | Sodium lactate solution 50% | 14271907         | 1       |
| Gehe amax                  | Sodium lactate solution 50% | 15375806         | 1       |
| Caelo                      | Sodium lactate solution 50% | 15375806         | 29      |
| Euro OTC                   | Sodium lactate solution 50% | 14039503         | 1       |
| Fagron                     | Sodium lactate solution 50% | 14271901         | 1       |
| Klenk                      | Sodium lactate solution 50% | 18135702         | 1       |
| Henry Lamotte Oils GmbH    | Sodium lactate solution 50% | 16321001         | 1       |
| Henry Lamotte Oils GmbH... | Sodium lactate solution 50% | 16056206         | 1       |
| Jenne                      | Sodium lactate solution 50% | 191667007        | 1       |
| Caelo                      | Sodium lactate solution 50% | 18135702         | 69      |
| Kehr                       | Sodium lactate solution 50% | 17097709         | 1       |
| Kehr/Sanacorp              | Sodium lactate solution 50% | 17315301         | 1       |
| Klenk                      | Sodium lactate solution 50% | 13267001         | 1       |
| L30                        | Sodium lactate solution 50% | 17315301         | 1       |
| Lamotte/Phönix             | Sodium lactate solution 50% | 16056201         | 1       |
| Lamotte/Sanacorp           | Sodium lactate solution 50% | 17315301         | 1       |
| Noweda                     | Sodium lactate solution 50% | 12294604         | 1       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| Noweda                     | Sodium lactate solution 50% | 13267001    | 1       |
| Noweda                     | Sodium lactate solution 50% | 17097704    | 2       |
| Noweda                     | Sodium lactate solution 50% | 17097709    | 1       |
| Noweda                     | Sodium lactate solution 50% | 17315301    | 1       |
| Noweda                     | Sodium lactate solution 50% | 18135806    | 1       |
| Noweda                     | Sodium lactate solution 50% | 20000467002 | 1       |
| Caelo                      | Sodium lactate solution 50% | 14353204    | 3       |
| Noweda 18.05.2015          | Sodium lactate solution 50% | 14353205    | 1       |
| Otto Fischar               | Sodium lactate solution 50% | 16056201    | 1       |
| Pharmachem/AHD             | Sodium lactate solution 50% | 17097704    | 1       |
| phoenix                    | Sodium lactate solution 50% | 14271901    | 2       |
| phoenix                    | Sodium lactate solution 50% | 15251101    | 2       |
| Phoenix                    | Sodium lactate solution 50% | 14353210    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 15251101    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 16056201    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 17097704    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 3110        | 1       |
| Phoenix                    | Sodium lactate solution 50% | 17315306    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 17315307    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 3240        | 1       |
| Phoenix                    | Sodium lactate solution 50% | 18135803    | 1       |
| Phoenix                    | Sodium lactate solution 50% | 18314501    | 1       |
| Phonix                     | Sodium lactate solution 50% | 17097701    | 1       |
| phönix                     | Sodium lactate solution 50% | 12180404/8  | 1       |
| phönix                     | Sodium lactate solution 50% | 9/AKD56     | 1       |
| Phönix                     | Sodium lactate solution 50% | 12180407    | 1       |
| Phönix                     | Sodium lactate solution 50% | 14271901    | 1       |
| Phönix                     | Sodium lactate solution 50% | 17097704    | 2       |
| Phönix                     | Sodium lactate solution 50% | 17315301    | 1       |
| Phönix                     | Sodium lactate solution 50% | 191667006   | 1       |
| Phönix                     | Sodium lactate solution 50% | 20000467004 | 1       |
| Phönix Gotha               | Sodium lactate solution 50% | K40875122   | 1       |
| Phönix, 20.09.2013         | Sodium lactate solution 50% | 13111705    | 1       |
| Phönix, Caesar&Loretz G... | Sodium lactate solution 50% | 18314506    | 1       |
| Fagron                     | Sodium lactate solution 50% | 14271907    | 1       |
| PKH Halle                  | Sodium lactate solution 50% | 17315306    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 12180407    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 14039508    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 11/AKD13    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 16056206    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 17097708    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 17315301    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 18135702    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 15375806    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 18314501    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 18135802    | 1       |
| Sanacorp                   | Sodium lactate solution 50% | 183145001   | 2       |
| Sanacorp/Caesar & Loret... | Sodium lactate solution 50% | 18135803    | 1       |
| Caelo                      | Sodium lactate solution 50% | 14353208    | 1       |
|                            | Sodium lactate solution 50% | 14182904    | 2       |
| Caelo                      | Sodium lactate solution 50% | 14039503    | 15      |
| Caelo                      | Sodium lactate solution 50% | 16056201    | 51      |
| Caelo                      | Sodium lactate solution 50% |             | 3       |
| Caelo                      | Sodium lactate solution 50% | 12027310    | 1       |
| Euro OTC                   | Sodium lactate solution 50% |             | 1       |

- 239 676 spectra from 1121 *Apo-Ident* customers from a total of 46 839 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are docu-



mented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Sodium lactate solution 50%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Sodium lactate solution 50%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 280           | 0              | 63 659        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 1683          | 4              | 239 676       |

The substance/substance group *Sodium lactate solution 50%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.8571 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.7629 % (> 99.5851 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Sodium lactate solution 50%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                           | Distance in main model | Distance in second-stage model |
|-------------------------------------|------------------------|--------------------------------|
| Lotio Cordes <sup>®</sup>           | 34.87                  | —                              |
| Liquorice juice purified, diluted   | 36.31                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40) | 44.73                  | —                              |
| Condurango wine                     | 47.53                  | —                              |
| Base cream, diluted                 | 51.14                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Sodium lactate solution 50%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30621     | 32839               | 2.98                         | 35.62                           |
| 31321     | 32839               | 2.10                         | 37.33                           |
| 32586     | 34729               | 7.29                         | 45.84                           |
| 32839     | 32839               | 0.00                         | 37.37                           |
| 32917     | 32839               | 2.52                         | 34.87                           |
| 34729     | 34729               | 0.00                         | 40.55                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Sodium laureth sulfate solution 27%</b>                       |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30936-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Sodium laureth sulfate solution 27%; Sodium laureth sulphate solution 27%; Solutio natrii laurylaethersulfurici 27 %

### Special notes

When selecting the *Sodium laureth sulfate solution 27%* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group           | Type A | Type B | Type C |
|-------------------------------------|--------|--------|--------|
| Sodium laureth sulfate solution 27% | 9      | 5      | 40     |

## Second-stage model

For differentiation of the substance/substance group *Sodium laureth sulfate solution 27%* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Sodium laureth sulfate solution 27%*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Sodium laureth s... | 12315211 | 30936     | 50      | 20121029    |
| Caelo    | Sodium laureth s... | 13069915 | 31114     | 39      | 20130402    |
| Caelo    | Sodium laureth s... | 14049902 | 31349     | 60      | 8930        |
| Caelo    | Sodium laureth s... | 161968   | 32696     | 30      | 20161010*   |
| Caelo    | Sodium laureth s... | 16196801 | 32818     | 30      | 20161010    |
| Caelo    | Sodium laureth s... | 163071   | 33090     | 40      | 20161121*   |
| Caelo    | Sodium laureth s... | 190124   | 34464     | 40      | 20190211*   |
| Caelo    | Sodium laureth s... | 190656   | 34633     | 40      | 20190510*   |
| Caelo    | Sodium laureth s... | 192336   | 34725     | 40      | 20190916*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 369 spectra of 9 reference samples from the substance/substance group *Sodium laureth sulfate solution 27%*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 570 spectra from a total of 1298 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 270 spectra of 8 reference samples from the substance/substance group *Sodium laureth sulfate solution* 27%.
- Among them are spectra of independent samples from 5 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch       | Sample ID          | Spectra |
|----------|---------------------------------|-------------|--------------------|---------|
| Caelo    | Sodium laureth sulfate solut... | 171210      | 33335              | 40      |
| Caelo    | Sodium laureth sulfate solut... | 172233      | 33698              | 40      |
| Caelo    | Sodium laureth sulfate solut... | 20001653002 | 35134              | 40      |
| Caelo    | Sodium laureth sulfate solut... | 20004206    | 35253              | 40      |
| Caelo    | Sodium laureth sulfate solut... | 21002403    | 35722              | 50      |
| Caelo    | Sodium laureth sulfate solut... | 161968      | 32696 <sup>†</sup> | 10      |
| Caelo    | Sodium laureth sulfate solut... | 16196801    | 32818 <sup>†</sup> | 10      |
| Caelo    | Sodium laureth sulfate solut... | 172233      | 33883              | 40      |

- 91 221 spectra from a total of 2009 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 94 spectra from 39 *Apo-Ident* customers from 43 batches from the substance/substance group *Sodium laureth sulfate solution* 27%.
- Among them are spectra of independent samples from 40 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                       | Batch    | Spectra |
|----------|---------------------------------|----------|---------|
| Caelo    | Sodium laureth sulfate solut... | 12044308 | 4       |
| Caelo    | Sodium laureth sulfate solut... | 12044307 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 13069911 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 13241001 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 11322611 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 14197916 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 14355304 | 2       |
| Caelo    | Sodium laureth sulfate solut... | 14355308 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 17121004 | 7       |
| Caelo    | Sodium laureth sulfate solut... | 17223302 | 4       |
| Caelo    | Sodium laureth sulfate solut... | 17318601 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 18199701 | 7       |
| Caelo    | Sodium laureth sulfate solut... | 18118901 | 4       |
| Caelo    | Sodium laureth sulfate solut... | 19065604 | 2       |
| Caelo    | Sodium laureth sulfate solut... | 14355314 | 8       |
| Caelo    | Sodium laureth sulfate solut... | 14197920 | 1       |
| Caelo    | Sodium laureth sulfate solut... | 1901240  | 1       |
| Caelo    | Sodium laureth sulfate solut... | 19233602 | 3       |

*continued on the next page*

<sup>†</sup>These spectra were recorded from material of the same package as the corresponding calibration spectra (*Type A*). Hence, these spectra are not independent and are not of *Type B*.

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | Sodium laureth sulfate solut... | 20001653002 | 2       |
| Caelo                      | Sodium laureth sulfate solut... | 12341104    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 15145004    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 13241101    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 16307104    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 17121005    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 13069903    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 13069905    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 13241004    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 14049904    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 14355310    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 15145017    | 5       |
| Caelo                      | Sodium laureth sulfate solut... | 19065601    | 2       |
| Caelo                      | Sodium laureth sulfate solut... | 17121002    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 16354801    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 12315203    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 2613M-01907 | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 15145010    | 1       |
| Caesar & Loretz GmbH       | Sodium laureth sulfate solut... | 18199701    | 1       |
| Caesar & Loretz GmbH       | Sodium laureth sulfate solut... | 19012404    | 2       |
| Caesar & Loretz GmbH       | Sodium laureth sulfate solut... | 19233602    | 1       |
| Caesar & Loretz GmbH       | Sodium laureth sulfate solut... | 20001653002 | 1       |
| Caesar & Loretz GmbH Hi... | Sodium laureth sulfate solut... | 14049913    | 1       |
| Caesar & Loretz GmbH, 4... | Sodium laureth sulfate solut... | 12315211    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 14197915    | 6       |
| Caelo                      | Sodium laureth sulfate solut... | 14355315    | 1       |
| Phönix                     | Sodium laureth sulfate solut... | 14355314    | 1       |
| Sanacorp                   | Sodium laureth sulfate solut... | 14049902    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 12315211    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 14049902    | 1       |
| Caelo                      | Sodium laureth sulfate solut... | 16196801    | 2       |

- 241 269 spectra from 1121 *Apo-Ident* customers from a total of 46 964 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Sodium laureth sulfate solution 27%* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Sodium laureth sulfate solution 27%* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 369           | 0              | 63 570        |
| <b>Type B</b> | 0              | 253           | 17             | 91 221        |
| <b>Type C</b> | 0              | 94            | 0              | 241 269       |

The substance/substance group *Sodium laureth sulfate solution 27%* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.3740 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 93.7037 % (> 92.5926 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6850 %) | 100.0000 % (> 93.6170 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Sodium laureth sulfate solution 27%* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>                           | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|--------------------------------------------|-------------------------------|---------------------------------------|
| Non-ionic hydrous liniment SR/DAC (NRF...  | 18.81                         | —                                     |
| Hydrated liniment SR/DAC (NRF p.40)        | 20.58                         | —                                     |
| Hydrophilic cream, non-ionic SR (NRF p...  | 21.95                         | —                                     |
| Hydrophilic cream, non-ionic without p...  | 28.07                         | —                                     |
| Anionic hydrophilic cream without prese... | 30.29                         | —                                     |
| Anionic hydrophilic cream SR (NRF p.27)    | 31.54                         | —                                     |
| Glycolic acid 70%                          | 33.60                         | —                                     |
| Wolff® base half-fat cream                 | 47.49                         | —                                     |
| Base cream, diluted                        | 48.85                         | —                                     |
| Gel Cordes®                                | 50.67                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Sodium laureth sulfate solution 27%* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 30936            | 31349                      | 2.84                                | 26.10                                  |
| 31114            | 31349                      | 4.47                                | 24.47                                  |
| 31349            | 31349                      | 0.00                                | 23.10                                  |
| 32696            | 32696                      | 0.00                                | 19.38                                  |
| 32818            | 33090                      | 2.34                                | 20.58                                  |
| 33090            | 33090                      | 0.00                                | 20.84                                  |
| 34464            | 34464                      | 0.00                                | 19.62                                  |

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| <b>Sample ID</b> | <b>Reference<br/>sample ID</b> | <b>Distance to<br/>reference sample</b> | <b>Distance to<br/>next foreign sample</b> |
|------------------|--------------------------------|-----------------------------------------|--------------------------------------------|
| 34633            | 34633                          | 0.00                                    | 19.21                                      |
| 34725            | 34725                          | 0.00                                    | 22.23                                      |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Soft ointment**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30896-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Soft ointment; Unguentum molle

### Special notes

When selecting the *Soft ointment* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Soft ointment             | 9      | 25     | 450    |

## Second-stage model

For differentiation of the substance/substance group *Soft ointment* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Soft ointment*:

| Supplier      | Substance     | Batch      | Sample ID | Spectra | Certificate        |
|---------------|---------------|------------|-----------|---------|--------------------|
| Caelo         | Soft ointment | 12353301   | 30896     | 80      | 20121218           |
| Caelo         | Soft ointment | 14080501   | 31452     | 40      | AR-15-FG-000142-01 |
| Caelo         | Soft ointment | 153768     | 31984     | 60      | 20151103*          |
| Caelo         | Soft ointment | 160833     | 32097     | 40      | 20160322*          |
| Caelo         | Soft ointment | 163134     | 32871     | 40      | 20161116*          |
| Caelo         | Soft ointment | 21000780   | 35342     | 40      | 20210310*          |
| Caelo         | Soft ointment | 21000781   | 35343     | 40      | 20210310*          |
| Henry Lamotte | Soft ointment | 5215100    | 30924     | 50      | 20111111           |
| Henry Lamotte | Soft ointment | 8005213003 | 34687     | 40      | 20190318           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 430 spectra of 9 reference samples from the substance/substance group *Soft ointment*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 9 different batches.
- 63 509 spectra from a total of 1298 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 1250 spectra of 29 reference samples from the substance/substance group *Soft ointment*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 25 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance     | Batch    | Sample ID | Spectra |
|----------|---------------|----------|-----------|---------|
| Caelo    | Soft ointment | 153770   | 31985     | 60      |
| Caelo    | Soft ointment | 153772   | 31987     | 60      |
| Caelo    | Soft ointment | 160830   | 32094     | 40      |
| Caelo    | Soft ointment | 160831   | 32095     | 30      |
| Caelo    | Soft ointment | 160832   | 32096     | 40      |
| Caelo    | Soft ointment | 161463   | 32406     | 40      |
| Caelo    | Soft ointment | 161464   | 32407     | 40      |
| Caelo    | Soft ointment | 162452   | 32496     | 40      |
| Caelo    | Soft ointment | 162453   | 32497     | 40      |
| Caelo    | Soft ointment | 162454   | 32498     | 40      |
| Caelo    | Soft ointment | 162455   | 32499     | 40      |
| Caelo    | Soft ointment | 171969   | 33560     | 40      |
| Caelo    | Soft ointment | 171971   | 33561     | 40      |
| Caelo    | Soft ointment | 171972   | 33562     | 40      |
| Caelo    | Soft ointment | 172631   | 33748     | 40      |
| Caelo    | Soft ointment | 172632   | 33749     | 40      |
| Caelo    | Soft ointment | 180021   | 34012     | 40      |
| Caelo    | Soft ointment | 182012   | 34258     | 40      |
| Caelo    | Soft ointment | 182511   | 34356     | 40      |
| Caelo    | Soft ointment | 191915   | 34784     | 40      |
| Caelo    | Soft ointment | 190824   | 34785     | 40      |
| Caelo    | Soft ointment | 20001408 | 34964     | 40      |
| Caelo    | Soft ointment | 21000779 | 35341     | 40      |
| Caelo    | Soft ointment | 21000782 | 35344     | 40      |
| Caelo    | Soft ointment | 21000783 | 35345     | 40      |
| Caelo    | Soft ointment | 153768   | 31983     | 60      |
| Caelo    | Soft ointment | 153770   | 31986     | 60      |
| Caelo    | Soft ointment | 153772   | 31988     | 60      |
| Caelo    | Soft ointment | 172632   | 33750     | 40      |

- 90 241 spectra from a total of 1990 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4215 spectra from 825 *Apo-Ident* customers from 463 batches from the substance/substance group *Soft ointment*.
- Among them are spectra of independent samples from 449 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier           | Substance     | Batch      | Spectra |
|--------------------|---------------|------------|---------|
| AEP                | Soft ointment | 19191501   | 1       |
| AEP/Caelo/19.06.20 | Soft ointment | 19305101   | 1       |
| AHC/Lamotte        | Soft ointment | 8002875005 | 1       |
| AHD                | Soft ointment | 17076601   | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| AHD 02.09.14 EK 5,03       | Soft ointment    | 5691800          | 1              |
| AHD 17.11.14 EK 5,51       | Soft ointment    | 13I24-T01-006925 | 1              |
| Euro OTC                   | Soft ointment    | 16313401         | 1              |
| ahd/lamotte                | Soft ointment    | 5789000          | 1              |
| AHDE 03.06.2015            | Soft ointment    | 14375602         | 2              |
| Ahde 20.11.17              | Soft ointment    | 17076401         | 1              |
| AHL                        | Soft ointment    | 6001368001       | 2              |
| AHL                        | Soft ointment    | 8002320004       | 1              |
| Caelo                      | Soft ointment    | 16313402         | 4              |
| ALH/ Henry                 | Soft ointment    | 8002875006       | 1              |
| Caelo                      | Soft ointment    | 17197201         | 15             |
| Allianc 03.02.15           | Soft ointment    | 14375601         | 1              |
| Caelo                      | Soft ointment    | 15377101         | 62             |
| Alliance                   | Soft ointment    | 18251101         | 1              |
| Alliance Healthcare        | Soft ointment    | 14080201         | 1              |
| Alliance Healthcare        | Soft ointment    | 298070           | 1              |
| Alliance Healthcare        | Soft ointment    | 18251101         | 2              |
| Alliance Healthcare Hen... | Soft ointment    | 8004399002       | 1              |
| Alliance Healthcare/Hed... | Soft ointment    | 281897           | 1              |
| Allianz Healthcare 11.0... | Soft ointment    | 14375602         | 1              |
| Alte Apotheke              | Soft ointment    | 16146103         | 1              |
| Anzag                      | Soft ointment    | 267553           | 1              |
| Anzag                      | Soft ointment    | 269470           | 1              |
| Anzag                      | Soft ointment    | 15377101         | 1              |
| Anzag                      | Soft ointment    | 16A21-T05-029597 | 1              |
| Anzag                      | Soft ointment    | 17A03-T01-039997 | 1              |
| Anzag                      | Soft ointment    | 18000135         | 1              |
| Anzag                      | Soft ointment    | 18002039         | 1              |
| Anzag 18.04.14 EK:3,87     | Soft ointment    | 1324-T02-006929  | 1              |
| Anzag 23.01.2013           | Soft ointment    | 12353301         | 1              |
| Anzag 27.6.17              | Soft ointment    | 16313401         | 1              |
| Anzag 31.01.13 ek: 5,10EUR | Soft ointment    | 12353201         | 1              |
| Anzag ek:5,12EUR 19.09.12  | Soft ointment    | 12091402         | 1              |
| Anzag;21.03.15;3,53EUR     | Soft ointment    | 14375601         | 1              |
| Anzag;27.10.14;3,28EUR     | Soft ointment    | 14202301         | 1              |
| ApoAmKlini                 | Soft ointment    | 1118Q-02542      | 2              |
| BASF AG                    | Soft ointment    | 291333           | 1              |
| Beiersdorf/Phoenix         | Soft ointment    | 16313401         | 1              |
| Berkel AHK                 | Soft ointment    | 13387402         | 1              |
| Berkel AHK                 | Soft ointment    | 14007601         | 1              |
| Berkel AHK                 | Soft ointment    | 14202201         | 2              |
| Berkel AHK                 | Soft ointment    | 14202001         | 1              |
| Bomastus                   | Soft ointment    | 291333           | 1              |
| Bomastus                   | Soft ointment    | 269468           | 1              |
| Bomastus                   | Soft ointment    | 271430           | 1              |
| Bomastus                   | Soft ointment    | 275422           | 4              |
| Bomastus                   | Soft ointment    | 261106           | 1              |
| Bomastus                   | Soft ointment    | 275424           | 1              |
| Bomastus                   | Soft ointment    | 254399           | 1              |
| Bomastus                   | Soft ointment    | 284057           | 1              |
| Bomastus                   | Soft ointment    | 286012           | 7              |
| Bomastus                   | Soft ointment    | 281897           | 1              |
| Bomastus                   | Soft ointment    | 288013           | 4              |
| Bomastus                   | Soft ointment    | 291333           | 3              |
| Bomastus                   | Soft ointment    | 295313           | 4              |
| Bomastus                   | Soft ointment    | 15377001         | 1              |
| Bomastus                   | Soft ointment    | 16083001         | 1              |
| Bomastus                   | Soft ointment    | 6862381          | 2              |
| Bomastus                   | Soft ointment    | 308038           | 2              |
| Bomastus                   | Soft ointment    | 3099727          | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Bombastus       | Soft ointment    | 18004475     | 10             |
| Bombastus       | Soft ointment    | 18006880     | 5              |
| Bombastus       | Soft ointment    | 18006881     | 2              |
| Bombastus       | Soft ointment    | 19002576     | 3              |
| Bombastus       | Soft ointment    | 262274       | 1              |
| Bombastus       | Soft ointment    | 20001428     | 2              |
| Bombastus       | Soft ointment    | 297077       | 9              |
| Bombastus       | Soft ointment    | 18004473     | 2              |
| Bombastus       | Soft ointment    | 304548       | 7              |
| Bombastus       | Soft ointment    | 18000136     | 3              |
| Bombastus       | Soft ointment    | 305451       | 4              |
| Bombastus       | Soft ointment    | 280166       | 2              |
| Bombastus       | Soft ointment    | 300642       | 1              |
| Bombastus       | Soft ointment    | 302326       | 1              |
| Bombastus       | Soft ointment    | 288704       | 7              |
| Bombastus       | Soft ointment    | 304546       | 1              |
| Bombastus       | Soft ointment    | 309727       | 7              |
| Bombastus       | Soft ointment    | 276854       | 1              |
| Bombastus       | Soft ointment    | 19005877     | 1              |
| Bombastus       | Soft ointment    | 278047       | 1              |
| Bombastus       | Soft ointment    | 309726       | 2              |
| Bombastus       | Soft ointment    | 18002039     | 4              |
| Bombastus       | Soft ointment    | 308040       | 5              |
| Bombastus       | Soft ointment    | 20002930     | 1              |
| Bombastus       | Soft ointment    | 305450       | 5              |
| Bombastus       | Soft ointment    | 293336       | 3              |
| Bombastus       | Soft ointment    | 8002875005   | 1              |
| Bombastus       | Soft ointment    | 19002113     | 3              |
| Bombastus       | Soft ointment    | 19305101     | 1              |
| Bombastus       | Soft ointment    | 21002016     | 1              |
| Bombastus       | Soft ointment    | 298070       | 3              |
| Bombastus       | Soft ointment    | 278048       | 2              |
| Bombastus       | Soft ointment    | 16146301     | 1              |
| Bombastus       | Soft ointment    | 18000135     | 3              |
| Bombastus       | Soft ointment    | 18002038     | 8              |
| Bombastus       | Soft ointment    | 305449       | 7              |
| Bombastus       | Soft ointment    | 308039       | 4              |
| Bombastus       | Soft ointment    | 18000134     | 6              |
| Bombastus       | Soft ointment    | 18006882     | 7              |
| Bombastus       | Soft ointment    | 19002112     | 5              |
| Bombastus       | Soft ointment    | 5317100      | 1              |
| Bombastus       | Soft ointment    | 284056       | 1              |
| Bombastus       | Soft ointment    | 288702       | 1              |
| Bombastus       | Soft ointment    | 298069       | 1              |
| Bombastus       | Soft ointment    | 302327       | 5              |
| Bombastus       | Soft ointment    | 17000369     | 4              |
| Bombastus       | Soft ointment    | 18002978     | 7              |
| Bombastus       | Soft ointment    | 19005876     | 1              |
| Bombastus       | Soft ointment    | 17000370     | 7              |
| Bombastus       | Soft ointment    | 299869       | 8              |
| Bombastus       | Soft ointment    | 19002114     | 7              |
| Bombastus       | Soft ointment    | 19005878     | 4              |
| Bombastus       | Soft ointment    | 18002040     | 5              |
| Bombastus       | Soft ointment    | 16083101     | 1              |
| Bombastus       | Soft ointment    | 18004474     | 1              |
| Bombastus       | Soft ointment    | 269469       | 1              |
| Caela           | Soft ointment    | 15376801     | 1              |
| Caeleo/ Krieger | Soft ointment    | 182021301    | 1              |
| Caelo           | Soft ointment    | 14375901     | 10             |
| Caelo           | Soft ointment    | 92810389     | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Soft ointment    | 11282201         | 7              |
| Caelo           | Soft ointment    | 12045401         | 1              |
| Caelo           | Soft ointment    | 7071202          | 1              |
| Caelo           | Soft ointment    | 12194501         | 8              |
| Caelo           | Soft ointment    | 12091402         | 6              |
| Caelo           | Soft ointment    | 1097697          | 2              |
| Caelo           | Soft ointment    | 12194601         | 13             |
| Caelo           | Soft ointment    | 12045501         | 2              |
| Caelo           | Soft ointment    | 612212542        | 1              |
| Caelo           | Soft ointment    | 18121206         | 1              |
| Caelo           | Soft ointment    | 12194502         | 4              |
| Caelo           | Soft ointment    | 20230712-4       | 1              |
| Caelo           | Soft ointment    | 12353201         | 15             |
| Caelo           | Soft ointment    | 1253201          | 1              |
| Caelo           | Soft ointment    | 1294502          | 1              |
| Caelo           | Soft ointment    | 13053601         | 14             |
| Caelo           | Soft ointment    | 13053801         | 20             |
| Caelo           | Soft ointment    | 13053901         | 7              |
| Caelo           | Soft ointment    | 13192901         | 19             |
| Caelo           | Soft ointment    | 3213E2542        | 1              |
| Caelo           | Soft ointment    | 13192601         | 37             |
| Caelo           | Soft ointment    | 13387402         | 19             |
| Caelo           | Soft ointment    | 8012014C         | 1              |
| Caelo           | Soft ointment    | 13375503         | 2              |
| Caelo           | Soft ointment    | 10111201         | 1              |
| Caelo           | Soft ointment    | 14007601         | 30             |
| Caelo           | Soft ointment    | 5448300          | 1              |
| Caelo           | Soft ointment    | 13387403         | 3              |
| Caelo           | Soft ointment    | 14007501         | 12             |
| Caelo           | Soft ointment    | 10377201         | 1              |
| Caelo           | Soft ointment    | 23061403         | 1              |
| Caelo           | Soft ointment    | 1097763          | 2              |
| Caelo           | Soft ointment    | 5081405          | 1              |
| Caelo           | Soft ointment    | 15092014C        | 1              |
| Caelo           | Soft ointment    | 14202302         | 8              |
| Caelo           | Soft ointment    | 14202201         | 23             |
| Caelo           | Soft ointment    | 14202301         | 38             |
| Caelo           | Soft ointment    | 1420220          | 1              |
| Caelo           | Soft ointment    | 5011504          | 1              |
| Caelo           | Soft ointment    | 14375603         | 1              |
| Caelo           | Soft ointment    | 15059402         | 2              |
| Caelo           | Soft ointment    | 16083301         | 9              |
| Caelo           | Soft ointment    | 16146201         | 10             |
| Caelo           | Soft ointment    | 8012015C         | 1              |
| Caelo           | Soft ointment    | 14375601         | 18             |
| Caelo           | Soft ointment    | Caelo            | 1              |
| Caelo           | Soft ointment    | 31031503         | 1              |
| Caelo           | Soft ointment    | 15059301         | 22             |
| Caelo           | Soft ointment    | 14375602         | 29             |
| Caelo           | Soft ointment    | 7051510          | 1              |
| Caelo           | Soft ointment    | 15204401         | 44             |
| Caelo           | Soft ointment    | 15059501         | 1              |
| Caelo           | Soft ointment    | 15e14-t01-022366 | 1              |
| Caelo           | Soft ointment    | 2739             | 1              |
| Caelo           | Soft ointment    | 15377001         | 30             |
| Caelo           | Soft ointment    | 1537701          | 2              |
| Caelo           | Soft ointment    | 16083002         | 38             |
| Caelo           | Soft ointment    | 160830           | 1              |
| Caelo           | Soft ointment    | 16083101         | 37             |
| Caelo           | Soft ointment    | 15E14-T02-022369 | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|-----------------|------------------|-------------------|----------------|
| Caelo           | Soft ointment    | 16083001          | 45             |
| Caelo           | Soft ointment    | 2820              | 1              |
| Caelo           | Soft ointment    | 1614620           | 1              |
| Caelo           | Soft ointment    | 16146301          | 24             |
| Caelo           | Soft ointment    | 160620UM          | 1              |
| Caelo           | Soft ointment    | 16146502          | 34             |
| Caelo           | Soft ointment    | 161111UM/16146103 | 1              |
| Caelo           | Soft ointment    | 15108t02025891    | 1              |
| Caelo           | Soft ointment    | 161465            | 1              |
| Caelo           | Soft ointment    | 16146302          | 5              |
| Caelo           | Soft ointment    | 20011702          | 1              |
| Caelo           | Soft ointment    | 16313401          | 44             |
| Caelo           | Soft ointment    | 16F03-T02-033989  | 2              |
| Caelo           | Soft ointment    | 17076402          | 2              |
| Caelo           | Soft ointment    | 161465025263      | 1              |
| Caelo           | Soft ointment    | 16G18-T02-035248  | 1              |
| Caelo           | Soft ointment    | 17076701          | 8              |
| Caelo           | Soft ointment    | 170764            | 1              |
| Caelo           | Soft ointment    | 20170815-02542    | 1              |
| Caelo           | Soft ointment    | 170764015337      | 1              |
| Caelo           | Soft ointment    | 7076501           | 1              |
| Caelo           | Soft ointment    | 23101705          | 1              |
| Caelo           | Soft ointment    | 17104902          | 1              |
| Caelo           | Soft ointment    | 17196901          | 4              |
| Caelo           | Soft ointment    | 17203101          | 1              |
| Caelo           | Soft ointment    | 17263302          | 9              |
| Caelo           | Soft ointment    | 17076051          | 1              |
| Caelo           | Soft ointment    | 18002303          | 12             |
| Caelo           | Soft ointment    | 18061806          | 1              |
| Caelo           | Soft ointment    | 18002320          | 1              |
| Caelo           | Soft ointment    | 1814501           | 1              |
| Caelo           | Soft ointment    | 1726201           | 1              |
| Caelo           | Soft ointment    | 180002401         | 2              |
| Caelo           | Soft ointment    | 29091804          | 1              |
| Caelo           | Soft ointment    | 182014202         | 1              |
| Caelo           | Soft ointment    | 18001901          | 8              |
| Caelo           | Soft ointment    | 18251101          | 77             |
| Caelo           | Soft ointment    | 1800251           | 1              |
| Caelo           | Soft ointment    | 26011904          | 1              |
| Caelo           | Soft ointment    | 18251102          | 3              |
| Caelo           | Soft ointment    | VFM002-1C         | 1              |
| Caelo           | Soft ointment    | 18251302          | 3              |
| Caelo           | Soft ointment    | 19015102          | 10             |
| Caelo           | Soft ointment    | 19191602          | 47             |
| Caelo           | Soft ointment    | 19191702          | 8              |
| Caelo           | Soft ointment    | 10101801          | 1              |
| Caelo           | Soft ointment    | 19000445001       | 3              |
| Caelo           | Soft ointment    | 1900044001        | 1              |
| Caelo           | Soft ointment    | 20001642001       | 2              |
| Caelo           | Soft ointment    | 20002176002       | 2              |
| Caelo           | Soft ointment    | 20001641001       | 1              |
| Caelo           | Soft ointment    | 12194701          | 1              |
| Caelo           | Soft ointment    | 11282102          | 2              |
| Caelo           | Soft ointment    | 12091403          | 1              |
| Caelo           | Soft ointment    | 15204501          | 27             |
| Caelo           | Soft ointment    | 19082302          | 69             |
| Caelo           | Soft ointment    | 299869            | 1              |
| Caelo           | Soft ointment    | 11111             | 1              |
| Caelo           | Soft ointment    | 15204602          | 6              |
| Caelo           | Soft ointment    | 17076601          | 64             |

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| Supplier | Substance     | Batch                | Spectra |
|----------|---------------|----------------------|---------|
| Caelo    | Soft ointment | 18001701             | 11      |
| Caelo    | Soft ointment | 17263302-20180404Ma8 | 1       |
| Caelo    | Soft ointment | 17197103-20180112Ma6 | 1       |
| Caelo    | Soft ointment | 170509UM/16245202    | 1       |
| Caelo    | Soft ointment | 20003574002          | 3       |
| Caelo    | Soft ointment | 13192502             | 2       |
| Caelo    | Soft ointment | 15204402             | 4       |
| Caelo    | Soft ointment | 18140502             | 7       |
| Caelo    | Soft ointment | 19305101             | 57      |
| Caelo    | Soft ointment | 11256701             | 5       |
| Caelo    | Soft ointment | 101/AKD13            | 1       |
| Caelo    | Soft ointment | 19B14T07064291       | 1       |
| Caelo    | Soft ointment | 1324-T01-006925      | 1       |
| Caelo    | Soft ointment | 16245502             | 3       |
| Caelo    | Soft ointment | 12045601             | 1       |
| Caelo    | Soft ointment | 12194401             | 3       |
| Caelo    | Soft ointment | 17076801-20171106Ma6 | 1       |
| Caelo    | Soft ointment | 12353302             | 2       |
| Caelo    | Soft ointment | 18001901-W20190115Ma | 1       |
| Caelo    | Soft ointment | 18002401             | 83      |
| Caelo    | Soft ointment | 1919602              | 2       |
| Caelo    | Soft ointment | 17263202             | 16      |
| Caelo    | Soft ointment | 14007301             | 24      |
| Caelo    | Soft ointment | 16024401             | 1       |
| Caelo    | Soft ointment | 18152901             | 33      |
| Caelo    | Soft ointment | 18E07-T09-055703     | 1       |
| Caelo    | Soft ointment | 19015101             | 31      |
| Caelo    | Soft ointment | 16146503             | 3       |
| Caelo    | Soft ointment | 16245402             | 7       |
| Caelo    | Soft ointment | 18002501             | 63      |
| Caelo    | Soft ointment | 19000446001          | 17      |
| Caelo    | Soft ointment | 12045702             | 5       |
| Caelo    | Soft ointment | 18002302             | 21      |
| Caelo    | Soft ointment | 8201402              | 1       |
| Caelo    | Soft ointment | 21000781001          | 1       |
| Caelo    | Soft ointment | 18201402             | 75      |
| Caelo    | Soft ointment | 19082301             | 16      |
| Caelo    | Soft ointment | 20001408001          | 7       |
| Caelo    | Soft ointment | 1706401              | 1       |
| Caelo    | Soft ointment | 18251202             | 5       |
| Caelo    | Soft ointment | 19015020             | 1       |
| Caelo    | Soft ointment | 19191601             | 5       |
| Caelo    | Soft ointment | 13192701             | 6       |
| Caelo    | Soft ointment | 13375402             | 10      |
| Caelo    | Soft ointment | 11132901             | 1       |
| Caelo    | Soft ointment | 16045301             | 1       |
| Caelo    | Soft ointment | 19191603             | 1       |
| Caelo    | Soft ointment | 1402201              | 1       |
| Caelo    | Soft ointment | 11256302             | 1       |
| Caelo    | Soft ointment | 12091401             | 1       |
| Caelo    | Soft ointment | 1319201              | 1       |
| Caelo    | Soft ointment | 17076301             | 16      |
| Caelo    | Soft ointment | 17263201             | 91      |
| Caelo    | Soft ointment | 18251301             | 38      |
| Caelo    | Soft ointment | 1314I-02542          | 1       |
| Caelo    | Soft ointment | 1603001              | 1       |
| Caelo    | Soft ointment | 192936001            | 32      |
| Caelo    | Soft ointment | 19014902             | 1       |
| Caelo    | Soft ointment | 14080301             | 5       |
| Caelo    | Soft ointment | 18140501             | 14      |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Soft ointment    | 10(18002303)         | 1              |
| Caelo           | Soft ointment    | 51123/1S1e           | 1              |
| Caelo           | Soft ointment    | 15376901             | 13             |
| Caelo           | Soft ointment    | 16A21-T05-029597     | 1              |
| Caelo           | Soft ointment    | 17076501             | 52             |
| Caelo           | Soft ointment    | 19015202             | 45             |
| Caelo           | Soft ointment    | 13053701             | 1              |
| Caelo           | Soft ointment    | 13192801             | 2              |
| Caelo           | Soft ointment    | 14080101             | 1              |
| Caelo           | Soft ointment    | 19000426001          | 6              |
| Caelo           | Soft ointment    | 11282101             | 2              |
| Caelo           | Soft ointment    | 12045701             | 5              |
| Caelo           | Soft ointment    | 16A21T05029597       | 1              |
| Caelo           | Soft ointment    | 16146401             | 11             |
| Caelo           | Soft ointment    | 16146103             | 9              |
| Caelo           | Soft ointment    | 16245401             | 36             |
| Caelo           | Soft ointment    | 16245202             | 7              |
| Caelo           | Soft ointment    | 17064402             | 1              |
| Caelo           | Soft ointment    | 170926UM/17076301    | 1              |
| Caelo           | Soft ointment    | 170318183            | 1              |
| Caelo           | Soft ointment    | 17263101             | 67             |
| Caelo           | Soft ointment    | 181102183            | 1              |
| Caelo           | Soft ointment    | 181016187            | 1              |
| Caelo           | Soft ointment    | 180320UM/17263302    | 1              |
| Caelo           | Soft ointment    | 18140503             | 1              |
| Caelo           | Soft ointment    | 17250908             | 1              |
| Caelo           | Soft ointment    | 17263301             | 3              |
| Caelo           | Soft ointment    | 8002875005           | 1              |
| Caelo           | Soft ointment    | 18002201             | 2              |
| Caelo           | Soft ointment    | 18201401             | 1              |
| Caelo           | Soft ointment    | 2002175002           | 1              |
| Caelo           | Soft ointment    | 20001409001          | 21             |
| Fagron          | Soft ointment    | 18002001             | 1              |
| Caelo           | Soft ointment    | 14080201             | 15             |
| Caelo           | Soft ointment    | 13053602             | 6              |
| Caelo           | Soft ointment    | 13192902             | 3              |
| Caelo           | Soft ointment    | 1314I2542            | 1              |
| Caelo           | Soft ointment    | 286011               | 1              |
| Caelo           | Soft ointment    | 15204801             | 5              |
| Caelo           | Soft ointment    | 1624501              | 1              |
| Caelo           | Soft ointment    | 16245502-20170818Ma7 | 1              |
| Caelo           | Soft ointment    | 18521301             | 1              |
| Caelo           | Soft ointment    | 20002174001          | 8              |
| Caelo           | Soft ointment    | 118282301            | 1              |
| Caelo           | Soft ointment    | 14202011             | 1              |
| Caelo           | Soft ointment    | 15059601             | 6              |
| Caelo           | Soft ointment    | 15376801             | 32             |
| Caelo           | Soft ointment    | 17076801             | 10             |
| Caelo           | Soft ointment    | 17076901             | 13             |
| Caelo           | Soft ointment    | 17A03-T01-039997     | 1              |
| Caelo           | Soft ointment    | 17197102             | 17             |
| Caelo           | Soft ointment    | 1631351              | 1              |
| Caelo           | Soft ointment    | 18002101             | 15             |
| Caelo           | Soft ointment    | 17H28-T03-047827     | 2              |
| Caelo           | Soft ointment    | 18162901             | 22             |
| Caelo           | Soft ointment    | 18201301             | 61             |
| Caelo           | Soft ointment    | 19191501             | 27             |
| Caelo           | Soft ointment    | 20002175002          | 7              |
| Caelo           | Soft ointment    | 2000217502           | 1              |
| Caelo           | Soft ointment    | 20003575001          | 3              |

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| <b>Supplier</b>      | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|----------------------|------------------|---------------|----------------|
| Caelo                | Soft ointment    | pzn01097763   | 1              |
| Caelo                | Soft ointment    | 18001801      | 13             |
| Caelo                | Soft ointment    | 18002001      | 12             |
| Caelo                | Soft ointment    | 17076401/5440 | 1              |
| Caelo                | Soft ointment    | 172632015583  | 1              |
| Caelo                | Soft ointment    | 14201901      | 7              |
| Caelo                | Soft ointment    | 1437591       | 1              |
| Caelo                | Soft ointment    | 15204701      | 6              |
| Caelo                | Soft ointment    | 100/AKD7      | 1              |
| Caelo                | Soft ointment    | 101/AKD12     | 1              |
| Caelo                | Soft ointment    | 16083003      | 2              |
| Caelo                | Soft ointment    | 16245301      | 48             |
| Caelo                | Soft ointment    | 17197101      | 10             |
| Caelo                | Soft ointment    | 17197103      | 5              |
| Caelo                | Soft ointment    | 18201204      | 1              |
| Caelo                | Soft ointment    | 19015001      | 11             |
| Caelo                | Soft ointment    | 190152002     | 2              |
| Caelo                | Soft ointment    | 19082401      | 46             |
| Caelo                | Soft ointment    | 1905202       | 1              |
| Caelo                | Soft ointment    | 2000149001    | 2              |
| Caelo                | Soft ointment    | 20002175001   | 3              |
| Caelo                | Soft ointment    | 200021        | 1              |
| Caelo                | Soft ointment    | 17076401      | 82             |
| Caelo                | Soft ointment    | I3192502      | 1              |
| Caelo                | Soft ointment    | 14007302      | 2              |
| Caelo                | Soft ointment    | 14007402      | 3              |
| Caelo                | Soft ointment    | 170769901     | 1              |
| Caelo                | Soft ointment    | 2513A-02542   | 1              |
| Caelo                | Soft ointment    | 1912A-02542   | 1              |
| Caelo                | Soft ointment    | 18163001      | 27             |
| Caecolo/Ahd          | Soft ointment    | 18201301      | 1              |
| Caecolo/Gehe         | Soft ointment    | 17263201      | 2              |
| Caecolo/Phönix       | Soft ointment    | 17076401      | 1              |
| Caecolo/Sanacorp     | Soft ointment    | 18163001      | 1              |
| Caecolo/Sanacorp     | Soft ointment    | 18251101      | 1              |
| Caecolo/Noweda       | Soft ointment    | 17076401      | 1              |
| Caesar & Lorenz GmbH | Soft ointment    | 18002302      | 1              |
| Caesar & Lorenz GmbH | Soft ointment    | 19191602      | 1              |
| Caesar & Loretz      | Soft ointment    | 16245201      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 18162901      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 18152901      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 18251101      | 12             |
| Caesar & Loretz GmbH | Soft ointment    | 18201402      | 2              |
| Caesar & Loretz GmbH | Soft ointment    | 18201301      | 6              |
| Caesar & Loretz GmbH | Soft ointment    | 18251202      | 2              |
| Caesar & Loretz GmbH | Soft ointment    | 18002401      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 18251301      | 6              |
| Caesar & Loretz GmbH | Soft ointment    | 18251302      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 19015101      | 11             |
| Caesar & Loretz GmbH | Soft ointment    | 19015202      | 13             |
| Caesar & Loretz GmbH | Soft ointment    | 19082301      | 9              |
| Caesar & Loretz GmbH | Soft ointment    | 19082302      | 20             |
| Caesar & Loretz GmbH | Soft ointment    | 19015001      | 1              |
| Caesar & Loretz GmbH | Soft ointment    | 19015102      | 3              |
| Caesar & Loretz GmbH | Soft ointment    | 19082401      | 13             |
| Caesar & Loretz GmbH | Soft ointment    | 19082501      | 2              |
| Caesar & Loretz GmbH | Soft ointment    | 19191501      | 14             |
| Caesar & Loretz GmbH | Soft ointment    | 19191603      | 2              |
| Caesar & Loretz GmbH | Soft ointment    | 19191602      | 15             |
| Caesar & Loretz GmbH | Soft ointment    | 19191801      | 2              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Soft ointment    | 19191601     | 5              |
| Caesar & Loretz GmbH       | Soft ointment    | 192936001    | 11             |
| Caesar & Loretz GmbH       | Soft ointment    | 19305101     | 15             |
| Caesar & Loretz GmbH       | Soft ointment    | 19000444001  | 6              |
| Caesar & Loretz GmbH       | Soft ointment    | 19000446001  | 7              |
| Caesar & Loretz GmbH       | Soft ointment    | 19000445001  | 1              |
| Caesar & Loretz GmbH       | Soft ointment    | 20001409001  | 13             |
| Caesar & Loretz GmbH       | Soft ointment    | 19000426001  | 2              |
| Caesar & Loretz GmbH       | Soft ointment    | 20001408001  | 3              |
| Caesar & Loretz GmbH       | Soft ointment    | 20002174001  | 6              |
| Caesar & Loretz GmbH       | Soft ointment    | 20002175001  | 2              |
| Caesar & Loretz GmbH       | Soft ointment    | 20003574002  | 3              |
| Caesar & Loretz GmbH       | Soft ointment    | 20002175002  | 3              |
| Caesar & Loretz GmbH       | Soft ointment    | 20003575001  | 4              |
| Caesar & Loretz GmbH       | Soft ointment    | 21000781001  | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 15204401     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19082401     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19082302     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19015202     | 2              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19191801     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19015202     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 20001409001  | 2              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 18201201     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 18201301     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 18251301     | 1              |
| Caesar & Loretz GmbH / ... | Soft ointment    | 19082401     | 3              |
| Caesar & Loretz GmbH, 4... | Soft ointment    | 13053601     | 1              |
| Caesar & Loretz GmbH, P... | Soft ointment    | 18002501     | 1              |
| Caesar & Loretz GmbH/ N... | Soft ointment    | 19082302     | 1              |
| Caesar & Loretz GmbH/Fi... | Soft ointment    | 192936001    | 1              |
| Caesar & Loretz GmbH/Fi... | Soft ointment    | 18251301     | 2              |
| Caesar & Loretz GmbH/Fi... | Soft ointment    | 19082401     | 1              |
| Caesar & Loretz GmbH/Gehe  | Soft ointment    | 18251101     | 1              |
| Caesar & Loretz GmbH/Ge... | Soft ointment    | 19015202     | 1              |
| Caesar & Loretz GmbH/Ge... | Soft ointment    | 19191501     | 1              |
| Caesar & Loretz GmbH/Je... | Soft ointment    | 19082401     | 1              |
| Caesar & Loretz GmbH/Je... | Soft ointment    | 19082302     | 1              |
| Caesar & Loretz GmbH/Je... | Soft ointment    | 19191501     | 1              |
| Caesar & Loretz GmbH/Je... | Soft ointment    | 192936001    | 4              |
| Caesar & Loretz GmbH/Je... | Soft ointment    | 20001409001  | 1              |
| Caesar & Loretz GmbH/Kehr  | Soft ointment    | 19082301     | 1              |
| Caesar & Loretz GmbH/No... | Soft ointment    | 19015202     | 1              |
| Caesar & Loretz GmbH/No... | Soft ointment    | 19082401     | 1              |
| Caesar & Loretz GmbH/No... | Soft ointment    | 20001409001  | 4              |
| Caesar & Loretz GmbH/Ph... | Soft ointment    | 19015001     | 1              |
| Caesar & Loretz GmbH/Ph... | Soft ointment    | 19191501     | 2              |
| Caesar & Loretz GmbH/Ph... | Soft ointment    | 19082401     | 1              |
| Caesar & Loretz GmbH/Ph... | Soft ointment    | 19305101     | 2              |
| Caesar & Loretz GmbH/Ph... | Soft ointment    | 192936001    | 1              |
| Caesar & Loretz GmbH/Sa... | Soft ointment    | 20002175001  | 1              |
| Caesar & Loretz GmbH7Ge... | Soft ointment    | 19191601     | 1              |
| Caesar & Loretz Hilden     | Soft ointment    | 18201201     | 1              |
| Caesar & Loretz Hilden     | Soft ointment    | 19000444001  | 1              |
| Caesar & Loretz Hilden     | Soft ointment    | 20001408001  | 1              |
| Caesar & Loretz Hilden/... | Soft ointment    | 18251202     | 1              |
| Caesar & Loretz GmbH       | Soft ointment    | 14080501     | 1              |
| Caesar u Loretz            | Soft ointment    | 13053601     | 1              |
| Caesar und Loretz          | Soft ointment    | 19191501     | 1              |
| Caesar und Loretz GmbH     | Soft ointment    | 18201402     | 1              |
| Caesar und Loretz GmbH     | Soft ointment    | 19082302     | 1              |

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| <b>Supplier</b>              | <b>Substance</b> | <b>Batch</b>      | <b>Spectra</b> |
|------------------------------|------------------|-------------------|----------------|
| caesar&loretz GmbH,Phönix    | Soft ointment    | 12194502          | 1              |
| caesar&loretz GmbH,Phönix    | Soft ointment    | 15959301          | 1              |
| Caesar&Loretz GmbH/Sana. . . | Soft ointment    | 14375602          | 1              |
| Caesar&loretz,Phoenix        | Soft ointment    | 12045401          | 1              |
| Caesar&loretz,Phoenix        | Soft ointment    | 12045501          | 1              |
| Caesar&loretz,Phoenix        | Soft ointment    | 12091303          | 1              |
| Caesar&loretz,Phoenix        | Soft ointment    | 12194502          | 1              |
| CaesaruLorenz/Ebert          | Soft ointment    | 15059401          | 2              |
| Caleo/ Noweda                | Soft ointment    | 18001801          | 1              |
| Caleo/Fiebig                 | Soft ointment    | 18002303          | 1              |
| Carlo/Phönix/5,40            | Soft ointment    | 19082302          | 1              |
| Cealo                        | Soft ointment    | 17076401          | 1              |
| Cealo                        | Soft ointment    | 19000444001       | 1              |
| Cealo / Otto Geilenkirc. . . | Soft ointment    | 19082401          | 3              |
| Cealo / Otto Geilenkirc. . . | Soft ointment    | 19082501          | 1              |
| Cealo/Gehe                   | Soft ointment    | 18163001          | 1              |
| Cealo/Gehe                   | Soft ointment    | 19000446001       | 2              |
| Cealo/Noweda                 | Soft ointment    | 16313501          | 2              |
| Cealo/Sanacorp               | Soft ointment    | 15059301          | 1              |
| Devesa                       | Soft ointment    | 16083001          | 1              |
| Ebert & Jacobi               | Soft ointment    | 18002302          | 1              |
| Ebert & Jacobi               | Soft ointment    | 18162901          | 1              |
| Ebert & Jacobi               | Soft ointment    | 18163001          | 2              |
| Ebert & Jacobi               | Soft ointment    | 18201402          | 1              |
| Ebert & Jacobi 19.07. . .    | Soft ointment    | 16083101          | 1              |
| Euro OTC                     | Soft ointment    | 14375602          | 1              |
| Euro OTC                     | Soft ointment    | 18001701          | 1              |
| Euro OTC                     | Soft ointment    | 17076601          | 1              |
| Euro OTC                     | Soft ointment    | 14080201          | 1              |
| Euro OTC                     | Soft ointment    | 13192902          | 1              |
| Euro OTC                     | Soft ointment    | 18163001          | 1              |
| Euro OTC                     | Soft ointment    | 19015202          | 5              |
| Euro/ Phönix                 | Soft ointment    | 4517A-02542       | 1              |
| euro//Noweda                 | Soft ointment    | 18001901          | 1              |
| Euro/Phönix                  | Soft ointment    | 17076501          | 1              |
| Fagron                       | Soft ointment    | 13C04-T04-001710  | 2              |
| Fagron                       | Soft ointment    | 13A08-T12-000186  | 1              |
| Fagron                       | Soft ointment    | 13C04-T04-0002    | 1              |
| Fagron                       | Soft ointment    | 13C04-T05         | 1              |
| Fagron                       | Soft ointment    | 4113A-02542       | 1              |
| Fagron                       | Soft ointment    | 13E13-T14-003679  | 1              |
| Fagron                       | Soft ointment    | 13387402          | 1              |
| Fagron                       | Soft ointment    | 14202301          | 1              |
| Fagron                       | Soft ointment    | 13I24-T04-006936  | 1              |
| Fagron                       | Soft ointment    | 1324-t03-006933   | 1              |
| Fagron                       | Soft ointment    | 15A30-T02-018955  | 5              |
| Fagron                       | Soft ointment    | 15059601          | 1              |
| Fagron                       | Soft ointment    | 15I08-T01-025888  | 1              |
| Fagron                       | Soft ointment    | 15I08-T02-025891  | 1              |
| Fagron                       | Soft ointment    | 15I08-T01-0205888 | 1              |
| Fagron                       | Soft ointment    | 16F03-T01-033986  | 2              |
| Fagron                       | Soft ointment    | 17076401          | 1              |
| Fagron                       | Soft ointment    | 701878-0002       | 1              |
| Fagron                       | Soft ointment    | 17076501          | 1              |
| Fagron                       | Soft ointment    | 17A03-T01-039998  | 3              |
| Fagron                       | Soft ointment    | 17263101          | 2              |
| Fagron                       | Soft ointment    | 17H28-T03-047827  | 5              |
| Fagron                       | Soft ointment    | 18E07T09055703    | 2              |
| Fagron                       | Soft ointment    | 20C19-T11-077800  | 1              |
| Fagron                       | Soft ointment    | 13E13-T12-003670  | 3              |

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| Supplier                   | Substance     | Batch             | Spectra |
|----------------------------|---------------|-------------------|---------|
| Fagron                     | Soft ointment | 14e16-t03-012548  | 1       |
| Fagron                     | Soft ointment | 20c19-T11-077800  | 1       |
| Fagron                     | Soft ointment | 16G18-T02-035247  | 3       |
| Fagron                     | Soft ointment | 16245401          | 1       |
| Fagron                     | Soft ointment | 13A08-T13-000189  | 1       |
| Fagron                     | Soft ointment | 13C04-T04-001709  | 3       |
| Fagron                     | Soft ointment | 18e07t09055703    | 1       |
| Fagron                     | Soft ointment | 5869200           | 1       |
| Fagron                     | Soft ointment | 19J09-T08-072597  | 3       |
| Fagron                     | Soft ointment | 19B14-T07-064291  | 10      |
| Fagron                     | Soft ointment | 15F24T16023904    | 1       |
| Fagron                     | Soft ointment | 13I24-T02-006930  | 1       |
| Fagron                     | Soft ointment | 12E23-T01         | 1       |
| Fagron                     | Soft ointment | 12G09-T02         | 1       |
| Fagron                     | Soft ointment | 2514M-02542       | 1       |
| Fagron                     | Soft ointment | 14E16-T03-012547  | 1       |
| Fagron                     | Soft ointment | 15E14-T02-022369  | 2       |
| Fagron                     | Soft ointment | 16F03-T02-033989  | 1       |
| Fagron                     | Soft ointment | 16F03-T03-033992  | 4       |
| Fagron                     | Soft ointment | 13I24-T01-006925  | 2       |
| Fagron                     | Soft ointment | 13I24-T01-006925  | 1       |
| Fagron                     | Soft ointment | 14E16-T03-012548  | 1       |
| Fagron                     | Soft ointment | 15f24-t16-023904  | 1       |
| Fagron                     | Soft ointment | 16G18-T02-035248  | 6       |
| Fagron                     | Soft ointment | 15A30             | 1       |
| Fagron                     | Soft ointment | 15F24-T16-023904  | 6       |
| Fagron                     | Soft ointment | 14201901          | 1       |
| Fagron                     | Soft ointment | 15377001          | 1       |
| Fagron                     | Soft ointment | 299868            | 1       |
| Fagron                     | Soft ointment | 16a21-t05-029597  | 1       |
| Fagron                     | Soft ointment | 16G18-T03-035249  | 1       |
| Fagron                     | Soft ointment | 16F03-T01033986   | 1       |
| Fagron                     | Soft ointment | 16G18-T02-035249  | 2       |
| Fagron                     | Soft ointment | 16A21-T06-029597  | 1       |
| Fagron                     | Soft ointment | 17A03-T01-039997  | 8       |
| Fagron                     | Soft ointment | 17A03-T01_039997  | 1       |
| Fagron                     | Soft ointment | 18E07-T09-055703  | 12      |
| Fagron                     | Soft ointment | 18E07-T09-0557703 | 1       |
| Fagron                     | Soft ointment | 19J-09-T08-072597 | 1       |
| Fargon                     | Soft ointment | 16G18-T02-035247  | 1       |
| fargon/Sanacorp            | Soft ointment | 12353301          | 1       |
| Fargron/ Noweda            | Soft ointment | 15A30-T02-018955  | 2       |
| Fiebig                     | Soft ointment | 16245201          | 1       |
| Fiebig                     | Soft ointment | 16313401          | 1       |
| Fiebig                     | Soft ointment | 17263201          | 2       |
| Fiebig                     | Soft ointment | 17197201          | 1       |
| Fiebig                     | Soft ointment | 18162901          | 1       |
| Fiebig                     | Soft ointment | 18201402          | 1       |
| Fiebig                     | Soft ointment | 18201301          | 2       |
| Fiebig                     | Soft ointment | 18251101          | 3       |
| Fiebig 32.01.13 ek:4,84EUR | Soft ointment | 5317100           | 1       |
| Finze                      | Soft ointment | 5215100           | 1       |
| Frau Brinn-Holtz           | Soft ointment | 1577001           | 1       |
| gehe                       | Soft ointment | 18002302          | 1       |
| Gehe                       | Soft ointment | 5375800           | 1       |
| Gehe                       | Soft ointment | 14202301          | 1       |
| Gehe                       | Soft ointment | 15204401          | 1       |
| Gehe                       | Soft ointment | 16083002          | 1       |
| Gehe                       | Soft ointment | 16146401          | 1       |
| Gehe                       | Soft ointment | 16245201          | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Gehe                       | Soft ointment    | 16146103     | 1              |
| Gehe                       | Soft ointment    | 16245202     | 1              |
| Gehe                       | Soft ointment    | 305449       | 1              |
| Gehe                       | Soft ointment    | 17076402     | 1              |
| Gehe                       | Soft ointment    | 16313402     | 1              |
| Gehe                       | Soft ointment    | 17076401     | 1              |
| Gehe                       | Soft ointment    | 18002302     | 1              |
| Gehe                       | Soft ointment    | 17076901     | 1              |
| Gehe                       | Soft ointment    | 18201402     | 1              |
| GEHE                       | Soft ointment    | 16313501     | 1              |
| GEHE                       | Soft ointment    | 17197102     | 1              |
| GEHE                       | Soft ointment    | 17263101     | 1              |
| GEHE                       | Soft ointment    | 18002501     | 1              |
| GEHE                       | Soft ointment    | 18152901     | 2              |
| gehe 04.12.13              | Soft ointment    | 13192601     | 1              |
| Gehe am 04.02.2014         | Soft ointment    | 13387402     | 1              |
| Gehe am 25.02.14           | Soft ointment    | 13375402     | 1              |
| Caelo                      | Soft ointment    | 284057       | 1              |
| Gehe/04.12.14              | Soft ointment    | 12353301     | 1              |
| Caelo                      | Soft ointment    | 13192501     | 24             |
| Caelo                      | Soft ointment    | 16313501     | 49             |
| Euro OTC                   | Soft ointment    | 16083101     | 1              |
| Geilenkirchen              | Soft ointment    | 19162901     | 1              |
| Gutenberg-Apotheke         | Soft ointment    | 5600500      | 3              |
| H.Lamotte                  | Soft ointment    | 8004399002   | 1              |
| H.Lamotte / Anzag          | Soft ointment    | 5317100      | 1              |
| Hedinger/Gehe              | Soft ointment    | 18140501     | 1              |
| Henra Lamotte              | Soft ointment    | 5321600      | 1              |
| Henry Lam./ Sanacorp       | Soft ointment    | 5215100      | 1              |
| Henry Lamotte              | Soft ointment    | 5067500      | 1              |
| Henry Lamotte              | Soft ointment    | 5317100      | 1              |
| Henry Lamotte              | Soft ointment    | 5789000      | 2              |
| Henry Lamotte              | Soft ointment    | 6001368015   | 4              |
| Henry Lamotte              | Soft ointment    | 6001368001   | 1              |
| Henry Lamotte              | Soft ointment    | 16245401     | 1              |
| Henry Lamotte              | Soft ointment    | 8002875005   | 2              |
| Henry Lamotte              | Soft ointment    | 8002320004   | 1              |
| Henry Lamotte Oils         | Soft ointment    | 5317100      | 1              |
| Henry Lamotte Oils / Gehe  | Soft ointment    | 8002320003   | 1              |
| Henry lamotte Oils GmbH    | Soft ointment    | 802875005    | 1              |
| Henry Lamotte oils GmbH    | Soft ointment    | 5321600      | 2              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 5317100      | 3              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 5496100      | 1              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 5600500      | 2              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 5691800      | 1              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 5789000      | 2              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 6001368015   | 1              |
| Henry Lamotte Oils GmbH    | Soft ointment    | 8002320003   | 2              |
| Henry Lamotte Oils GMBH    | Soft ointment    | 5496100      | 1              |
| HENRY LAMOTTE OILS GmbH    | Soft ointment    | 6001368015   | 2              |
| Henry Lamotte Oils GmbH... | Soft ointment    | 8002320003   | 2              |
| Henry Lamotte Oils GmbH... | Soft ointment    | 8004399002   | 1              |
| Henry Lamotte Oils GmbH... | Soft ointment    | 5496100      | 2              |
| Henry Lamotte Oils GmbH... | Soft ointment    | 5448300      | 1              |
| Henry Lamotte oils gmbh... | Soft ointment    | 8004399002   | 1              |
| Henry Lamotte oils GmbH... | Soft ointment    | 5448300      | 1              |
| Henry Lamotte oils GmbH... | Soft ointment    | 5691000      | 1              |
| Henry Lamotte Oils GmbH... | Soft ointment    | 8004399002   | 1              |
| Henry Lamotte Oils/ Gehe   | Soft ointment    | 61580        | 1              |
| Henry Lamotte Olis GmbH... | Soft ointment    | 5789000      | 3              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Henry Lamotte Olis GmbH... | Soft ointment    | 6001368015   | 2              |
| Henry Lamotte,Anzag        | Soft ointment    | 5189900      | 2              |
| Henry Lamotte,Phönix       | Soft ointment    | 5067500      | 1              |
| Henry Lamotte/ AHD         | Soft ointment    | 8002320003   | 1              |
| Henry Lamotte/Anzag        | Soft ointment    | 5448300      | 1              |
| Henry Lamotte/Anzag        | Soft ointment    | 6001368001   | 1              |
| Henry Lamotte/Anzag        | Soft ointment    | 6001368015   | 1              |
| Henry Lamotte/GEHE         | Soft ointment    | 5215100      | 1              |
| Henry Lamotte/GEHE         | Soft ointment    | 5317100      | 1              |
| Henry Lamotte/GEHE         | Soft ointment    | 5375800      | 1              |
| Henry Lamotte/Geilenkir... | Soft ointment    | 8002320003   | 1              |
| HenryLamotte/Phoenix       | Soft ointment    | 5189900      | 1              |
| Heyl/Noweda                | Soft ointment    | 17197101     | 1              |
| Ichthyol-Gesellschaft C... | Soft ointment    | 15059401     | 1              |
| Ichtyol-Gesellschaft       | Soft ointment    | 16245201     | 1              |
| InfectoPharm/Noweda        | Soft ointment    | 15377001     | 1              |
| Kehr                       | Soft ointment    | 17076501     | 1              |
| Kehr                       | Soft ointment    | 18002302     | 1              |
| Kehr                       | Soft ointment    | 18140501     | 1              |
| Kehr                       | Soft ointment    | 18162901     | 1              |
| Kehr/Henry Lamotte         | Soft ointment    | 8004399002   | 1              |
| Klosterring                | Soft ointment    | 18251101     | 2              |
| Krieger am 16.08.2018      | Soft ointment    | 18002401     | 1              |
| Krieger/ Henry Lamotte     | Soft ointment    | 8002320003   | 1              |
| L12/Apomix                 | Soft ointment    | 16146401     | 1              |
| Lamotte                    | Soft ointment    | 5215100      | 1              |
| Lamotte                    | Soft ointment    | 5375800      | 1              |
| Lamotte                    | Soft ointment    | 5448300      | 1              |
| Lamotte                    | Soft ointment    | 5789000      | 3              |
| Lamotte                    | Soft ointment    | 8002875005   | 1              |
| Lamotte / Anzag            | Soft ointment    | 8004399003   | 1              |
| Lamotte /Noweda            | Soft ointment    | 8002875005   | 2              |
| Lamotte GmbH               | Soft ointment    | 8002320003   | 1              |
| Lamotte/ Anzag             | Soft ointment    | 5375800      | 1              |
| Lamotte/ Anzag             | Soft ointment    | 5496100      | 1              |
| lamotte/AHD/23.03.20       | Soft ointment    | 8005213003   | 1              |
| Lamotte/Alliance           | Soft ointment    | 5691000      | 1              |
| Lamotte/Alliance           | Soft ointment    | 8002875005   | 1              |
| lamotte/anzag              | Soft ointment    | 5265300      | 2              |
| Lamotte/Anzag              | Soft ointment    | 8005213006   | 1              |
| Lamotte/ANZAG              | Soft ointment    | 8004399002   | 5              |
| lamotte/Kehr               | Soft ointment    | 8002875005   | 1              |
| Lamotte/Kehr               | Soft ointment    | 5789000      | 1              |
| Lamotte/Kehr               | Soft ointment    | 6001368015   | 2              |
| Lamotte/Kehr               | Soft ointment    | 5869200      | 1              |
| Lamotte/Kehr               | Soft ointment    | 6001368001   | 1              |
| Lamotte/Kehr               | Soft ointment    | 8002320004   | 1              |
| Lamotte/Krieger/20.05.2... | Soft ointment    | 5496100      | 1              |
| Lamotte/Noweda             | Soft ointment    | 8002320004   | 2              |
| Lamotte/Noweda             | Soft ointment    | 8002875006   | 5              |
| Lamotte/Noweda             | Soft ointment    | 80028755006  | 1              |
| Lamotte/Noweda             | Soft ointment    | 8004399003   | 4              |
| Lamotte/Noweda             | Soft ointment    | 8005213006   | 2              |
| Lamotte/Phoenix            | Soft ointment    | 18201201     | 1              |
| Lamotte/Sanacorp           | Soft ointment    | 8002875005   | 3              |
| Lamotte/Sanacorp           | Soft ointment    | 8005213003   | 2              |
| lamotte7anzag              | Soft ointment    | 5294600      | 1              |
| Midas                      | Soft ointment    | 17076401     | 1              |
| Midas                      | Soft ointment    | 17197201     | 1              |
| Midas                      | Soft ointment    | 18002001     | 1              |

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| Supplier                   | Substance     | Batch            | Spectra |
|----------------------------|---------------|------------------|---------|
| Noweda                     | Soft ointment | 19015001         | 1       |
| Noweda                     | Soft ointment | 60089901         | 1       |
| Noweda                     | Soft ointment | 11256701         | 1       |
| Noweda                     | Soft ointment | 11133001         | 1       |
| Noweda                     | Soft ointment | 14007601         | 1       |
| Noweda                     | Soft ointment | 15059301         | 1       |
| Noweda                     | Soft ointment | 15376901         | 2       |
| Noweda                     | Soft ointment | 15377001         | 2       |
| Noweda                     | Soft ointment | 16245202         | 1       |
| Noweda                     | Soft ointment | 16313402         | 1       |
| Noweda                     | Soft ointment | 17076401         | 1       |
| Noweda                     | Soft ointment | 8002875005       | 3       |
| Noweda                     | Soft ointment | 18002101         | 1       |
| Noweda                     | Soft ointment | 17263202         | 2       |
| Noweda                     | Soft ointment | 18002040         | 1       |
| Noweda                     | Soft ointment | 18001901         | 1       |
| Noweda                     | Soft ointment | 18004473         | 1       |
| Noweda                     | Soft ointment | 18251202         | 1       |
| Noweda                     | Soft ointment | 19082302         | 3       |
| Noweda                     | Soft ointment | 19015102         | 1       |
| Noweda                     | Soft ointment | 19082501         | 1       |
| Noweda                     | Soft ointment | 19082401         | 1       |
| Noweda                     | Soft ointment | 19002114         | 1       |
| Noweda                     | Soft ointment | 20001428         | 1       |
| Noweda                     | Soft ointment | 20001409001      | 1       |
| Noweda                     | Soft ointment | 20002175002      | 1       |
| Caelo                      | Soft ointment | 14375801         | 8       |
| Fagron                     | Soft ointment | 13I24-T03-006933 | 1       |
| Caelo                      | Soft ointment | 19082501         | 10      |
| Caelo                      | Soft ointment | 19191801         | 4       |
| Caelo                      | Soft ointment | 1900046001       | 2       |
| Caelo                      | Soft ointment | 15059401         | 13      |
| Caelo                      | Soft ointment | 13375501         | 14      |
| Caelo                      | Soft ointment | 1982401          | 1       |
| Pharmachem/Phoenix         | Soft ointment | 305451           | 1       |
| phoenix                    | Soft ointment | 17076401         | 1       |
| phoenix                    | Soft ointment | 297077           | 1       |
| Phoenix                    | Soft ointment | 12045701         | 1       |
| Phoenix                    | Soft ointment | 13192601         | 1       |
| Phoenix                    | Soft ointment | 14007601         | 1       |
| Phoenix                    | Soft ointment | 13387403         | 1       |
| Phoenix                    | Soft ointment | 16083002         | 1       |
| Phoenix                    | Soft ointment | 3084             | 1       |
| Phoenix                    | Soft ointment | 17197102         | 1       |
| Phoenix                    | Soft ointment | 16313501         | 1       |
| Phoenix                    | Soft ointment | 17263201         | 1       |
| Phoenix                    | Soft ointment | 19015202         | 2       |
| Phoenix                    | Soft ointment | 19082401         | 2       |
| Phoenix 08.08.2018 6,39EUR | Soft ointment | 18000136         | 1       |
| PHOENIX 10.03.2014         | Soft ointment | 14007302         | 1       |
| Phoenix 19.06.2017 6,21EUR | Soft ointment | 17A03-T01-039997 | 1       |
| Caelo                      | Soft ointment | 18201201         | 77      |
| Caelo                      | Soft ointment | 19000444001      | 3       |
| Phoenix/Cealo              | Soft ointment | 17263201         | 1       |
| phönix                     | Soft ointment | 12194701         | 1       |
| phönix                     | Soft ointment | 16083002         | 1       |
| phönix                     | Soft ointment | 16083001         | 1       |
| phönix                     | Soft ointment | 17076401         | 1       |
| Phönix                     | Soft ointment | 11256301         | 1       |
| Phönix                     | Soft ointment | 13053801         | 1       |

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| <b>Supplier</b>       | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------------|------------------|------------------|----------------|
| Phönix                | Soft ointment    | 13192901         | 1              |
| Phönix                | Soft ointment    | 14264301         | 1              |
| Phönix                | Soft ointment    | 16245201         | 1              |
| Phönix                | Soft ointment    | 17076401         | 1              |
| Phönix                | Soft ointment    | 17197101         | 1              |
| Phönix                | Soft ointment    | 17197201         | 1              |
| Phönix                | Soft ointment    | 17000370         | 1              |
| Phönix                | Soft ointment    | 3154             | 1              |
| Phönix                | Soft ointment    | 18002401         | 1              |
| Phönix                | Soft ointment    | 18201301         | 1              |
| Phönix                | Soft ointment    | 18201402         | 1              |
| Phönix                | Soft ointment    | 19015202         | 1              |
| Phönix                | Soft ointment    | 19191602         | 1              |
| Phönix Gotha          | Soft ointment    | 271425           | 1              |
| Phönix Gotha          | Soft ointment    | 278046           | 1              |
| Phönix Gotha          | Soft ointment    | 286010           | 1              |
| Phönix Gotha          | Soft ointment    | 291331           | 1              |
| Bombastus             | Soft ointment    | 19003313         | 6              |
| Caelo                 | Soft ointment    | 12353401         | 10             |
| Caelo                 | Soft ointment    | 16245201         | 47             |
| Euro OTC              | Soft ointment    | 16313501         | 4              |
| Fagron                | Soft ointment    | 16A21-T05-029597 | 11             |
| Px/Phoenix            | Soft ointment    | 18002501         | 1              |
| Sana 18.12.14 EK 5,39 | Soft ointment    | 14202201         | 1              |
| sanacoro              | Soft ointment    | 15376801         | 1              |
| sanacorp              | Soft ointment    | 14202301         | 1              |
| Sanacorp              | Soft ointment    | 12194501         | 1              |
| Sanacorp              | Soft ointment    | 13192901         | 1              |
| Sanacorp              | Soft ointment    | 13192701         | 1              |
| Sanacorp              | Soft ointment    | 13375402         | 1              |
| Sanacorp              | Soft ointment    | 94/AKD1          | 1              |
| Sanacorp              | Soft ointment    | 14080301         | 1              |
| Sanacorp              | Soft ointment    | 96/AKD3          | 1              |
| Sanacorp              | Soft ointment    | 14375801         | 1              |
| Sanacorp              | Soft ointment    | 97/AKD4          | 1              |
| Sanacorp              | Soft ointment    | 15059301         | 1              |
| Sanacorp              | Soft ointment    | 15376801         | 1              |
| Sanacorp              | Soft ointment    | 100/AKD10        | 1              |
| Sanacorp              | Soft ointment    | 16313501         | 1              |
| Sanacorp              | Soft ointment    | 17076801         | 1              |
| Sanacorp              | Soft ointment    | 17076401         | 3              |
| Sanacorp              | Soft ointment    | 17076501         | 1              |
| Sanacorp              | Soft ointment    | 16245201         | 1              |
| Sanacorp              | Soft ointment    | 17197102         | 1              |
| Sanacorp              | Soft ointment    | 17263201         | 2              |
| Sanacorp              | Soft ointment    | 17H28-T03-047827 | 8              |
| Sanacorp              | Soft ointment    | 18002302         | 1              |
| Sanacorp              | Soft ointment    | 18002501         | 2              |
| Sanacorp              | Soft ointment    | 18162901         | 1              |
| Sanacorp              | Soft ointment    | 18163001         | 1              |
| Sanacorp              | Soft ointment    | 18152901         | 2              |
| Sanacorp              | Soft ointment    | 18201402         | 3              |
| Sanacorp              | Soft ointment    | 18251101         | 1              |
| Sanacorp              | Soft ointment    | 18251301         | 1              |
| Sanacorp              | Soft ointment    | 19015202         | 2              |
| Sanacorp              | Soft ointment    | 19082401         | 4              |
| Sanacorp              | Soft ointment    | 19191501         | 1              |
| Sanacorp              | Soft ointment    | 19191601         | 1              |
| Sanacorp              | Soft ointment    | 192936001        | 3              |
| Sanacorp              | Soft ointment    | 19305101         | 2              |

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| Supplier                  | Substance     | Batch            | Spectra |
|---------------------------|---------------|------------------|---------|
| Sanacorp 19.01.15 EK 5,39 | Soft ointment | 14202001         | 1       |
| Sanacorp Noweda           | Soft ointment | 20001409001      | 1       |
| Caelo                     | Soft ointment | 14202001         | 15      |
| Caelo                     | Soft ointment | 11282301         | 2       |
| Caelo                     | Soft ointment | 1422001          | 1       |
| SanacorpWE:28.01.2017 ... | Soft ointment | 16245201         | 1       |
| Caelo                     | Soft ointment | 14201801         | 3       |
| THC Rezeptur-Set          | Soft ointment | 17076401         | 1       |
| VDL                       | Soft ointment | 14202301         | 1       |
| Caelo                     | Soft ointment | 12091303         | 3       |
| Wolf-Apotheke             | Soft ointment | 16083101         | 1       |
|                           | Soft ointment | 16G18-T02-035248 | 1       |
| Caelo                     | Soft ointment | 12353301         | 9       |
| Caelo                     | Soft ointment | 14080501         | 9       |
| Caelo                     | Soft ointment |                  | 5       |
|                           | Soft ointment | 14007601         | 1       |
|                           | Soft ointment | 15059301         | 1       |

- 237 148 spectra from 1121 *Apo-Ident* customers from a total of 46 555 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Soft ointment* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Soft ointment* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 430           | 0              | 63 509        |
| Type B | 0              | 1250          | 0              | 90 241        |
| Type C | 0              | 4126          | 89             | 237 148       |

The substance/substance group *Soft ointment* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.6047 %) |
| Type B | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.5200 %) |
| Type C | 100.0000 % (> 99.6849 %) | 97.8885 % (> 97.8173 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Soft ointment* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------|---------------------------|-----------------------------------|
| Macrogols 300     | 43.92                     | —                                 |
| Lanolin DAB       | 49.45                     | —                                 |
| Macrogol ointment | 54.62                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Soft ointment* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30896     | 31984                  | 5.20                            | 92.19                              |
| 30924     | 31984                  | 7.44                            | 99.48                              |
| 31452     | 31452                  | 0.00                            | 91.56                              |
| 31984     | 31984                  | 0.00                            | 92.20                              |
| 32097     | 32097                  | 0.00                            | 89.30                              |
| 32871     | 32871                  | 0.00                            | 91.78                              |
| 34687     | 31984                  | 4.65                            | 88.82                              |
| 35342     | 35342                  | 0.00                            | 91.70                              |
| 35343     | 35343                  | 0.00                            | 92.47                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Softisan<sup>®</sup> 378 / Wool fat**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30743-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Softisan<sup>®</sup> 378 / Wool fat; Adeps lanae; Softisan<sup>®</sup> 378; Wool fat

### Special notes

When selecting the *Softisan<sup>®</sup> 378 / Wool fat* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group            | Type A | Type B | Type C |
|--------------------------------------|--------|--------|--------|
| Softisan <sup>®</sup> 378 / Wool fat | 15     | 12     | 735    |

## Second-stage model

For differentiation of the substance/substance group *Softisan*<sup>®</sup> 378 / *Wool fat* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Softisan*<sup>®</sup> 378 / *Wool fat*:

| Supplier      | Substance                        | Batch            | Sample ID | Spectra | Certificate        |
|---------------|----------------------------------|------------------|-----------|---------|--------------------|
| Caelo         | <i>Softisan</i> <sup>®</sup> 378 | 13370104         | 31472     | 40      | 20131119           |
| Caelo         | <i>Softisan</i> <sup>®</sup> 378 | 14301114         | 32298     | 40      | 20141118           |
| Fagron        | <i>Softisan</i> <sup>®</sup> 378 | 12K27-N05        | 30887     | 60      | 20121204           |
| Fagron        | <i>Softisan</i> <sup>®</sup> 378 | 13D26-N12        | 31117     | 40      | 1407632            |
| Fagron        | <i>Softisan</i> <sup>®</sup> 378 | 15G20-B10-326361 | 32964     | 40      | 1704407            |
| Fagron        | <i>Softisan</i> <sup>®</sup> 378 | 20F25-F02-371909 | 35145     | 40      | 20200713           |
| Caelo         | Wool fat                         | 12122403         | 30743     | 40      | 20120514           |
| Caelo         | Wool fat                         | 14086904         | 31479     | 40      | 20140321           |
| Caelo         | Wool fat                         | 15050902         | 31742     | 60      | 20150223           |
| Caelo         | Wool fat                         | 15198802         | 31952     | 60      | 20150625           |
| Euro OTC      | Wool fat                         | 1403023-01       | 31533     | 60      | AR-14-FG-012696-01 |
| Euro OTC      | Wool fat                         | 1502024-01       | 31743     | 60      | AR-16-FG-003762-01 |
| Euro OTC      | Wool fat                         | 1601040          | 31847     | 60      | 20160127*          |
| Henry Lamotte | Wool fat                         | 5320900          | 30925     | 40      | 20120608           |
| Henry Lamotte | Wool fat                         | 8003158002       | 33939     | 40      | 20170628           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 720 spectra of 15 reference samples from the substance/substance group *Softisan*<sup>®</sup> 378 / *Wool fat*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 15 different batches.
- 63 219 spectra from a total of 1292 batches from further 222 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

*Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 560 spectra of 14 reference samples from the substance/substance group *Softisan*® 378 / *Wool fat*.
- Among them are spectra of independent samples from 12 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                 | Batch      | Sample ID | Spectra |
|----------|---------------------------|------------|-----------|---------|
| Caelo    | Softisan <sup>®</sup> 378 | 162686     | 33078     | 40      |
| Caelo    | Softisan <sup>®</sup> 378 | 191862005  | 35130     | 40      |
| Caelo    | Wool fat                  | 152923     | 31998     | 40      |
| Caelo    | Wool fat                  | 16221907   | 33111     | 40      |
| Caelo    | Wool fat                  | 173075     | 34017     | 40      |
| Euro OTC | Wool fat                  | 1607001    | 32459     | 40      |
| Euro OTC | Wool fat                  | 1701051    | 33245     | 40      |
| Euro OTC | Wool fat                  | 1807008-01 | 34212     | 40      |
| Euro OTC | Wool fat                  | 1907027    | 34660     | 40      |
| Euro OTC | Wool fat                  | 2003065    | 34835     | 40      |
| Euro OTC | Wool fat                  | 2008027    | 35082     | 40      |
| Euro OTC | Wool fat                  | 2101040    | 35248     | 40      |
| Caelo    | Softisan <sup>®</sup> 378 | 14301114   | 32299     | 40      |
| Caelo    | Softisan <sup>®</sup> 378 | 162686     | 33101     | 40      |

- 90931 spectra from a total of 2003 batches from further 344 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 5742 spectra from 924 *Apo-Ident* customers from 754 batches from the substance/substance group *Softisan*® 378 / *Wool fat*.
- Among them are spectra of independent samples from 732 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| 11.05.20/AHD/Bionorica     | Softisan <sup>®</sup> 378 | 132321           | 1       |
| 24.01.20/Gehe/Bionorica    | Softisan <sup>®</sup> 378 | 130243           | 1       |
| Aallianc. Healthc. / TH... | Softisan <sup>®</sup> 378 | 98561            | 7       |
| Aallianc. Healthc. /Bio... | Softisan <sup>®</sup> 378 | 113358           | 4       |
| Aallianc. Healthc. /Bio... | Softisan <sup>®</sup> 378 | 9999113358       | 1       |
| AHD                        | Softisan <sup>®</sup> 378 | 17I07-B01-338745 | 1       |
| AHD                        | Softisan <sup>®</sup> 378 | 17I07-B01-340337 | 1       |
| AHD                        | Softisan <sup>®</sup> 378 | 701203-0001      | 1       |
| AHD                        | Softisan <sup>®</sup> 378 | 17J06-B01-349162 | 1       |
| AHD                        | Softisan <sup>®</sup> 378 | 18G30-B05-355402 | 1       |

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| Supplier                   | Substance                 | Batch          | Spectra |
|----------------------------|---------------------------|----------------|---------|
| AHD                        | Softisan <sup>®</sup> 378 | 18G-B05-358235 | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 98561          | 1       |
| Allianc. Health. / Bion... | Softisan <sup>®</sup> 378 | 109704         | 2       |
| Allianc. Health. / Bion... | Softisan <sup>®</sup> 378 | 118060         | 3       |
| Allianc. Health. / Bion... | Softisan <sup>®</sup> 378 | 130243         | 1       |
| Allianc. Health. / THC ... | Softisan <sup>®</sup> 378 | 92456          | 1       |
| Alliance Healthcare        | Softisan <sup>®</sup> 378 | 109704         | 2       |
| Alliance Healthcare        | Softisan <sup>®</sup> 378 | 113358         | 4       |
| Alliance Healthcare        | Softisan <sup>®</sup> 378 | 103897         | 1       |
| Alliance Healthcare        | Softisan <sup>®</sup> 378 | 132321         | 2       |
| Anzag , Stuttgart          | Softisan <sup>®</sup> 378 | 118060         | 1       |
| Bionorica                  | Softisan <sup>®</sup> 378 | 107075         | 4       |
| Bionorica                  | Softisan <sup>®</sup> 378 | 109779         | 9       |
| Bionorica                  | Softisan <sup>®</sup> 378 | keinevorhanden | 1       |
| Bionorica                  | Softisan <sup>®</sup> 378 | 109778         | 4       |
| Bionorica                  | Softisan <sup>®</sup> 378 | 113358         | 18      |
| Bionorica                  | Softisan <sup>®</sup> 378 | 118060         | 16      |
| Bionorica                  | Softisan <sup>®</sup> 378 | 130243         | 8       |
| Bionorica                  | Softisan <sup>®</sup> 378 | 132321         | 2       |
| Bionorica / Alliance       | Softisan <sup>®</sup> 378 | 107075         | 1       |
| Bionorica / Alliance       | Softisan <sup>®</sup> 378 | 103897         | 1       |
| Bionorica / Alliance       | Softisan <sup>®</sup> 378 | 113358         | 1       |
| Bionorica / Alliance He... | Softisan <sup>®</sup> 378 | 109779         | 3       |
| Bionorica ethics           | Softisan <sup>®</sup> 378 | 95076          | 1       |
| Bionorica ethics           | Softisan <sup>®</sup> 378 | 109779         | 1       |
| Bionorica ethics           | Softisan <sup>®</sup> 378 | 1070075        | 1       |
| Bionorica ethics           | Softisan <sup>®</sup> 378 | 113358         | 2       |
| Bionorica ethics           | Softisan <sup>®</sup> 378 | 118060         | 6       |
| Bionorica Ethics           | Softisan <sup>®</sup> 378 | 109779         | 1       |
| Bionorica Ethics           | Softisan <sup>®</sup> 378 | 118060         | 2       |
| Bionorica Ethics           | Softisan <sup>®</sup> 378 | 130243         | 1       |
| Bionorica Ethics / Alli... | Softisan <sup>®</sup> 378 | 118060         | 3       |
| Bionorica Ethics / Alli... | Softisan <sup>®</sup> 378 | 130243         | 1       |
| Bionorica ethics / Kehr    | Softisan <sup>®</sup> 378 | 118060         | 2       |
| Bionorica ethics / VDL     | Softisan <sup>®</sup> 378 | 107075         | 1       |
| Bionorica ethics /AHD      | Softisan <sup>®</sup> 378 | 113358         | 1       |
| Bionorica ethics/ Allia... | Softisan <sup>®</sup> 378 | 113358         | 1       |
| Bionorica Ethics/ Allia... | Softisan <sup>®</sup> 378 | 132321         | 1       |
| Bionorica ethics/ Fiebig   | Softisan <sup>®</sup> 378 | 103897         | 4       |
| Bionorica Ethics/ Noweda   | Softisan <sup>®</sup> 378 | 98561          | 1       |
| Bionorica ethics/Allian... | Softisan <sup>®</sup> 378 | 118060         | 1       |
| Bionorica ethics/GEHE      | Softisan <sup>®</sup> 378 | 113358         | 1       |
| Bionorica ethics/Holder... | Softisan <sup>®</sup> 378 | 132321         | 1       |
| Bionorica ethics/Noweda    | Softisan <sup>®</sup> 378 | 107075         | 1       |
| Bionorica Ethics/Noweda    | Softisan <sup>®</sup> 378 | 130243         | 2       |
| Bionorica ethics/Phoenix   | Softisan <sup>®</sup> 378 | 138485         | 4       |
| Bionorica Ethics/Phoenix   | Softisan <sup>®</sup> 378 | 133396         | 1       |
| Bionorica ethics/Phönix    | Softisan <sup>®</sup> 378 | 130243         | 2       |
| Bionorica ethics/Phönix    | Softisan <sup>®</sup> 378 | 133396         | 1       |
| Bionorica Ethics/Phönix    | Softisan <sup>®</sup> 378 | 113358         | 2       |
| Bionorica SE               | Softisan <sup>®</sup> 378 | 107075         | 1       |
| Bionorica SE               | Softisan <sup>®</sup> 378 | 113358         | 2       |
| Bionorica SE               | Softisan <sup>®</sup> 378 | 130243         | 1       |
| Bionorica SE Neumarkt      | Softisan <sup>®</sup> 378 | 132321         | 1       |
| Bionorica SE Neumarkt      | Softisan <sup>®</sup> 378 | 133396         | 1       |
| Bionorica SE/Sanacorp      | Softisan <sup>®</sup> 378 | 118060         | 2       |
| Bionorica/ AHD             | Softisan <sup>®</sup> 378 | 130243         | 2       |
| Bionorica/ Alliance        | Softisan <sup>®</sup> 378 | 132321         | 1       |
| Bionorica/ Allianve        | Softisan <sup>®</sup> 378 | 118060         | 2       |
| Bionorica/ Noweda          | Softisan <sup>®</sup> 378 | 113358         | 1       |

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| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| Bionorica/ Noweda          | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/ Sanacorp        | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/ Sanacorp        | Softisan <sup>®</sup> 378 | 151571           | 1       |
| Bionorica/AHD              | Softisan <sup>®</sup> 378 | 130243           | 1       |
| Bionorica/Alliance         | Softisan <sup>®</sup> 378 | 109779           | 1       |
| Bionorica/Alliance         | Softisan <sup>®</sup> 378 | 118060           | 2       |
| Bionorica/Alliance Health  | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/Alliance Health  | Softisan <sup>®</sup> 378 | 1300243          | 1       |
| Bionorica/Anzag            | Softisan <sup>®</sup> 378 | 118060           | 4       |
| Bionorica/Anzag            | Softisan <sup>®</sup> 378 | 130243           | 3       |
| Bionorica/Direkt           | Softisan <sup>®</sup> 378 | 113358           | 2       |
| Bionorica/Ebert            | Softisan <sup>®</sup> 378 | 113358           | 1       |
| Bionorica/Fiebig           | Softisan <sup>®</sup> 378 | 109779           | 3       |
| Bionorica/Fiebig           | Softisan <sup>®</sup> 378 | 109778           | 1       |
| Bionorica/Fiebig           | Softisan <sup>®</sup> 378 | 113358           | 2       |
| Bionorica/Gehe             | Softisan <sup>®</sup> 378 | 75850            | 3       |
| Bionorica/Gehe             | Softisan <sup>®</sup> 378 | 107075           | 1       |
| Bionorica/Gehe             | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/Gehe             | Softisan <sup>®</sup> 378 | 138485           | 1       |
| Bionorica/GEHE/20.06.19    | Softisan <sup>®</sup> 378 | 118060           | 2       |
| Bionorica/Kehr             | Softisan <sup>®</sup> 378 | 103897           | 1       |
| Bionorica/Kehr             | Softisan <sup>®</sup> 378 | 107075           | 1       |
| Bionorica/Krieger          | Softisan <sup>®</sup> 378 | 109779           | 1       |
| Bionorica/Noweda           | Softisan <sup>®</sup> 378 | 98561            | 1       |
| Bionorica/Noweda           | Softisan <sup>®</sup> 378 | 103897           | 2       |
| Bionorica/Noweda           | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/phoenix          | Softisan <sup>®</sup> 378 | 318E-02911       | 1       |
| Bionorica/Phoenix          | Softisan <sup>®</sup> 378 | 107075           | 1       |
| Bionorica/Phoenix          | Softisan <sup>®</sup> 378 | 11806            | 1       |
| Bionorica/Phoenix          | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bionorica/Phoenix          | Softisan <sup>®</sup> 378 | 130243           | 1       |
| Bionorica/Phoenix          | Softisan <sup>®</sup> 378 | 133396           | 1       |
| Bionorica/Phönix           | Softisan <sup>®</sup> 378 | 95076            | 1       |
| Bionorica/Phönix           | Softisan <sup>®</sup> 378 | 112894           | 1       |
| Bionorica/Phönix           | Softisan <sup>®</sup> 378 | 113358           | 1       |
| bionorica/sanacorp         | Softisan <sup>®</sup> 378 | 130243           | 2       |
| Bionorica/Sanacorp         | Softisan <sup>®</sup> 378 | 113358           | 1       |
| Bionorica/Sanacorp         | Softisan <sup>®</sup> 378 | 118060           | 1       |
| BionoricaEthics / GEHE     | Softisan <sup>®</sup> 378 | 130243           | 1       |
| BionoricaEthics / Phöni... | Softisan <sup>®</sup> 378 | 133396           | 1       |
| Bionoricaethics/Anzag      | Softisan <sup>®</sup> 378 | 133396           | 2       |
| Bionoricaethics/Gehe       | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Bombastus                  | Softisan <sup>®</sup> 378 | 17B16-B06-331749 | 1       |
| Bombastus                  | Softisan <sup>®</sup> 378 | 17816-806-331749 | 1       |
| Bombastus                  | Softisan <sup>®</sup> 378 | 302709           | 1       |
| C.P.M Contract Pharma G... | Softisan <sup>®</sup> 378 | 113358           | 3       |
| Caelo                      | Softisan <sup>®</sup> 378 | 13012703         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 10310003         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 3071201          | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 10310008         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 18011302         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 11359302         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 21031310         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 57657            | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 27091306         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 14111312         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 11121304         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 73059            | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 28031401         | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 1081408          | 1       |

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| Supplier | Substance                 | Batch            | Spectra |
|----------|---------------------------|------------------|---------|
| Caelo    | Softisan <sup>®</sup> 378 | 14301103         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 14301112         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 15G20-B10-310231 | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 14101712         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 16021507         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 4041501          | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 22062015B        | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 16010417         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 103897           | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 21071707         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 107075           | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 19021811         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 25041804         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 12051807         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 23051811         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 17I07-B01-340337 | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 17247114         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 18146401         | 12      |
| Caelo    | Softisan <sup>®</sup> 378 | 17J06-B01-349162 | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 20101804         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 17J06-B01-348073 | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 190560102        | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 19056106         | 16      |
| Caelo    | Softisan <sup>®</sup> 378 | 19056108         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 191862005        | 4       |
| Caelo    | Softisan <sup>®</sup> 378 | 14301104         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 20001844003      | 3       |
| Caelo    | Softisan <sup>®</sup> 378 | 21000299002      | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 191862002        | 12      |
| Caelo    | Softisan <sup>®</sup> 378 | 191862003        | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 13012707         | 5       |
| Caelo    | Softisan <sup>®</sup> 378 | 18146404         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 18146408         | 4       |
| Caelo    | Softisan <sup>®</sup> 378 | 18062005         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 191862007        | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 14301113         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 19056196         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 15G20B10320309   | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 113358           | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 16010402         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 16268606         | 3       |
| Caelo    | Softisan <sup>®</sup> 378 | 16268611         | 4       |
| Caelo    | Softisan <sup>®</sup> 378 | 18146406         | 4       |
| Caelo    | Softisan <sup>®</sup> 378 | 19056102         | 14      |
| Caelo    | Softisan <sup>®</sup> 378 | 20001844001      | 3       |
| Caelo    | Softisan <sup>®</sup> 378 | 20001844006      | 4       |
| Caelo    | Softisan <sup>®</sup> 378 | 209602           | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 15gb10326361     | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 17/06-B01-350967 | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 3/2017           | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 610789           | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 14F11B04         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 15G20-B10-311893 | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 15G20-B10-316518 | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 13012704         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 13370102         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 13370112         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 17247109         | 2       |
| Caelo    | Softisan <sup>®</sup> 378 | 17247112         | 1       |
| Caelo    | Softisan <sup>®</sup> 378 | 18146409         | 9       |

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| <b>Supplier</b>            | <b>Substance</b>          | <b>Batch</b>      | <b>Spectra</b> |
|----------------------------|---------------------------|-------------------|----------------|
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 19056102          | 2              |
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 19056106          | 2              |
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 19056108          | 1              |
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 19A30-B04         | 1              |
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 191862002         | 1              |
| Caesar & Loretz GmbH       | Softisan <sup>®</sup> 378 | 191862005         | 2              |
| Caesar & Loretz GmbH/Gehe  | Softisan <sup>®</sup> 378 | 19056106          | 1              |
| Caesar & Loretz GmbH/Gehe  | Softisan <sup>®</sup> 378 | 191862002         | 1              |
| Caesar & Loretz GmbH/Gehe  | Softisan <sup>®</sup> 378 | 191862005         | 1              |
| Caesar & Loretz GmbH/Gehe  | Softisan <sup>®</sup> 378 | 20001844006       | 1              |
| Caesar & Loretz GmbH/No... | Softisan <sup>®</sup> 378 | 191862002         | 2              |
| Caesar & Loretz GmbH/No... | Softisan <sup>®</sup> 378 | 1918620002        | 2              |
| Caesar L / Sanacorp        | Softisan <sup>®</sup> 378 | 19056102          | 1              |
| Delta                      | Softisan <sup>®</sup> 378 | 17J06-B01-525706  | 2              |
| Euro/Phönix                | Softisan <sup>®</sup> 378 | 103897            | 1              |
| Fagro                      | Softisan <sup>®</sup> 378 | 19A30-B04         | 4              |
| Fagro                      | Softisan <sup>®</sup> 378 | 19K04-F06-367115  | 1              |
| Fagro                      | Softisan <sup>®</sup> 378 | F06-3671106       | 2              |
| Fagro                      | Softisan <sup>®</sup> 378 | F02-3719009       | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 12/24-N01         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 13B11-N01         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 13D26-N02         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 209602            | 4              |
| Fagron                     | Softisan <sup>®</sup> 378 | 13H22-N01         | 5              |
| Fagron                     | Softisan <sup>®</sup> 378 | 303624            | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 12I24-N01         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 311662            | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 14F11-B04-296083  | 3              |
| Fagron                     | Softisan <sup>®</sup> 378 | 14F11B04-296083   | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-310231  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-10-316518   | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 14F11-B04         | 3              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-311893  | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-316518  | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-320309  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10_316518  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10         | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17B16-B06-525441  | 3              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17F15-B05-336058  | 4              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17I07-B01-338745  | 4              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17B16-B06-333147  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17F-15-B05-336058 | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17816-806         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17I07-B01-340337  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17/07-B01-340337  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17F15-B05         | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01-342646  | 4              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01_342646  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17F15-B05-336059  | 2              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01-349162  | 7              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01-348073  | 4              |
| Fagron                     | Softisan <sup>®</sup> 378 | 170828            | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 18G30-B05-352747  | 5              |
| Fagron                     | Softisan <sup>®</sup> 378 | 1814640           | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 18G30-B05-358235  | 5              |
| Fagron                     | Softisan <sup>®</sup> 378 | 19A30-B04526060   | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01-525706  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 20F25-F02-373348  | 1              |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06-B01-346209  | 6              |
| Fagron                     | Softisan <sup>®</sup> 378 | 18G30-B05         | 2              |

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| Supplier               | Substance                 | Batch             | Spectra |
|------------------------|---------------------------|-------------------|---------|
| Fagron                 | Softisan <sup>®</sup> 378 | 18G30-B05-355402  | 4       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-B04-362347  | 12      |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-804-364125  | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19430-B04-364125  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 505717            | 3       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19K04-F06-369505  | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17J06-B01-350967  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19K04-F06         | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 11520             | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 13H22-N01         | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17F15-B05-525528  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 812878            | 3       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30B04-362347   | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 10A30-B04-362347  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A-30-B04-364125 | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-B04-364125  | 10      |
| Fagron                 | Softisan <sup>®</sup> 378 | 20F25-F02         | 3       |
| Fagron                 | Softisan <sup>®</sup> 378 | 20F25-F02-373348  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17B16-B06-331749  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17107-B01-340337  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 15G20-B10-525379  | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 708826            | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17J06B01350967    | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 190902908         | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-B04-362346  | 9       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19K04-F06-367116  | 3       |
| Fagron                 | Softisan <sup>®</sup> 378 | 14F11-B04-299298  | 8       |
| Fagron                 | Softisan <sup>®</sup> 378 | 514E-02911        | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 2715E-02911       | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17B16-B06-334707  | 3       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17B16-B06         | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17I07-B01-525611  | 5       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17J06-B01-525718  | 4       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17J06-B01-525822  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 190230702         | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19K04-F06-367115  | 5       |
| Fagron                 | Softisan <sup>®</sup> 378 | 17J06-B01         | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-B04-362348  | 1       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19A30-B04-362349  | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19K04-F06-367117  | 1       |
| Fargon                 | Softisan <sup>®</sup> 378 | 17I07-B01-338745  | 1       |
| Fragon                 | Softisan <sup>®</sup> 378 | 17F15-B05-525528  | 1       |
| Gehe                   | Softisan <sup>®</sup> 378 | 9477689           | 1       |
| Gehe                   | Softisan <sup>®</sup> 378 | 18146401          | 1       |
| GEHE                   | Softisan <sup>®</sup> 378 | 17B16-B06         | 1       |
| Gehe Kassel 09.02.2015 | Softisan <sup>®</sup> 378 | 75850             | 1       |
| IOI/Noweda             | Softisan <sup>®</sup> 378 | 19K04-F06         | 1       |
| IOI/Noweda             | Softisan <sup>®</sup> 378 | 21C19-F03         | 1       |
| IOI/Noweda             | Softisan <sup>®</sup> 378 | 2910              | 1       |
| IOI/Phoenix            | Softisan <sup>®</sup> 378 | 812878            | 3       |
| IOI/Phoenix            | Softisan <sup>®</sup> 378 | 19A30-B04         | 1       |
| Caelo                  | Softisan <sup>®</sup> 378 | 16268605          | 2       |
| Fagron                 | Softisan <sup>®</sup> 378 | 19D25-B04         | 2       |
| Noweda                 | Softisan <sup>®</sup> 378 | 2012060444        | 1       |
| Noweda                 | Softisan <sup>®</sup> 378 | 17B16-B06-331749  | 1       |
| Noweda                 | Softisan <sup>®</sup> 378 | 109704            | 1       |
| Caelo                  | Softisan <sup>®</sup> 378 | 17247103          | 1       |
| Caelo                  | Softisan <sup>®</sup> 378 | 17247107          | 2       |
| Phoenix                | Softisan <sup>®</sup> 378 | 17107-B01-340337  | 1       |
| Phoenix                | Softisan <sup>®</sup> 378 | 200351604         | 1       |

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| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| Phoenix                    | Softisan <sup>®</sup> 378 | 200721705        | 1       |
| Phoenix / Bionorica Ethi   | Softisan <sup>®</sup> 378 | 109779           | 2       |
| Phoenix / Bionorica Ethi   | Softisan <sup>®</sup> 378 | 103897           | 2       |
| Phoenix / Bionorica Ethi   | Softisan <sup>®</sup> 378 | 113358           | 4       |
| Phoenix Goettin            | Softisan <sup>®</sup> 378 | 2013091014       | 2       |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-525272 | 1       |
| Phönix/Bionorica           | Softisan <sup>®</sup> 378 | 109778           | 2       |
| Phönix/Bionorica           | Softisan <sup>®</sup> 378 | 118060           | 1       |
| Fagron                     | Softisan <sup>®</sup> 378 | 15G20-B10-525116 | 3       |
| Fagron                     | Softisan <sup>®</sup> 378 | 17J06B01349162   | 2       |
| Fagron                     | Softisan <sup>®</sup> 378 | 18G30-B05-52839  | 1       |
| Fagron                     | Softisan <sup>®</sup> 378 | 18G30-B05-525839 | 2       |
| Sanacorp                   | Softisan <sup>®</sup> 378 | 3/AKD1           | 1       |
| Sanacorp                   | Softisan <sup>®</sup> 378 | 12A18-N11        | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 13H22-N01        | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 190556106        | 1       |
| Thc                        | Softisan <sup>®</sup> 378 | 2012060444       | 1       |
| THC Pharm                  | Softisan <sup>®</sup> 378 | 1180600          | 1       |
| THC Pharm /Anzag           | Softisan <sup>®</sup> 378 | 132321           | 1       |
| THC Pharm GmbH             | Softisan <sup>®</sup> 378 | 113358           | 1       |
| THC Pharm GmbH/ Phönix     | Softisan <sup>®</sup> 378 | 132321           | 1       |
| THC Pharm/Alliance         | Softisan <sup>®</sup> 378 | 98561            | 1       |
| THC Pharm/Noweda           | Softisan <sup>®</sup> 378 | 113358           | 1       |
| THC Pharma                 | Softisan <sup>®</sup> 378 | 88154            | 1       |
| THC Pharma                 | Softisan <sup>®</sup> 378 | 92456            | 1       |
| THC Pharma                 | Softisan <sup>®</sup> 378 | 98561            | 1       |
| THC Pharma / Phoenix       | Softisan <sup>®</sup> 378 | 103897           | 2       |
| THC Pharma/Krieger         | Softisan <sup>®</sup> 378 | 118060           | 1       |
| THC Pharma/Phönix          | Softisan <sup>®</sup> 378 | 95076            | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 16010408         | 1       |
| ACM                        | Wool fat                  | KNC1879J13       | 2       |
| AEP                        | Wool fat                  | 18314704         | 2       |
| Caelo                      | Wool fat                  | 18139305         | 34      |
| Caelo                      | Wool fat                  | 20002793002      | 1       |
| AHD                        | Wool fat                  | 14238002         | 2       |
| AHD                        | Wool fat                  | 18224303         | 1       |
| AHD 29.01.15 EK 7,67       | Wool fat                  | 14238006         | 1       |
| AHD;15.12.14;4,82EUR       | Wool fat                  | 14238002         | 2       |
| AHD;9.7.15; 4,78EUR        | Wool fat                  | 15050902         | 1       |
| AHDE 19,05,.2015           | Wool fat                  | 14238002         | 1       |
| Alliance healthcare        | Wool fat                  | 5528000          | 1       |
| Alliance Healthcare        | Wool fat                  | 12224404         | 1       |
| Alliance Healthcare        | Wool fat                  | 13039403         | 1       |
| Alliance Healthcare        | Wool fat                  | 17248106         | 1       |
| Alliance Healthcare        | Wool fat                  | 17307507         | 1       |
| Alliance Healthcare        | Wool fat                  | 8004748003       | 2       |
| Alliance Healthcare        | Wool fat                  | 19100504         | 1       |
| Alliance Healthcare        | Wool fat                  | 19100506         | 1       |
| Alliance/                  | Wool fat                  | 1000010937       | 2       |
| Alliance/Henry Lamotte     | Wool fat                  | 8004748002       | 1       |
| Allianz Healthcare 22.0... | Wool fat                  | 14238008         | 1       |
| Alte Apotheke              | Wool fat                  | 16221904         | 1       |
| Anzag                      | Wool fat                  | 5375400          | 2       |
| Anzag                      | Wool fat                  | 15050906         | 1       |
| Anzag                      | Wool fat                  | 15050903         | 1       |
| Anzag                      | Wool fat                  | 15198804         | 1       |
| Anzag                      | Wool fat                  | 16003905         | 1       |
| Anzag                      | Wool fat                  | 16044302         | 1       |
| Anzag                      | Wool fat                  | 8002112003       | 1       |
| Anzag                      | Wool fat                  | 8002320010       | 1       |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|------------------|--------------|----------------|
| Anzag                       | Wool fat         | 8002760003   | 1              |
| Anzag                       | Wool fat         | 8003158003   | 3              |
| Anzag                       | Wool fat         | 19100504     | 1              |
| Anzag 25.02.13 ek: 14,44EUR | Wool fat         | 5264700      | 1              |
| Anzag/13.02.2013            | Wool fat         | 12122403     | 1              |
| Anzag/Beiersdorf            | Wool fat         | 15050902     | 1              |
| Bombastus                   | Wool fat         | 267377       | 2              |
| Fagron                      | Wool fat         | 14086906     | 1              |
| Apo Ident/ Noweda           | Wool fat         | 18139302     | 2              |
| apomix                      | Wool fat         | 17248103     | 1              |
| apomix/Noweda               | Wool fat         | 311019       | 1              |
| Aponorm                     | Wool fat         | 17307502     | 1              |
| Bergchemie                  | Wool fat         | 14086904     | 1              |
| Berkel AHK                  | Wool fat         | 14086905     | 1              |
| Bionorica ethics/Allian...  | Wool fat         | 8004134015   | 1              |
| Bobastus/Noweda             | Wool fat         | 279840       | 1              |
| Bombastus direkt            | Wool fat         | 60081303     | 1              |
| Bombastos                   | Wool fat         | 305553       | 1              |
| Bombastus                   | Wool fat         | 260535       | 1              |
| Bombastus                   | Wool fat         | 254683       | 1              |
| Bombastus                   | Wool fat         | 272421       | 1              |
| Bombastus                   | Wool fat         | 275701       | 3              |
| Bombastus                   | Wool fat         | 273197       | 1              |
| Bombastus                   | Wool fat         | 275888       | 2              |
| Bombastus                   | Wool fat         | 272422       | 1              |
| Bombastus                   | Wool fat         | 277470       | 1              |
| Bombastus                   | Wool fat         | 280167       | 2              |
| Bombastus                   | Wool fat         | 271419       | 2              |
| Bombastus                   | Wool fat         | 281849       | 1              |
| Bombastus                   | Wool fat         | 286361       | 1              |
| Bombastus                   | Wool fat         | 288711       | 2              |
| Bombastus                   | Wool fat         | 290972       | 1              |
| Bombastus                   | Wool fat         | 296321       | 4              |
| Bombastus                   | Wool fat         | 301843       | 1              |
| Bombastus                   | Wool fat         | 16345104     | 1              |
| Bombastus                   | Wool fat         | 17307503     | 1              |
| Bombastus                   | Wool fat         | 18002044     | 3              |
| Bombastus                   | Wool fat         | 17002020     | 2              |
| Bombastus                   | Wool fat         | 60081303     | 1              |
| Bombastus                   | Wool fat         | 19002210     | 6              |
| Bombastus                   | Wool fat         | 20003386     | 2              |
| Bombastus                   | Wool fat         | 18003425     | 1              |
| Bombastus                   | Wool fat         | 308894       | 3              |
| Bombastus                   | Wool fat         | 286362       | 3              |
| Bombastus                   | Wool fat         | 303927       | 1              |
| Bombastus                   | Wool fat         | 288712       | 4              |
| Bombastus                   | Wool fat         | 291339       | 1              |
| Bombastus                   | Wool fat         | 290878       | 1              |
| Bombastus                   | Wool fat         | 18029902     | 1              |
| Bombastus                   | Wool fat         | 299653       | 2              |
| Bombastus                   | Wool fat         | 14147902     | 1              |
| Bombastus                   | Wool fat         | 295371       | 1              |
| Bombastus                   | Wool fat         | 294438       | 3              |
| Bombastus                   | Wool fat         | 301844       | 2              |
| Bombastus                   | Wool fat         | 311019       | 1              |
| Bombastus                   | Wool fat         | 18005684     | 6              |
| Bombastus                   | Wool fat         | 19006596     | 2              |
| Bombastus                   | Wool fat         | 297572       | 2              |
| Bombastus                   | Wool fat         | 275889       | 3              |
| Bombastus                   | Wool fat         | 18002043     | 3              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|-----------------|------------------|----------------|----------------|
| Bombastus       | Wool fat         | 281850         | 3              |
| Bombastus       | Wool fat         | 16221907       | 1              |
| Bombastus       | Wool fat         | 305552         | 5              |
| Bombastus       | Wool fat         | 308893         | 2              |
| Bombastus       | Wool fat         | 303928         | 9              |
| Bombastus       | Wool fat         | 17248107       | 1              |
| Bombastus       | Wool fat         | 180003425      | 1              |
| Bombastus       | Wool fat         | 291336         | 2              |
| Bombastus       | Wool fat         | 299568         | 1              |
| Bombastus       | Wool fat         | 303926         | 3              |
| Bombastus       | Wool fat         | 279840         | 1              |
| Bombastus       | Wool fat         | 18003426       | 10             |
| Bombastus       | Wool fat         | 268668         | 2              |
| Bombastus       | Wool fat         | 283526         | 3              |
| Bombastus       | Wool fat         | 17002018       | 1              |
| Bombastus       | Wool fat         | 19005541       | 3              |
| Bombastus       | Wool fat         | 17000437       | 5              |
| Caelo           | Wool fat         | 13398202       | 8              |
| Caelo           | Wool fat         | 14147903       | 20             |
| Caelo           | Wool fat         | 1505906        | 1              |
| Caelo           | Wool fat         | 17248103       | 63             |
| Caelo           | Wool fat         | 18139302       | 32             |
| Caelo           | Wool fat         | 90008450021    | 1              |
| Caelo           | Wool fat         | 11261102       | 1              |
| Caelo           | Wool fat         | 11097402       | 1              |
| Caelo           | Wool fat         | 11261103       | 1              |
| Caelo           | Wool fat         | 11261106       | 2              |
| Caelo           | Wool fat         | 11203902       | 2              |
| Caelo           | Wool fat         | 1603211056     | 1              |
| Caelo           | Wool fat         | 12015605       | 5              |
| Caelo           | Wool fat         | 12015603       | 6              |
| Caelo           | Wool fat         | 26061205       | 1              |
| Caelo           | Wool fat         | 12015604       | 3              |
| Caelo           | Wool fat         | 13081206       | 1              |
| Caelo           | Wool fat         | 12074502       | 4              |
| Caelo           | Wool fat         | 1309211056     | 1              |
| Caelo           | Wool fat         | 27091204       | 1              |
| Caelo           | Wool fat         | 6111212        | 1              |
| Caelo           | Wool fat         | 5211E-01056    | 1              |
| Caelo           | Wool fat         | 24422111203903 | 1              |
| Caelo           | Wool fat         | 612211056      | 1              |
| Caelo           | Wool fat         | 14121204       | 1              |
| Caelo           | Wool fat         | 12006702       | 1              |
| Caelo           | Wool fat         | 5212Q-01056    | 1              |
| Caelo           | Wool fat         | 5253400        | 1              |
| Caelo           | Wool fat         | 12122406       | 7              |
| Caelo           | Wool fat         | 12224404       | 18             |
| Caelo           | Wool fat         | 12224405       | 15             |
| Caelo           | Wool fat         | 31011302       | 1              |
| Caelo           | Wool fat         | 5264700        | 3              |
| Caelo           | Wool fat         | 11031302       | 1              |
| Caelo           | Wool fat         | 5375400        | 2              |
| Caelo           | Wool fat         | 12224403       | 4              |
| Caelo           | Wool fat         | 12321805       | 9              |
| Caelo           | Wool fat         | 15041306       | 1              |
| Caelo           | Wool fat         | 13039403       | 27             |
| Caelo           | Wool fat         | 13039402       | 15             |
| Caelo           | Wool fat         | 2113U01056     | 1              |
| Caelo           | Wool fat         | 8061304        | 1              |
| Caelo           | Wool fat         | 12091301       | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>   | <b>Spectra</b> |
|-----------------|------------------|----------------|----------------|
| Caelo           | Wool fat         | 16102013D      | 1              |
| Caelo           | Wool fat         | 30101311       | 1              |
| Caelo           | Wool fat         | 13213108       | 19             |
| Caelo           | Wool fat         | 13213105       | 8              |
| Caelo           | Wool fat         | 16121308       | 1              |
| Caelo           | Wool fat         | 5520800        | 4              |
| Caelo           | Wool fat         | 1321308        | 1              |
| Caelo           | Wool fat         | 14022014A      | 1              |
| Caelo           | Wool fat         | 13306203       | 12             |
| Caelo           | Wool fat         | 412062-1-P     | 1              |
| Caelo           | Wool fat         | 15031401       | 1              |
| Caelo           | Wool fat         | 13303208       | 1              |
| Caelo           | Wool fat         | 3x13398202     | 1              |
| Caelo           | Wool fat         | 29041407       | 1              |
| Caelo           | Wool fat         | 5052014A       | 1              |
| Caelo           | Wool fat         | 7051401        | 1              |
| Caelo           | Wool fat         | 4061402        | 1              |
| Caelo           | Wool fat         | 14086906       | 21             |
| Caelo           | Wool fat         | 14086903       | 18             |
| Caelo           | Wool fat         | 14086907       | 7              |
| Caelo           | Wool fat         | 5081406        | 1              |
| Caelo           | Wool fat         | 5650500        | 1              |
| Caelo           | Wool fat         | 14147902       | 22             |
| Caelo           | Wool fat         | 4101404        | 1              |
| Caelo           | Wool fat         | 6102014C       | 1              |
| Caelo           | Wool fat         | 5763900        | 2              |
| Caelo           | Wool fat         | 14111402       | 1              |
| Caelo           | Wool fat         | 1423006        | 1              |
| Caelo           | Wool fat         | 8011509        | 1              |
| Caelo           | Wool fat         | 14238010       | 6              |
| Caelo           | Wool fat         | 14304502       | 17             |
| Caelo           | Wool fat         | 15050904       | 16             |
| Caelo           | Wool fat         | 23091704       | 1              |
| Caelo           | Wool fat         | 14238006       | 17             |
| Caelo           | Wool fat         | 14238004       | 15             |
| Caelo           | Wool fat         | 23012015A      | 1              |
| Caelo           | Wool fat         | 11041312036703 | 1              |
| Caelo           | Wool fat         | 14238008       | 22             |
| Caelo           | Wool fat         | 14238001       | 2              |
| Caelo           | Wool fat         | 18021502       | 1              |
| Caelo           | Wool fat         | 14238005       | 8              |
| Caelo           | Wool fat         | 4032015A       | 1              |
| Caelo           | Wool fat         | 1321305        | 1              |
| Caelo           | Wool fat         | 18041503       | 1              |
| Caelo           | Wool fat         | 15050906       | 18             |
| Caelo           | Wool fat         | 2061509        | 1              |
| Caelo           | Wool fat         | 1505090        | 1              |
| Caelo           | Wool fat         | 21071502       | 1              |
| Caelo           | Wool fat         | 1518405        | 2              |
| Caelo           | Wool fat         | 15158405       | 24             |
| Caelo           | Wool fat         | 1518401        | 1              |
| Caelo           | Wool fat         | 15198803       | 25             |
| Caelo           | Wool fat         | 2751           | 1              |
| Caelo           | Wool fat         | 15292313       | 1              |
| Caelo           | Wool fat         | 15421401       | 1              |
| Caelo           | Wool fat         | 16003902       | 40             |
| Caelo           | Wool fat         | 160003901      | 1              |
| Caelo           | Wool fat         | 2818           | 1              |
| Caelo           | Wool fat         | 16163006       | 33             |
| Caelo           | Wool fat         | 161630         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|-----------------|------------------|--------------|----------------|
| Caelo           | Wool fat         | 16221902     | 24             |
| Caelo           | Wool fat         | 16221905     | 15             |
| Caelo           | Wool fat         | 16221903     | 24             |
| Caelo           | Wool fat         | 16221906     | 16             |
| Caelo           | Wool fat         | 6221903      | 1              |
| Caelo           | Wool fat         | 23021709     | 1              |
| Caelo           | Wool fat         | 1000         | 1              |
| Caelo           | Wool fat         | 16267204     | 16             |
| Caelo           | Wool fat         | 9041706      | 1              |
| Caelo           | Wool fat         | 16345104     | 92             |
| Caelo           | Wool fat         | 16051701     | 1              |
| Caelo           | Wool fat         | 16345106     | 13             |
| Caelo           | Wool fat         | 15071705     | 1              |
| Caelo           | Wool fat         | 163451045377 | 1              |
| Caelo           | Wool fat         | 17167702     | 12             |
| Caelo           | Wool fat         | 17167701     | 31             |
| Caelo           | Wool fat         | 23101703     | 1              |
| Caelo           | Wool fat         | 17139301     | 57             |
| Caelo           | Wool fat         | 16345108     | 1              |
| Caelo           | Wool fat         | 171677001    | 1              |
| Caelo           | Wool fat         | 8003158003   | 5              |
| Caelo           | Wool fat         | 17167704     | 21             |
| Caelo           | Wool fat         | 13011801     | 1              |
| Caelo           | Wool fat         | 1739301      | 1              |
| Caelo           | Wool fat         | 19021801     | 1              |
| Caelo           | Wool fat         | 17428107     | 1              |
| Caelo           | Wool fat         | 17307501     | 18             |
| Caelo           | Wool fat         | 17000437     | 1              |
| Caelo           | Wool fat         | 23041801     | 1              |
| Caelo           | Wool fat         | 17284103     | 1              |
| Caelo           | Wool fat         | 18029902     | 34             |
| Caelo           | Wool fat         | 17307506     | 54             |
| Caelo           | Wool fat         | 24051801     | 1              |
| Caelo           | Wool fat         | 17307902     | 1              |
| Caelo           | Wool fat         | 17037503     | 1              |
| Caelo           | Wool fat         | 29061802     | 1              |
| Caelo           | Wool fat         | 17307906     | 1              |
| Caelo           | Wool fat         | 22091801     | 1              |
| Caelo           | Wool fat         | 18029901     | 11             |
| Caelo           | Wool fat         | 3246         | 1              |
| Caelo           | Wool fat         | 8004134001   | 1              |
| Caelo           | Wool fat         | 173057506    | 1              |
| Caelo           | Wool fat         | 17111802     | 1              |
| Caelo           | Wool fat         | 18139308     | 34             |
| Caelo           | Wool fat         | 18029905     | 2              |
| Caelo           | Wool fat         | 9011901      | 1              |
| Caelo           | Wool fat         | 18224304     | 18             |
| Caelo           | Wool fat         | 18139202     | 1              |
| Caelo           | Wool fat         | 18168701     | 1              |
| Caelo           | Wool fat         | 18224306     | 13             |
| Caelo           | Wool fat         | 18314704     | 17             |
| Caelo           | Wool fat         | 19043405     | 23             |
| Caelo           | Wool fat         | 19043402     | 10             |
| Caelo           | Wool fat         | 19100502     | 47             |
| Caelo           | Wool fat         | 19100504     | 52             |
| Caelo           | Wool fat         | 191746005    | 1              |
| Caelo           | Wool fat         | 191774605    | 1              |
| Caelo           | Wool fat         | 192611005    | 30             |
| Caelo           | Wool fat         | 192611004    | 26             |
| Caelo           | Wool fat         | 19000845004  | 14             |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Wool fat         | 20000968004          | 7              |
| Caelo           | Wool fat         | 20003738004          | 1              |
| Caelo           | Wool fat         | CHB19100506          | 1              |
| Caelo           | Wool fat         | 14238002             | 11             |
| Caelo           | Wool fat         | 20003738002          | 3              |
| Caelo           | Wool fat         | 15292311             | 5              |
| Caelo           | Wool fat         | 16221907             | 63             |
| Caelo           | Wool fat         | 14304501             | 23             |
| Caelo           | Wool fat         | 11203903             | 1              |
| Caelo           | Wool fat         | 19174605             | 37             |
| Caelo           | Wool fat         | 18131302             | 1              |
| Caelo           | Wool fat         | 1309405              | 1              |
| Caelo           | Wool fat         | 12321807             | 2              |
| Caelo           | Wool fat         | 75798803             | 1              |
| Caelo           | Wool fat         | 18224204             | 1              |
| Caelo           | Wool fat         | 1701051-01           | 1              |
| Caelo           | Wool fat         | 19000845001          | 30             |
| Caelo           | Wool fat         | 13398201             | 15             |
| Caelo           | Wool fat         | 16221904             | 46             |
| Caelo           | Wool fat         | 8002760002           | 6              |
| Caelo           | Wool fat         | AKD17                | 1              |
| Caelo           | Wool fat         | 5163200              | 1              |
| Caelo           | Wool fat         | 12321803             | 12             |
| Caelo           | Wool fat         | 20160727Ma6          | 1              |
| Caelo           | Wool fat         | 13306204             | 7              |
| Caelo           | Wool fat         | 12321802             | 9              |
| Caelo           | Wool fat         | 13094905             | 18             |
| Caelo           | Wool fat         | 19100504P-191004-4   | 1              |
| Caelo           | Wool fat         | 19100504P-191022-3   | 1              |
| Caelo           | Wool fat         | 19165701P-200319-6   | 1              |
| Caelo           | Wool fat         | 19100506P-191227-2   | 1              |
| Caelo           | Wool fat         | 19100504P-190923-2   | 1              |
| Caelo           | Wool fat         | 192611004P-200507-5  | 1              |
| Caelo           | Wool fat         | 12036704             | 6              |
| Caelo           | Wool fat         | 12224402             | 1              |
| Caelo           | Wool fat         | 12321801             | 2              |
| Caelo           | Wool fat         | 5727500              | 1              |
| Caelo           | Wool fat         | 18139306-W20181115Ma | 1              |
| Caelo           | Wool fat         | 1917460              | 1              |
| Caelo           | Wool fat         | 13398291             | 1              |
| Caelo           | Wool fat         | 16044303             | 31             |
| Caelo           | Wool fat         | 167(18139302)        | 1              |
| Caelo           | Wool fat         | 168(18224304)        | 1              |
| Caelo           | Wool fat         | 19100507             | 15             |
| Caelo           | Wool fat         | 172488107            | 1              |
| Caelo           | Wool fat         | 13094903             | 13             |
| Caelo           | Wool fat         | 13094904             | 1              |
| Caelo           | Wool fat         | 14147905             | 1              |
| Caelo           | Wool fat         | 16044306             | 9              |
| Caelo           | Wool fat         | 17307502             | 30             |
| Caelo           | Wool fat         | 14086902             | 1              |
| Caelo           | Wool fat         | 166(18029903)        | 1              |
| Caelo           | Wool fat         | 14147901             | 13             |
| Caelo           | Wool fat         | 14238009             | 19             |
| Caelo           | Wool fat         | 1613001              | 1              |
| Caelo           | Wool fat         | 8003158001           | 2              |
| Caelo           | Wool fat         | 19000845002          | 8              |
| Caelo           | Wool fat         | 20000968002          | 7              |
| Caelo           | Wool fat         | 19000845003          | 1              |
| Caelo           | Wool fat         | 20001836004          | 7              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|------------------|---------------|----------------|
| Caelo           | Wool fat         | 17278103      | 1              |
| Caelo           | Wool fat         | 3320          | 1              |
| Caelo           | Wool fat         | 15158402      | 48             |
| Caelo           | Wool fat         | 20001836006   | 2              |
| Caelo           | Wool fat         | 5690800       | 1              |
| Caelo           | Wool fat         | 6001861002    | 2              |
| Caelo           | Wool fat         | 18224302      | 66             |
| Caelo           | Wool fat         | 1303403       | 1              |
| Caelo           | Wool fat         | 1336205       | 1              |
| Caelo           | Wool fat         | 15292316      | 20             |
| Caelo           | Wool fat         | 15158401      | 27             |
| Caelo           | Wool fat         | 1613006       | 1              |
| Caelo           | Wool fat         | 18003426      | 1              |
| Caelo           | Wool fat         | 20001836002   | 8              |
| Caelo           | Wool fat         | 20002793001   | 4              |
| Caelo           | Wool fat         | 19174603      | 12             |
| Caelo           | Wool fat         | 5860600       | 1              |
| Caelo           | Wool fat         | 17307505      | 19             |
| Caelo           | Wool fat         | 1206702       | 1              |
| Caelo           | Wool fat         | 3112U-01056   | 1              |
| Caelo           | Wool fat         | 13213104      | 17             |
| Caelo           | Wool fat         | 3513U-01056   | 1              |
| Caelo           | Wool fat         | 2814U-01056   | 1              |
| Caelo           | Wool fat         | 316E-01056    | 1              |
| Caelo           | Wool fat         | 2516A-01056   | 1              |
| Caelo           | Wool fat         | 165(17307505) | 1              |
| Caelo           | Wool fat         | 18029908      | 1              |
| Caelo           | Wool fat         | 18139307      | 28             |
| Caelo           | Wool fat         | 19100501      | 1              |
| Caelo           | Wool fat         | 192611002     | 1              |
| Caelo           | Wool fat         | 140713c       | 1              |
| Caelo           | Wool fat         | 1231802       | 1              |
| Caelo           | Wool fat         | 17248106      | 10             |
| Caelo           | Wool fat         | 311201702     | 1              |
| Caelo           | Wool fat         | 4013Q1056     | 1              |
| Caelo           | Wool fat         | 13213107      | 19             |
| Caelo           | Wool fat         | 13306207      | 16             |
| Caelo           | Wool fat         | 13306205      | 8              |
| Caelo           | Wool fat         | 1914M1056     | 1              |
| Caelo           | Wool fat         | 286362        | 1              |
| Caelo           | Wool fat         | 14238007      | 8              |
| Caelo           | Wool fat         | 14304504      | 8              |
| Caelo           | Wool fat         | 15292309      | 5              |
| Caelo           | Wool fat         | 16163002      | 24             |
| Caelo           | Wool fat         | 8002112001    | 1              |
| Caelo           | Wool fat         | 4817A-01056   | 1              |
| Caelo           | Wool fat         | 8002760001    | 2              |
| Caelo           | Wool fat         | 1713901       | 2              |
| Caelo           | Wool fat         | 1713903       | 2              |
| Caelo           | Wool fat         | 18139303      | 22             |
| Caelo           | Wool fat         | 8004134015    | 2              |
| Caelo           | Wool fat         | 19139305      | 1              |
| Caelo           | Wool fat         | 20000968001   | 15             |
| Caelo           | Wool fat         | 1206703       | 1              |
| Caelo           | Wool fat         | 13306208      | 15             |
| Caelo           | Wool fat         | 15158404      | 1              |
| Caelo           | Wool fat         | 164(17307505) | 1              |
| Caelo           | Wool fat         | 169(18314702) | 1              |
| Caelo           | Wool fat         | 170(18314702) | 1              |
| Caelo           | Wool fat         | 200001316003  | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|-----------------|------------------|----------------------|----------------|
| Caelo           | Wool fat         | 181139305            | 1              |
| Caelo           | Wool fat         | 8003158002           | 1              |
| Caelo           | Wool fat         | 13039405             | 10             |
| Caelo           | Wool fat         | 291339               | 1              |
| Caelo           | Wool fat         | 1212204              | 1              |
| Caelo           | Wool fat         | 1321307              | 1              |
| Caelo           | Wool fat         | 13306206             | 20             |
| Caelo           | Wool fat         | 5528000              | 1              |
| Caelo           | Wool fat         | 15050903             | 17             |
| Caelo           | Wool fat         | 294643               | 1              |
| Caelo           | Wool fat         | 8002144001           | 4              |
| Caelo           | Wool fat         | 16328201             | 1              |
| Caelo           | Wool fat         | 16345107             | 23             |
| Caelo           | Wool fat         | 171339301            | 2              |
| Caelo           | Wool fat         | 17129301             | 1              |
| Caelo           | Wool fat         | 1167701              | 1              |
| Caelo           | Wool fat         | 17307503             | 30             |
| Caelo           | Wool fat         | 1767704              | 1              |
| Caelo           | Wool fat         | 180808184            | 1              |
| Caelo           | Wool fat         | 18029903             | 3              |
| Caelo           | Wool fat         | 17307507             | 69             |
| Caelo           | Wool fat         | 1730750              | 1              |
| Caelo           | Wool fat         | 18133902             | 1              |
| Caelo           | Wool fat         | 18224301             | 36             |
| Caelo           | Wool fat         | 18224305             | 56             |
| Caelo           | Wool fat         | 8004748002           | 3              |
| Caelo           | Wool fat         | 19043401             | 12             |
| Caelo           | Wool fat         | 19100505             | 22             |
| Caelo           | Wool fat         | 1900084501           | 1              |
| Caelo           | Wool fat         | 20000968007          | 7              |
| Caelo           | Wool fat         | 20001836001          | 9              |
| Caelo           | Wool fat         | 200001836004         | 1              |
| Fagron          | Wool fat         | 18224302             | 1              |
| Fagron          | Wool fat         | 19000845001          | 1              |
| Caelo           | Wool fat         | 133062707            | 1              |
| Caelo           | Wool fat         | 14238003             | 10             |
| Caelo           | Wool fat         | 16003901             | 36             |
| Caelo           | Wool fat         | 16044304             | 1              |
| Caelo           | Wool fat         | 16163005             | 1              |
| Caelo           | Wool fat         | 17139302             | 14             |
| Caelo           | Wool fat         | 8004134003           | 7              |
| Caelo           | Wool fat         | 181393007            | 1              |
| Caelo           | Wool fat         | 18314702             | 13             |
| Caelo           | Wool fat         | 190550306            | 1              |
| Caelo           | Wool fat         | 19174604             | 29             |
| Caelo           | Wool fat         | 27211926115          | 1              |
| Caelo           | Wool fat         | 2001836004           | 1              |
| Caelo           | Wool fat         | 17139301-20171106Ma4 | 1              |
| Caelo           | Wool fat         | 82325376             | 1              |
| Caelo           | Wool fat         | 142383               | 1              |
| Caelo           | Wool fat         | 1434502              | 1              |
| Caelo           | Wool fat         | 16044302             | 63             |
| Caelo           | Wool fat         | 17139303             | 60             |
| Caelo           | Wool fat         | 17248105             | 21             |
| Caelo           | Wool fat         | 17248107             | 28             |
| Caelo           | Wool fat         | 180029902            | 1              |
| Caelo           | Wool fat         | 18139304             | 27             |
| Caelo           | Wool fat         | 19100506             | 32             |
| Caelo           | Wool fat         | 192611003            | 17             |
| Caelo           | Wool fat         | 20001836005          | 10             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caelo                      | Wool fat         | 20002793003  | 1              |
| Caelo                      | Wool fat         | 51198803     | 1              |
| Caelo                      | Wool fat         | 171677045622 | 1              |
| Caelo                      | Wool fat         | 173075025782 | 1              |
| Caelo                      | Wool fat         | 13094902     | 2              |
| Caelo                      | Wool fat         | 132131104    | 1              |
| Caelo                      | Wool fat         | 1094641      | 2              |
| Caelo                      | Wool fat         | 16267203     | 2              |
| Caelo                      | Wool fat         | 1267201      | 2              |
| Caelo                      | Wool fat         | 308893       | 1              |
| Caelo                      | Wool fat         | 17248102     | 1              |
| Caelo                      | Wool fat         | 17307508     | 30             |
| Caelo                      | Wool fat         | 18049003     | 1              |
| Caelo                      | Wool fat         | 18139306     | 31             |
| Caelo                      | Wool fat         | 18262601     | 1              |
| Caelo                      | Wool fat         | 18314703     | 21             |
| Caelo                      | Wool fat         | 182243006    | 1              |
| Caelo                      | Wool fat         | 192611001    | 1              |
| Caelo                      | Wool fat         | 190008845001 | 1              |
| Caelo                      | Wool fat         | 151458402    | 1              |
| Caelo                      | Wool fat         | 17248104     | 37             |
| Caelo                      | Wool fat         | 1213E-01056  | 1              |
| Caesa / Alliance Health... | Wool fat         | 18139305     | 1              |
| caesar                     | Wool fat         | 14304501     | 1              |
| caesar                     | Wool fat         | 16044302     | 1              |
| Caesar & Lorenz GmbH       | Wool fat         | 19100504     | 1              |
| Caesar & Loretz            | Wool fat         | 16221903     | 1              |
| Caesar & Loretz            | Wool fat         | 17307502     | 1              |
| Caesar & Loretz            | Wool fat         | 18139306     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 12036703     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 12122403     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 13213104     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 13306205     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 14086903     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 14238002     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 14304501     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 15050902     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 15050903     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 16345106     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 17248105     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 18029902     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 17307502     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 18139302     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 18224302     | 6              |
| Caesar & Loretz GmbH       | Wool fat         | 18224301     | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 18224304     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 18224305     | 12             |
| Caesar & Loretz GmbH       | Wool fat         | 18139305     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 18139308     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 19043406     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 18139303     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 18224306     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 18314704     | 6              |
| Caesar & Loretz GmbH       | Wool fat         | 18314703     | 10             |
| Caesar & Loretz GmbH       | Wool fat         | 18314702     | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 19043402     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 19043401     | 5              |
| Caesar & Loretz GmbH       | Wool fat         | 19043405     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 19100502     | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 19100504     | 12             |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH       | Wool fat         | 19100505     | 16             |
| Caesar & Loretz GmbH       | Wool fat         | 19100506     | 11             |
| Caesar & Loretz GmbH       | Wool fat         | 19100508     | 4              |
| Caesar & Loretz GmbH       | Wool fat         | 19174603     | 6              |
| Caesar & Loretz GmbH       | Wool fat         | 19100507     | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 19174605     | 13             |
| Caesar & Loretz GmbH       | Wool fat         | 19174604     | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 19100501     | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 1000010939   | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 192611003    | 4              |
| Caesar & Loretz GmbH       | Wool fat         | 192611005    | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 19000845001  | 13             |
| Caesar & Loretz GmbH       | Wool fat         | 192611004    | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 192611002    | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20000968001  | 5              |
| Caesar & Loretz GmbH       | Wool fat         | 19000845002  | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20000968004  | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 20000968002  | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 19000845003  | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20001836004  | 6              |
| Caesar & Loretz GmbH       | Wool fat         | 20001836001  | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 20001836002  | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20000968007  | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 20001836005  | 2              |
| Caesar & Loretz GmbH       | Wool fat         | 20002793001  | 3              |
| Caesar & Loretz GmbH       | Wool fat         | 20002793002  | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20001836006  | 1              |
| Caesar & Loretz GmbH       | Wool fat         | 20003738002  | 5              |
| Caesar & Loretz GmbH / ... | Wool fat         | 17139303     | 1              |
| Caesar & Loretz GmbH / ... | Wool fat         | 18139306     | 1              |
| Caesar & Loretz GmbH / ... | Wool fat         | 192611003    | 1              |
| Caesar & Loretz GmbH / ... | Wool fat         | 20000968001  | 2              |
| Caesar & Loretz GmbH / ... | Wool fat         | 18224301     | 1              |
| Caesar & Loretz GmbH Hi... | Wool fat         | 16163001     | 1              |
| Caesar & Loretz GmbH, 4... | Wool fat         | 12036703     | 1              |
| Caesar & Loretz GmbH, 4... | Wool fat         | 13039402     | 1              |
| Caesar & Loretz GmbH/ N... | Wool fat         | 192611003    | 1              |
| Caesar & Loretz GmbH/AHD   | Wool fat         | 18224305     | 1              |
| Caesar & Loretz GmbH/An... | Wool fat         | 19043405     | 1              |
| Caesar & Loretz GmbH/Fi... | Wool fat         | 18314704     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 18224305     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 18224306     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 19043405     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 19174604     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 19174605     | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 19000845002  | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 19000845001  | 1              |
| Caesar & Loretz GmbH/Gehe  | Wool fat         | 20001836006  | 1              |
| Caesar & Loretz GmbH/Ge... | Wool fat         | 18314704     | 1              |
| Caesar & Loretz GmbH/Ge... | Wool fat         | 19100507     | 1              |
| Caesar & Loretz GmbH/Gö... | Wool fat         | 19100506     | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 18139304     | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 19174604     | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 192611004    | 3              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 19000845004  | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 20002793002  | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 1000012825   | 1              |
| Caesar & Loretz GmbH/Je... | Wool fat         | 20003738002  | 1              |
| Caesar & Loretz GmbH/Kr... | Wool fat         | 19100502     | 1              |
| Caesar & Loretz GmbH/Kr... | Wool fat         | 19100507     | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Caesar & Loretz GmbH/Mi... | Wool fat         | 19100504     | 1              |
| Caesar & Loretz GmbH/No... | Wool fat         | 19100502     | 2              |
| Caesar & Loretz GmbH/No... | Wool fat         | 19100506     | 2              |
| Caesar & Loretz GmbH/No... | Wool fat         | 19174603     | 1              |
| Caesar & Loretz GmbH/No... | Wool fat         | 19000845001  | 1              |
| Caesar & Loretz GmbH/No... | Wool fat         | 20000968001  | 1              |
| Caesar & Loretz GmbH/Ph... | Wool fat         | 19100508     | 1              |
| Caesar & Loretz GmbH/Ph... | Wool fat         | 20000968007  | 1              |
| Caesar & Loretz GmbH/Ph... | Wool fat         | 20001836002  | 1              |
| Caesar & Loretz GmbH/Sana  | Wool fat         | 1900084501   | 1              |
| Caesar & Loretz GmbH/Sa... | Wool fat         | 19174603     | 1              |
| Caesar & Loretz GmbH/Sa... | Wool fat         | 20000968002  | 1              |
| Caesar & Loretz GmbH/Sa... | Wool fat         | 20002793003  | 1              |
| Caesar & Loretz Hilden     | Wool fat         | 18224305     | 1              |
| Caesar & Loretz/Noweda     | Wool fat         | 16345104     | 1              |
| Caesar und Loretz GmbH     | Wool fat         | 17167701     | 1              |
| Caesar und Loretz GmbH     | Wool fat         | 17307507     | 1              |
| Caesar&Loretz              | Wool fat         | 15050903     | 1              |
| Caesar&Loretz              | Wool fat         | 15198802     | 1              |
| Caesar&Loretz GmbH         | Wool fat         | 16003901     | 1              |
| Caesar&Loretz GmbH,25.0... | Wool fat         | 16267201     | 2              |
| Caesar&Loretz GmbH/Anzag   | Wool fat         | 13213105     | 1              |
| Caesar&Loretz GmbH/Fiebig  | Wool fat         | 16345104     | 1              |
| Caesar&Loretz GmbH/Gehe    | Wool fat         | 19100506     | 1              |
| Caesar&loretz,AHC          | Wool fat         | 14238002     | 1              |
| Caesar&Loretz/Alliance     | Wool fat         | 17307507     | 1              |
| Caesar&Loretz/Noweda       | Wool fat         | 15198802     | 1              |
| Caeser und Loretz GmbH     | Wool fat         | 18314704     | 1              |
| Caleo                      | Wool fat         | 15050903     | 1              |
| Caleo/ Noweda              | Wool fat         | 17307507     | 1              |
| Caleo/ Noweda              | Wool fat         | 18029902     | 1              |
| cealo                      | Wool fat         | 18224302     | 3              |
| Cealo/ AHD                 | Wool fat         | 18314703     | 1              |
| Cealo/Gehe                 | Wool fat         | 17248104     | 2              |
| Cealo/Gehe                 | Wool fat         | 18029902     | 1              |
| Cealo/Gehe                 | Wool fat         | 17307506     | 1              |
| Cealo/Sanacorp             | Wool fat         | 16221905     | 2              |
| cesar&lorentz/Phönix       | Wool fat         | 12321805     | 1              |
| chaelo/gehe                | Wool fat         | 17248103     | 1              |
| Chiesi                     | Wool fat         | 17139301     | 1              |
| Cordes                     | Wool fat         | 11203908     | 1              |
| Delta Apotheke             | Wool fat         | 18139306     | 2              |
| E Plus                     | Wool fat         | 17002020     | 1              |
| EuRho                      | Wool fat         | 15198803     | 1              |
| EuRho                      | Wool fat         | 18139305     | 1              |
| EuRho/Sanacorp             | Wool fat         | 8003158001   | 1              |
| Euro OTC                   | Wool fat         | 1701051-01   | 2              |
| Euro OTC                   | Wool fat         | 14238007     | 1              |
| Euro OTC                   | Wool fat         | 1701051-02   | 1              |
| Euro OTC                   | Wool fat         | 16345107     | 1              |
| Euro OTC                   | Wool fat         | 1709021-01   | 1              |
| Euro OTC                   | Wool fat         | 1601040-01   | 2              |
| Euro OTC                   | Wool fat         | 8004748002   | 1              |
| Euro OTC                   | Wool fat         | 16345104     | 1              |
| Euro OTC                   | Wool fat         | 1607001-01   | 1              |
| Euro OTC                   | Wool fat         | 1907027-01   | 3              |
| Euro OTC                   | Wool fat         | 1907027      | 1              |
| Euro OTC                   | Wool fat         | 2003065-01   | 2              |
| Euro OTC                   | Wool fat         | 1305037-01   | 1              |
| Euro OTC                   | Wool fat         | 301843       | 1              |

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| Supplier         | Substance | Batch            | Spectra |
|------------------|-----------|------------------|---------|
| Euro OTC         | Wool fat  | 14147902         | 1       |
| Euro OTC         | Wool fat  | 17248103         | 1       |
| Euro OTC         | Wool fat  | 13398201         | 1       |
| Euro OTC         | Wool fat  | 10829902         | 1       |
| Euro OTC         | Wool fat  | 17002019         | 1       |
| EuRoh/ Gehe      | Wool fat  | 18224302         | 1       |
| Euro OTC         | Wool fat  | 17307501         | 1       |
| Europharm / Gehe | Wool fat  | 18029901         | 1       |
| Fagron           | Wool fat  | 18139308         | 1       |
| Fagron           | Wool fat  | 11L07-T01        | 1       |
| Fagron           | Wool fat  | 5264700          | 1       |
| Fagron           | Wool fat  | 12H31-T01        | 1       |
| Fagron           | Wool fat  | 12K07-T51-00357  | 1       |
| Fagron           | Wool fat  | 13094903         | 1       |
| Fagron           | Wool fat  | 15050904         | 1       |
| Fagron           | Wool fat  | 15B27-T27-023866 | 1       |
| Fagron           | Wool fat  | 8002112002       | 1       |
| Fagron           | Wool fat  | 17248106         | 1       |
| Fagron           | Wool fat  | 14B14-T03        | 1       |
| Fagron           | Wool fat  | 18029902         | 1       |
| Fagron           | Wool fat  | 15158402         | 2       |
| Fagron           | Wool fat  | 17I08-T03-051241 | 1       |
| Fagron           | Wool fat  | 18L21-T06-062805 | 1       |
| Fagron           | Wool fat  | L04187           | 1       |
| Fagron           | Wool fat  | 14304502         | 1       |
| Fagron           | Wool fat  | 6001861002       | 1       |
| Fagron           | Wool fat  | 8004748002       | 1       |
| Fiebig           | Wool fat  | 16003902         | 1       |
| Fiebig           | Wool fat  | 16345106         | 1       |
| Fiebig           | Wool fat  | 17167702         | 1       |
| Fiebig           | Wool fat  | 8002760003       | 2       |
| Fiebig           | Wool fat  | 17248104         | 1       |
| Fiebig           | Wool fat  | 1839302          | 1       |
| Fiebig           | Wool fat  | 18139302         | 1       |
| Fiebig           | Wool fat  | 18139305         | 1       |
| Fiebig           | Wool fat  | 18224304         | 3       |
| Fiebig           | Wool fat  | 18314702         | 1       |
| Fiebig           | Wool fat  | 19000845001      | 1       |
| Caelo            | Wool fat  | 16267201         | 60      |
| Caelo            | Wool fat  | 19100508         | 7       |
| Fiebig/lamotte   | Wool fat  | 8002760003       | 2       |
| Fiebig/lamotte   | Wool fat  | 8003158003       | 1       |
| Finze            | Wool fat  | 5264700          | 2       |
| Gatt-Koller      | Wool fat  | 1803528          | 1       |
| Gatt-Koller      | Wool fat  | 1803868          | 1       |
| Gatt-Koller      | Wool fat  | 1804107          | 1       |
| gehe             | Wool fat  | 19100506         | 1       |
| Gehe             | Wool fat  | 12036703         | 2       |
| Gehe             | Wool fat  | 1230113          | 1       |
| Gehe             | Wool fat  | 12224404         | 1       |
| Gehe             | Wool fat  | 5375400          | 2       |
| Gehe             | Wool fat  | 13039403         | 1       |
| Gehe             | Wool fat  | 14147901         | 1       |
| Gehe             | Wool fat  | 5763900          | 1       |
| Gehe             | Wool fat  | 15050902         | 1       |
| Gehe             | Wool fat  | 5908900          | 1       |
| Gehe             | Wool fat  | 15050903         | 1       |
| Gehe             | Wool fat  | 16003901         | 1       |
| Gehe             | Wool fat  | 16044306         | 1       |
| Gehe             | Wool fat  | 16163001         | 1       |

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| <b>Supplier</b>             | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------------------|------------------|------------------|----------------|
| Gehe                        | Wool fat         | 8002112002       | 3              |
| Gehe                        | Wool fat         | 16221907         | 2              |
| Gehe                        | Wool fat         | 16267201         | 1              |
| Gehe                        | Wool fat         | 8002320010       | 3              |
| Gehe                        | Wool fat         | 16221906         | 1              |
| Gehe                        | Wool fat         | 16163006         | 1              |
| Gehe                        | Wool fat         | 16345104         | 1              |
| Gehe                        | Wool fat         | 17139301         | 2              |
| Gehe                        | Wool fat         | 17167704         | 1              |
| Gehe                        | Wool fat         | 17248104         | 1              |
| Gehe                        | Wool fat         | 17248105         | 1              |
| Gehe                        | Wool fat         | 17307505         | 1              |
| Gehe                        | Wool fat         | 17307502         | 1              |
| Gehe                        | Wool fat         | 17307506         | 1              |
| Gehe                        | Wool fat         | 18139302         | 1              |
| Gehe                        | Wool fat         | 18139303         | 1              |
| Gehe                        | Wool fat         | 18224301         | 2              |
| Gehe                        | Wool fat         | 18139307         | 1              |
| Gehe                        | Wool fat         | 18139305         | 1              |
| Gehe                        | Wool fat         | 19100504         | 1              |
| Gehe                        | Wool fat         | 19174605         | 1              |
| Gehe                        | Wool fat         | 19000845001      | 2              |
| Gehe                        | Wool fat         | 192611004        | 3              |
| Gehe                        | Wool fat         | 20001836001      | 1              |
| GEHE                        | Wool fat         | 14086903         | 1              |
| GEHE                        | Wool fat         | 16221905         | 2              |
| GEHE                        | Wool fat         | 16163006         | 1              |
| GEHE                        | Wool fat         | 16221902         | 1              |
| GEHE                        | Wool fat         | 18029903         | 1              |
| GEHE                        | Wool fat         | 18029902         | 1              |
| GEHE                        | Wool fat         | 17307508         | 1              |
| GEHE                        | Wool fat         | 18139302         | 1              |
| GEHE                        | Wool fat         | 19043405         | 1              |
| GEHE                        | Wool fat         | 18314702         | 1              |
| GEHE                        | Wool fat         | 19100505         | 2              |
| Bombastus                   | Wool fat         | 305553           | 7              |
| Gehe / Lamotte              | Wool fat         | 8002760002       | 1              |
| GEHE 02.12.2014             | Wool fat         | 5528000          | 1              |
| Gehe 26.2.14                | Wool fat         | 13306205         | 2              |
| Caelo                       | Wool fat         | 8004134002       | 1              |
| Gehe/ Lamotte               | Wool fat         | 5375400          | 1              |
| Bombastus                   | Wool fat         | 303929           | 1              |
| Caelo                       | Wool fat         | 16221907/1160117 | 1              |
| Caelo                       | Wool fat         | 14086905         | 17             |
| Gehe/Lamotte                | Wool fat         | 8002112002       | 3              |
| Gehe/Lamotte                | Wool fat         | 8002760002       | 1              |
| Gehe/Lamotte                | Wool fat         | 8003158002       | 1              |
| H. Lamotte                  | Wool fat         | 8003158002       | 1              |
| Hedinger                    | Wool fat         | 11261105         | 2              |
| Hedinger/4                  | Wool fat         | 18224304         | 1              |
| Henry Lamotte/Krieger       | Wool fat         | 6001861002       | 2              |
| Henri Lamotte /Krieger      | Wool fat         | 8004748002       | 1              |
| Henry Lamotte Oils GmbH ... | Wool fat         | 8004134002       | 1              |
| Henry Lamotte Oils GmbH ... | Wool fat         | 8004748003       | 1              |
| Henry Lamotte Oils GmbH ... | Wool fat         | 1000010938       | 1              |
| Henry Lamotte               | Wool fat         | 5448200          | 4              |
| Henry Lamotte               | Wool fat         | 5264700          | 1              |
| Henry Lamotte               | Wool fat         | 5520800          | 1              |
| Henry Lamotte               | Wool fat         | 5528000          | 1              |
| Henry Lamotte               | Wool fat         | 5650500          | 2              |

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| <b>Supplier</b>          | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|------------------|--------------|----------------|
| Henry Lamotte            | Wool fat         | 5690800      | 3              |
| Henry Lamotte            | Wool fat         | 5763900      | 2              |
| Henry Lamotte            | Wool fat         | 5860600      | 3              |
| Henry Lamotte            | Wool fat         | 5908900      | 2              |
| Henry Lamotte            | Wool fat         | 5909000      | 2              |
| Henry Lamotte            | Wool fat         | 6001861002   | 3              |
| Henry Lamotte            | Wool fat         | 59090000     | 1              |
| Henry Lamotte            | Wool fat         | 55908900     | 1              |
| Henry Lamotte            | Wool fat         | 6001861001   | 1              |
| Henry Lamotte            | Wool fat         | 6001861003   | 1              |
| Henry Lamotte            | Wool fat         | 8002112001   | 2              |
| Henry Lamotte            | Wool fat         | 8002144001   | 5              |
| Henry Lamotte            | Wool fat         | 8002112002   | 3              |
| Henry Lamotte            | Wool fat         | 8002320010   | 3              |
| Henry Lamotte            | Wool fat         | 8002760003   | 2              |
| Henry Lamotte            | Wool fat         | 8002760002   | 4              |
| Henry Lamotte            | Wool fat         | 2002112002   | 1              |
| Henry Lamotte            | Wool fat         | 8002760001   | 2              |
| Henry Lamotte            | Wool fat         | 8003158001   | 4              |
| Henry Lamotte            | Wool fat         | 8003158003   | 1              |
| Henry Lamotte            | Wool fat         | 8004134002   | 5              |
| Henry Lamotte            | Wool fat         | 8004134003   | 7              |
| Henry Lamotte            | Wool fat         | 8004134001   | 1              |
| Henry Lamotte            | Wool fat         | 8004748002   | 2              |
| Henry Lamotte            | Wool fat         | 8004134015   | 2              |
| Henry Lamotte            | Wool fat         | 8004748003   | 3              |
| Henry Lamotte            | Wool fat         | 8004748004   | 3              |
| Henry Lamotte            | Wool fat         | 1000010938   | 5              |
| Henry Lamotte            | Wool fat         | 1000010939   | 1              |
| Henry Lamotte            | Wool fat         | 1000010937   | 1              |
| Henry Lamotte            | Wool fat         | 1000012825   | 1              |
| HENRY LAMOTTE            | Wool fat         | 8003158002   | 1              |
| HENRY LAMOTTE            | Wool fat         | 8004134002   | 1              |
| HENRY LAMOTTE            | Wool fat         | 1000010938   | 2              |
| Henry Lamotte / 107      | Wool fat         | 1000010938   | 1              |
| Henry Lamotte / 2        | Wool fat         | 1000012824   | 1              |
| Henry Lamotte / AHD      | Wool fat         | 1000010938   | 1              |
| Henry Lamotte / Anzag    | Wool fat         | 5690800      | 3              |
| Henry Lamotte / Anzag    | Wool fat         | 5650500      | 1              |
| HENRY LAMOTTE / Anzag    | Wool fat         | 1000012826   | 2              |
| Henry Lamotte / Jenne    | Wool fat         | 8004134002   | 1              |
| Henry Lamotte / Jenne    | Wool fat         | 8004134015   | 1              |
| Henry Lamotte / Noweda   | Wool fat         | 5909000      | 6              |
| Henry Lamotte / Noweda   | Wool fat         | 6001861002   | 2              |
| Henry Lamotte / Noweda   | Wool fat         | 8002112002   | 1              |
| Henry Lamotte / Noweda   | Wool fat         | 8003158002   | 1              |
| Henry Lamotte / Noweda   | Wool fat         | 8004134015   | 1              |
| Henry Lamotte / Phoenix  | Wool fat         | 5860600      | 2              |
| Henry Lamotte / Phoenix  | Wool fat         | 5909000      | 1              |
| Henry Lamotte / Phoenix  | Wool fat         | 6001861002   | 1              |
| Henry Lamotte / Phoenix  | Wool fat         | 8002112002   | 1              |
| Henry Lamotte / Sanacorp | Wool fat         | 8003158002   | 1              |
| Henry Lamotte / Sanacorp | Wool fat         | 8003158001   | 1              |
| Henry Lamotte / Sanacorp | Wool fat         | 8004134001   | 1              |
| HENRY LAMOTTE / Anzag    | Wool fat         | 8003158003   | 1              |
| HENRY LAMOTTE / Anzag    | Wool fat         | 8004134003   | 3              |
| HENRY LAMOTTE / Anzag    | Wool fat         | 8004748004   | 2              |
| Henry Lamotte / Noweda   | Wool fat         | 8002112002   | 2              |
| Henry Lamotte / Noweda   | Wool fat         | 8004134015   | 3              |
| Henry Lamotte / Phoenix  | Wool fat         | 8003158002   | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| HENRY LAMOTTE /Phönix      | Wool fat         | 1000010937   | 2              |
| Henry Lamotte GmbH         | Wool fat         | 8002112002   | 1              |
| Henry Lamotte GmbH         | Wool fat         | 8002760002   | 1              |
| Henry Lamotte GmbH         | Wool fat         | 8003158002   | 4              |
| Henry Lamotte GmbH         | Wool fat         | 8004134002   | 3              |
| Henry Lamotte GmbH         | Wool fat         | 8004134015   | 1              |
| henry lamotte oils         | Wool fat         | 5264700      | 1              |
| henry lamotte oils         | Wool fat         | 6001861002   | 1              |
| henry lamotte oils         | Wool fat         | 6991861002   | 1              |
| Henry Lamotte Oils         | Wool fat         | 5198200      | 2              |
| Henry Lamotte Oils         | Wool fat         | 5253400      | 1              |
| Henry Lamotte Oils         | Wool fat         | 5264700      | 1              |
| Henry Lamotte Oils         | Wool fat         | 5448200      | 3              |
| Henry Lamotte Oils         | Wool fat         | 5520800      | 1              |
| Henry Lamotte Oils         | Wool fat         | 5528000      | 1              |
| Henry Lamotte Oils         | Wool fat         | 5787700      | 1              |
| Henry Lamotte Oils         | Wool fat         | 8002320010   | 2              |
| Henry Lamotte Oils         | Wool fat         | 8003158002   | 1              |
| Henry Lamotte Oils         | Wool fat         | 8003158001   | 1              |
| Henry Lamotte Oils         | Wool fat         | 8004134001   | 1              |
| Henry Lamotte Oils         | Wool fat         | 8004748002   | 1              |
| Henry Lamotte Oils         | Wool fat         | 8004748004   | 1              |
| Henry Lamotte Oils         | Wool fat         | 1000010937   | 1              |
| Henry Lamotte Oils         | Wool fat         | 1000012826   | 1              |
| HENRY LAMOTTE OILS         | Wool fat         | 10000010938  | 1              |
| HENRY LAMOTTE OILS         | Wool fat         | 1000012825   | 3              |
| Henry Lamotte Oils / Gehe  | Wool fat         | 8002144001   | 1              |
| Henry Lamotte Oils / GEHE  | Wool fat         | 8004748004   | 1              |
| Henry Lamotte Oils / No... | Wool fat         | 5763900      | 1              |
| Henry Lamotte oils GmbH    | Wool fat         | 17248106     | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8004134002   | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8004134015   | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5264700      | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5448200      | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5528000      | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 56908000     | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5763900      | 6              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5650500      | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5860600      | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5908900      | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 5909100      | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 6001861001   | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8002112002   | 3              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8002144001   | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8002760001   | 4              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8002320010   | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8003158002   | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8003158001   | 2              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8004134001   | 3              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8004134015   | 3              |
| Henry Lamotte Oils GmbH    | Wool fat         | 1000010938   | 4              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8004748002   | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 1000012825   | 1              |
| Henry Lamotte Oils GMBH    | Wool fat         | 160915ALA    | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002112002   | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002320010   | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8003158002   | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134002   | 2              |
| Henry Lamotte Oils GmbH... | Wool fat         | 1000012824   | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002144001   | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>        | <b>Spectra</b> |
|----------------------------|------------------|---------------------|----------------|
| Henry Lamotte Oils GmbH... | Wool fat         | 180109AL/8003158003 | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 180320AL/8003158003 | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004748002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 1000012824          | 2              |
| Henry Lamotte Oils GMBH... | Wool fat         | 170303AL/800232001  | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5528000             | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002144001          | 2              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8003158002          | 4              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 1000010939          | 2              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002144001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002760001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8003158002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004748002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 6001861001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002144001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002112002          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5908900             | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002144001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8003158001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 1000010939          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5787700             | 3              |
| Henry Lamotte Oils GmbH... | Wool fat         | 6001861002          | 5              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8002320010          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8003158002          | 4              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004748003          | 2              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134002          | 4              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004748003          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5520800             | 1              |
| henry lamotte oils GmbH/N  | Wool fat         | 5908900             | 1              |
| Henry Lamotte Oils/ Gehe   | Wool fat         | 5520800             | 2              |
| Henry Lamotte Oils/ Gehe   | Wool fat         | 8002760002          | 1              |
| Henry Lamotte Oils/ Now... | Wool fat         | 8002144001          | 2              |
| Henry Lamotte Oils/ San... | Wool fat         | 8002112002          | 1              |
| Henry Lamotte Oils/Fiebig  | Wool fat         | 8003158002          | 3              |
| Henry Lamotte Oils/Fiebig  | Wool fat         | 8004134002          | 1              |
| Henry Lamotte Oils/Noweda  | Wool fat         | 6001861002          | 1              |
| Henry Lamotte Oils/Noweda  | Wool fat         | 8002112002          | 1              |
| Henry Lamotte Oils/Noweda  | Wool fat         | 8004748003          | 1              |
| Henry Lamotte Oils/Phönix  | Wool fat         | 6001861001          | 1              |
| Henry Lamotte Oils/Sana... | Wool fat         | 5320900             | 1              |
| Henry Lamotte Oils GmbH    | Wool fat         | 8003158001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5528000             | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 5650500             | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004134001          | 1              |
| Henry Lamotte Oils GmbH... | Wool fat         | 8004748002          | 2              |
| Henry Lamotte Oils GmbH... | Wool fat         | 1000012824          | 3              |
| Henry Lamotte/ Alliance    | Wool fat         | 8002320010          | 1              |
| Henry Lamotte/ Anzag       | Wool fat         | 8003158003          | 1              |
| Henry Lamotte/ Gehe        | Wool fat         | 5908900             | 1              |
| Henry Lamotte/ Krieger     | Wool fat         | 8002112002          | 1              |
| Henry Lamotte/ Krieger     | Wool fat         | 8002760002          | 1              |
| Henry Lamotte/ Krieger     | Wool fat         | 8003158002          | 1              |
| Henry Lamotte/ Krieger     | Wool fat         | 8004134002          | 1              |
| Henry Lamotte/ Noweda      | Wool fat         | 8002320010          | 7              |
| Henry Lamotte/ Noweda      | Wool fat         | 8003158002          | 3              |
| Henry Lamotte/ Noweda      | Wool fat         | 8004134002          | 1              |

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| <b>Supplier</b>        | <b>Substance</b> | <b>Batch</b>    | <b>Spectra</b> |
|------------------------|------------------|-----------------|----------------|
| Henry Lamotte/ Phoenix | Wool fat         | 8002320010      | 1              |
| Henry Lamotte/ Phönix  | Wool fat         | 6001861002      | 3              |
| Henry Lamotte/ Phönix  | Wool fat         | 8002112002      | 1              |
| Henry Lamotte/ Phönix  | Wool fat         | 8003158002      | 2              |
| Henry Lamotte/ Phönix  | Wool fat         | 8004134002      | 1              |
| Henry Lamotte/ Phönix  | Wool fat         | 1000010938      | 1              |
| HENRY LAMOTTE/1        | Wool fat         | 8004134001      | 1              |
| HENRY LAMOTTE/1        | Wool fat         | 80041748002     | 1              |
| Henry Lamotte/AHD      | Wool fat         | 17307502        | 2              |
| Henry Lamotte/AHD      | Wool fat         | 8004134001      | 1              |
| Henry Lamotte/AHD      | Wool fat         | 1000010939      | 5              |
| Henry Lamotte/AHD      | Wool fat         | 1000010937      | 2              |
| Henry Lamotte/AHD      | Wool fat         | 10000100939     | 1              |
| Henry Lamotte/Alliance | Wool fat         | 8002144002      | 1              |
| Henry Lamotte/Alliance | Wool fat         | 8002320011      | 1              |
| Henry Lamotte/Alliance | Wool fat         | 8002760001      | 1              |
| Henry Lamotte/Alliance | Wool fat         | 1000010939      | 1              |
| Henry Lamotte/Anzag    | Wool fat         | 2908900         | 1              |
| Henry Lamotte/Anzag    | Wool fat         | 5908900         | 1              |
| Henry Lamotte/Anzag    | Wool fat         | 6001861001      | 1              |
| Henry Lamotte/Anzag    | Wool fat         | 8002112001      | 3              |
| Henry Lamotte/Anzag    | Wool fat         | 8002144001      | 1              |
| Henry Lamotte/Anzag    | Wool fat         | 800244001       | 1              |
| henry lamotte/gehe     | Wool fat         | 16345104        | 1              |
| Henry Lamotte/Gehe     | Wool fat         | 8004134015      | 1              |
| Henry Lamotte/Gehe     | Wool fat         | 1000010939      | 2              |
| Henry Lamotte/GEHE     | Wool fat         | 5375400         | 1              |
| Henry Lamotte/Jenne    | Wool fat         | 163(8003158003) | 1              |
| Henry Lamotte/Jenne    | Wool fat         | 8002144001      | 1              |
| Henry Lamotte/Jenne    | Wool fat         | 1000010939      | 1              |
| Henry Lamotte/Kehr     | Wool fat         | 5909000         | 2              |
| Henry Lamotte/Kehr     | Wool fat         | 5860700         | 1              |
| Henry Lamotte/Kehr     | Wool fat         | 8004748002      | 1              |
| Henry Lamotte/Kehr     | Wool fat         | 1000010939      | 5              |
| Henry Lamotte/Kehr     | Wool fat         | 1000012824      | 2              |
| Henry Lamotte/Noweda   | Wool fat         | 5520800         | 1              |
| Henry Lamotte/Noweda   | Wool fat         | 5787700         | 1              |
| Henry Lamotte/Noweda   | Wool fat         | 8002112002      | 2              |
| Henry Lamotte/Noweda   | Wool fat         | 8002144001      | 1              |
| Henry Lamotte/Noweda   | Wool fat         | 8002320010      | 3              |
| Henry Lamotte/Noweda   | Wool fat         | 8002760001      | 3              |
| Henry Lamotte/Noweda   | Wool fat         | 8003158002      | 1              |
| Henry Lamotte/Noweda   | Wool fat         | 8004748002      | 2              |
| Henry Lamotte/Noweda   | Wool fat         | 1000010939      | 1              |
| Henry Lamotte/Phoenix  | Wool fat         | 8002112002      | 1              |
| Henry Lamotte/Phoenix  | Wool fat         | 802760002       | 1              |
| Henry Lamotte/Phoenix  | Wool fat         | 8003158002      | 5              |
| Henry Lamotte/Phoenix  | Wool fat         | 8004134002      | 2              |
| Henry Lamotte/Phönix   | Wool fat         | 6001861002      | 1              |
| Henry Lamotte/Phönix   | Wool fat         | 8002320010      | 1              |
| Henry Lamotte/Phönix   | Wool fat         | 8004134002      | 1              |
| Henry Lamotte/Phönix   | Wool fat         | 8004748003      | 4              |
| Henry Lamotte/Phönix   | Wool fat         | 8004748002      | 1              |
| Henry Lamotte/Phönix   | Wool fat         | 1000010938      | 2              |
| Henry Lamotte/Phönix   | Wool fat         | 1000010939      | 1              |
| Henry Lamotte/Sana     | Wool fat         | 5908900         | 1              |
| Henry Lamotte/Sana     | Wool fat         | 8002144001      | 2              |
| Henry Lamotte/Sana     | Wool fat         | 8002760001      | 1              |
| Henry Lamotte/Sana     | Wool fat         | 8003158001      | 1              |
| Henry Lamotte/Sanacorp | Wool fat         | 5528000         | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>  | <b>Spectra</b> |
|----------------------------|------------------|---------------|----------------|
| Henry Lamotte/Sanacorp     | Wool fat         | 5727500       | 2              |
| Henry Lamotte/Sanacorp     | Wool fat         | 60160         | 1              |
| Henry Lamotte/Sanacorp     | Wool fat         | 5909000       | 2              |
| Henry Lamotte/Sanacorp     | Wool fat         | 5909100       | 5              |
| Henry Lamotte/Sanacorp     | Wool fat         | 8002760002    | 2              |
| Henry Lamotte/Sanacorp     | Wool fat         | 8004134001    | 1              |
| Henry Lamotte/Sanacorp     | Wool fat         | 1000010938    | 2              |
| Henry Lamotte/VDL          | Wool fat         | 8002112002    | 1              |
| Henry Lamotte/VDL          | Wool fat         | 8002144002    | 1              |
| Henry LamotteOlis GmbH/... | Wool fat         | 8003158001    | 1              |
| Henry Lamotte-Phönix       | Wool fat         | 8002144001    | 1              |
| Henry LamotteSanacorp      | Wool fat         | 8004134001    | 1              |
| Henry/alliance             | Wool fat         | 8004748004    | 2              |
| Henry/Anzag                | Wool fat         | 8004748004    | 2              |
| Henry/Phönix               | Wool fat         | 1000012826    | 1              |
| HenryLamotte               | Wool fat         | 5528000       | 1              |
| HenryLamotte               | Wool fat         | 5860700       | 1              |
| HenryLamotte               | Wool fat         | 5909100       | 2              |
| HenryLamotte               | Wool fat         | 8002320011    | 1              |
| HenryLamotte               | Wool fat         | 8003158003    | 1              |
| HenryLamotte/Gehe          | Wool fat         | 8002112002    | 1              |
| HenryLamotte/Gehe          | Wool fat         | 8003158002    | 1              |
| HenryLamotte/Gehe          | Wool fat         | 8004134002    | 2              |
| HenryLamotte/Gehe          | Wool fat         | 8004134015    | 1              |
| HenryLamotte/Gehe          | Wool fat         | 1000010938    | 1              |
| Henty Lamotte Oils/ Gehe   | Wool fat         | 1000010939    | 1              |
| Heyl/Noweda                | Wool fat         | 17248103      | 1              |
| Hubertus Apotheke          | Wool fat         | 29022016      | 1              |
| Hubertus Apotheke          | Wool fat         | 165221907     | 1              |
| Ichthyol/Sanacorp          | Wool fat         | 5448200       | 7              |
| Ichthyol-Gesellschaft      | Wool fat         | 16221907      | 2              |
| Jenne                      | Wool fat         | 17248104      | 2              |
| Jenne                      | Wool fat         | 17248106      | 1              |
| Jenne                      | Wool fat         | 17307506      | 2              |
| Jenne                      | Wool fat         | 18139303      | 1              |
| Kehr                       | Wool fat         | 17248103      | 1              |
| Kehr / Lamotte             | Wool fat         | 8002320010    | 4              |
| Caelo                      | Wool fat         | 1716701       | 1              |
| Kehr/Henry Lamotte         | Wool fat         | 8004748002    | 2              |
| Klosterring                | Wool fat         | 17139303      | 1              |
| Kögl                       | Wool fat         | 402411160317  | 1              |
| Kögl                       | Wool fat         | 474001171017  | 1              |
| Kögl                       | Wool fat         | 402411165016  | 1              |
| Kögl                       | Wool fat         | 4024111650317 | 1              |
| Kögl                       | Wool fat         | 20172116      | 1              |
| Kögl                       | Wool fat         | 1701216       | 1              |
| Kögl                       | Wool fat         | 1702222       | 1              |
| Kögl                       | Wool fat         | 1800576       | 1              |
| Krieger                    | Wool fat         | 16345106      | 1              |
| Krieger                    | Wool fat         | 8003158003    | 1              |
| Krieger                    | Wool fat         | 8004748003    | 1              |
| Krieger/ Lamotte           | Wool fat         | 8002760003    | 2              |
| L12                        | Wool fat         | 16345106      | 1              |
| L12                        | Wool fat         | 17139303      | 1              |
| Caelo                      | Wool fat         | 17248109      | 1              |
| lamotte                    | Wool fat         | 8002760001    | 1              |
| lamotte                    | Wool fat         | 8003158001    | 2              |
| lamotte                    | Wool fat         | 800315001     | 1              |
| lamotte                    | Wool fat         | 8004134001    | 1              |
| lamotte                    | Wool fat         | 8004748002    | 1              |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>       | <b>Spectra</b> |
|----------------------------|------------------|--------------------|----------------|
| Lamotte                    | Wool fat         | 5198200            | 1              |
| Lamotte                    | Wool fat         | 5320900            | 1              |
| Lamotte                    | Wool fat         | 5375400            | 2              |
| Lamotte                    | Wool fat         | 5448400            | 1              |
| Lamotte                    | Wool fat         | 5528000            | 2              |
| Lamotte                    | Wool fat         | 5650500            | 1              |
| Lamotte                    | Wool fat         | 5909000            | 1              |
| Lamotte                    | Wool fat         | 6001861001         | 1              |
| Lamotte                    | Wool fat         | 590900             | 1              |
| Lamotte                    | Wool fat         | 6001861002         | 2              |
| Lamotte                    | Wool fat         | 8002112003         | 1              |
| Lamotte                    | Wool fat         | 8002112001         | 1              |
| Lamotte                    | Wool fat         | 8002112002         | 3              |
| Lamotte                    | Wool fat         | 8002320011         | 1              |
| Lamotte                    | Wool fat         | 8002760001         | 1              |
| Lamotte                    | Wool fat         | 8002760002         | 2              |
| Lamotte                    | Wool fat         | 8002320010         | 2              |
| Lamotte                    | Wool fat         | 8003158002         | 4              |
| Lamotte                    | Wool fat         | 8004134002         | 1              |
| Lamotte                    | Wool fat         | 8004748002         | 2              |
| Lamotte                    | Wool fat         | 1000010939         | 3              |
| Lamotte                    | Wool fat         | 100010939          | 1              |
| Lamotte                    | Wool fat         | 100012824          | 1              |
| Lamotte                    | Wool fat         | 1000012824         | 1              |
| Lamotte / Alliance Heal... | Wool fat         | 8002144001         | 1              |
| Lamotte / Gehe             | Wool fat         | 5763900            | 1              |
| Lamotte Noweda             | Wool fat         | 8004134002         | 3              |
| Lamotte Noweda             | Wool fat         | 8004134015         | 1              |
| Lamotte Noweda             | Wool fat         | 1000010938         | 1              |
| Lamotte Sanacorp           | Wool fat         | 5264700            | 1              |
| Lamotte Sanacorp           | Wool fat         | 5448200            | 1              |
| Lamotte Sanacorp           | Wool fat         | 8002760002         | 2              |
| Lamotte/ Gehe              | Wool fat         | 8002760002         | 1              |
| Lamotte/ Noweda            | Wool fat         | 1000010938         | 3              |
| lamotte/ Phoenix           | Wool fat         | 8002320011         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 5198200            | 2              |
| Lamotte/ Sanacorp          | Wool fat         | 59099000           | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 8002320010         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 8003158002         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 8004134002         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 8004748002         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 8004134015         | 1              |
| Lamotte/ Sanacorp          | Wool fat         | 1000010938         | 2              |
| Lamotte/AHD                | Wool fat         | 8002760001         | 1              |
| Lamotte/AHD                | Wool fat         | 8003158001         | 2              |
| Lamotte/AHD                | Wool fat         | 8004134015         | 1              |
| Lamotte/AHD                | Wool fat         | 1000010938         | 2              |
| Lamotte/AHD                | Wool fat         | 10000010937        | 1              |
| Lamotte/AHD                | Wool fat         | 1000012824         | 2              |
| Lamotte/Alliance           | Wool fat         | 8003158003         | 5              |
| Lamotte/Alliance           | Wool fat         | 8003158002         | 1              |
| Lamotte/Alliance Health... | Wool fat         | 8003158002         | 2              |
| lamotte/anzag              | Wool fat         | 5264700            | 1              |
| lamotte/anzag              | Wool fat         | 6001861003         | 1              |
| Lamotte/Anzag              | Wool fat         | 5264700-3384310110 | 1              |
| Lamotte/Anzag              | Wool fat         | 6001861001         | 2              |
| Lamotte/Ebert              | Wool fat         | 5787700            | 1              |
| Lamotte/Ebert              | Wool fat         | 6001861002         | 2              |
| Lamotte/Ebert              | Wool fat         | 8002112002         | 2              |
| Lamotte/Ebert              | Wool fat         | 8002760002         | 1              |

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| Supplier                 | Substance | Batch      | Spectra |
|--------------------------|-----------|------------|---------|
| Lamotte/Fiebig           | Wool fat  | 5528000    | 1       |
| Lamotte/Fiebig           | Wool fat  | 5787700    | 1       |
| Lamotte/Fiebig           | Wool fat  | 5860600    | 1       |
| Lamotte/Fiebig           | Wool fat  | 5909000    | 2       |
| Lamotte/Fiebig           | Wool fat  | 8002112002 | 1       |
| Lamotte/gehe             | Wool fat  | 5528000    | 1       |
| Lamotte/Gehe             | Wool fat  | 5909000    | 1       |
| Lamotte/Gehe             | Wool fat  | 8002320011 | 1       |
| Lamotte/Gehe             | Wool fat  | 8002112002 | 1       |
| Lamotte/Gehe             | Wool fat  | 1000010939 | 1       |
| Lamotte/Jenne            | Wool fat  | 5909000    | 1       |
| Lamotte/Jenne            | Wool fat  | 8004748003 | 1       |
| Lamotte/Jenne 30.10.2014 | Wool fat  | 5528000    | 1       |
| Lamotte/Krieger          | Wool fat  | 5264700    | 2       |
| Lamotte/Now              | Wool fat  | 8003158002 | 1       |
| Lamotte/Now              | Wool fat  | 8004134002 | 1       |
| Lamotte/Nowed            | Wool fat  | 5520800    | 1       |
| Lamotte/Noweda           | Wool fat  | 5860700    | 1       |
| Lamotte/Noweda           | Wool fat  | 8002144002 | 2       |
| Lamotte/Noweda           | Wool fat  | 8002112002 | 1       |
| Lamotte/Noweda           | Wool fat  | 8002320010 | 2       |
| Lamotte/Noweda           | Wool fat  | 8002760002 | 1       |
| Lamotte/Noweda           | Wool fat  | 8004134002 | 2       |
| Lamotte/Noweda           | Wool fat  | 8004134001 | 1       |
| Lamotte/Noweda           | Wool fat  | 8004134015 | 1       |
| Lamotte/Noweda           | Wool fat  | 1000010939 | 1       |
| Lamotte/Noweda           | Wool fat  | 1000012824 | 1       |
| Lamotte/Otto             | Wool fat  | 5264700    | 1       |
| Lamotte/Otto             | Wool fat  | 5375400    | 3       |
| Lamotte/Otto             | Wool fat  | 5787700    | 1       |
| Lamotte/Phoenix          | Wool fat  | 5448200    | 1       |
| Lamotte/Phoenix          | Wool fat  | 8003158002 | 2       |
| Lamotte/Phoenix          | Wool fat  | 8004134001 | 1       |
| Lamotte/Phoenix          | Wool fat  | 800413001  | 1       |
| Lamotte/Phoenix          | Wool fat  | 8004134015 | 1       |
| Lamotte/Phoenix          | Wool fat  | 8004748002 | 1       |
| Lamotte/Phoenix          | Wool fat  | 1000010938 | 1       |
| Lamotte/Phönix           | Wool fat  | 5650500    | 1       |
| Lamotte/Phönix           | Wool fat  | 8002760003 | 2       |
| Lamotte/Phönix           | Wool fat  | 8003158001 | 1       |
| Lamotte/Phönix           | Wool fat  | 8004134001 | 2       |
| Lamotte/Phönix           | Wool fat  | 1000010938 | 3       |
| Lamotte/Sanacorp         | Wool fat  | 5253400    | 1       |
| Lamotte/Sanacorp         | Wool fat  | 5448200    | 1       |
| Lamotte/Sanacorp         | Wool fat  | 5520800    | 1       |
| Lamotte/Sanacorp         | Wool fat  | 5787700    | 1       |
| Lamotte/Sanacorp         | Wool fat  | 5860700    | 4       |
| Lamotte/Sanacorp         | Wool fat  | 6001861002 | 2       |
| Lamotte/Sanacorp         | Wool fat  | 8002112003 | 2       |
| Lamotte/Sanacorp         | Wool fat  | 8004134002 | 1       |
| Lamotte/Sanacorp         | Wool fat  | 8004134015 | 2       |
| Lamotte/Spangro          | Wool fat  | 8003158002 | 1       |
| Midas                    | Wool fat  | 17307507   | 1       |
| Midas                    | Wool fat  | 18139302   | 1       |
| noweda                   | Wool fat  | 13398202   | 1       |
| Noweda                   | Wool fat  | 11203903   | 2       |
| Noweda                   | Wool fat  | 12036702   | 1       |
| Noweda                   | Wool fat  | 5375400    | 1       |
| Noweda                   | Wool fat  | 12224404   | 4       |
| Noweda                   | Wool fat  | 5448200    | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|------------------|--------------|----------------|
| Noweda                     | Wool fat         | 13213107     | 1              |
| Noweda                     | Wool fat         | 14086905     | 1              |
| Noweda                     | Wool fat         | 5787700      | 2              |
| Noweda                     | Wool fat         | 16003901     | 1              |
| Noweda                     | Wool fat         | 16267201     | 2              |
| Noweda                     | Wool fat         | 16345107     | 1              |
| Noweda                     | Wool fat         | 16345104     | 1              |
| Noweda                     | Wool fat         | 17167702     | 1              |
| Noweda                     | Wool fat         | 17139303     | 1              |
| Noweda                     | Wool fat         | 17248103     | 1              |
| Noweda                     | Wool fat         | 17248104     | 2              |
| Noweda                     | Wool fat         | 18139306     | 1              |
| Noweda                     | Wool fat         | 18029901     | 1              |
| Noweda                     | Wool fat         | 8004134001   | 1              |
| Noweda                     | Wool fat         | 18224305     | 1              |
| Noweda                     | Wool fat         | 19043401     | 1              |
| Noweda                     | Wool fat         | 19174605     | 3              |
| Noweda                     | Wool fat         | 192611005    | 1              |
| Noweda                     | Wool fat         | 1000012824   | 1              |
| Noweda/ 18.06.12 Caela     | Wool fat         | 12015605     | 1              |
| Caelo                      | Wool fat         | 16003905     | 22             |
| Noweda/Caesar & Loretz ... | Wool fat         | 15198802     | 1              |
| noweda/lamotte             | Wool fat         | 5763900      | 1              |
| NW/ Lamotte                | Wool fat         | 5375400      | 1              |
| Euro OTC                   | Wool fat         | 16221903     | 3              |
| Euro OTC                   | Wool fat         | 1807008-01   | 2              |
| Euro OTC                   | Wool fat         | 16003905     | 1              |
| Caelo                      | Wool fat         | 19261105     | 1              |
| phoenix                    | Wool fat         | 8003158002   | 2              |
| Phoenix                    | Wool fat         | 5216400      | 1              |
| Phoenix                    | Wool fat         | 5375400      | 2              |
| Phoenix                    | Wool fat         | 13039403     | 1              |
| Phoenix                    | Wool fat         | 13398201     | 1              |
| Phoenix                    | Wool fat         | 13398202     | 1              |
| Phoenix                    | Wool fat         | 15292316     | 1              |
| Phoenix                    | Wool fat         | 16221907     | 1              |
| Phoenix                    | Wool fat         | 3092         | 1              |
| Phoenix                    | Wool fat         | 17248103     | 1              |
| Phoenix                    | Wool fat         | 17248109     | 1              |
| Phoenix                    | Wool fat         | 17307503     | 1              |
| Phoenix                    | Wool fat         | 18224305     | 1              |
| Phoenix                    | Wool fat         | 19043405     | 2              |
| Phoenix                    | Wool fat         | 19000845001  | 1              |
| Phoenix 02.07.2018 5,...   | Wool fat         | 18029902     | 1              |
| Phoenix 06.02.2019         | Wool fat         | 18139305     | 1              |
| Phoenix 13.08.19 5,76EUR   | Wool fat         | 19043405     | 1              |
| Phoenix 25.07.2017 5,59EUR | Wool fat         | 16345104     | 1              |
| Phoenix 27.05.2014         | Wool fat         | 13306207     | 1              |
| Phonix                     | Wool fat         | 18139302     | 1              |
| phönix                     | Wool fat         | 8002112001   | 2              |
| phönix                     | Wool fat         | 8002112002   | 1              |
| phönix                     | Wool fat         | 8002144001   | 2              |
| Phönix                     | Wool fat         | 5100700      | 1              |
| Phönix                     | Wool fat         | 13213104     | 1              |
| Phönix                     | Wool fat         | 5520800      | 1              |
| Phönix                     | Wool fat         | 1336206      | 1              |
| Phönix                     | Wool fat         | 13306205     | 1              |
| Phönix                     | Wool fat         | 16003905     | 1              |
| Phönix                     | Wool fat         | 153620001    | 1              |
| Phönix                     | Wool fat         | 16267201     | 1              |

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| <b>Supplier</b>           | <b>Substance</b> | <b>Batch</b> | <b>Spectra</b> |
|---------------------------|------------------|--------------|----------------|
| Phönix                    | Wool fat         | 16221907     | 1              |
| Phönix                    | Wool fat         | 16221906     | 1              |
| Phönix                    | Wool fat         | 17139303     | 1              |
| Phönix                    | Wool fat         | 308894       | 2              |
| Phönix                    | Wool fat         | 3172         | 1              |
| Phönix                    | Wool fat         | 8004134001   | 1              |
| Phönix                    | Wool fat         | 18003426     | 1              |
| Phönix                    | Wool fat         | 18139303     | 1              |
| Phönix                    | Wool fat         | 18139305     | 3              |
| Phönix                    | Wool fat         | 18314703     | 1              |
| Phönix                    | Wool fat         | 19100502     | 1              |
| Phönix                    | Wool fat         | 19100507     | 2              |
| Phönix                    | Wool fat         | 192611005    | 1              |
| PHÖNIX                    | Wool fat         | 17167701     | 1              |
| PHÖNIX                    | Wool fat         | 1728105      | 1              |
| Phönix GÖ 01.04.2019      | Wool fat         | 18224302     | 3              |
| Caelo                     | Wool fat         | 16163001     | 30             |
| Phönix/Fagon              | Wool fat         | 16163002     | 1              |
| Phönix/Phönix             | Wool fat         | 16221907     | 1              |
| Post Apotheke             | Wool fat         | 17307506     | 1              |
| Purren Apotheke           | Wool fat         | 11261106     | 1              |
| Sana 31.01.17             | Wool fat         | 16267201     | 1              |
| sanacorp                  | Wool fat         | 20000968001  | 1              |
| Sanacorp                  | Wool fat         | 12122404     | 3              |
| Sanacorp                  | Wool fat         | 12224405     | 1              |
| Sanacorp                  | Wool fat         | 5448200      | 3              |
| Sanacorp                  | Wool fat         | 13213104     | 1              |
| Sanacorp                  | Wool fat         | 13039405     | 1              |
| Sanacorp                  | Wool fat         | 13398202     | 1              |
| Sanacorp                  | Wool fat         | 46/AKD1      | 1              |
| Sanacorp                  | Wool fat         | 14086904     | 1              |
| Sanacorp                  | Wool fat         | 13306206     | 1              |
| Sanacorp                  | Wool fat         | 14238004     | 1              |
| Sanacorp                  | Wool fat         | 14304502     | 1              |
| Sanacorp                  | Wool fat         | 46/AKD6      | 1              |
| Sanacorp                  | Wool fat         | 16044303     | 1              |
| Sanacorp                  | Wool fat         | 16221906     | 1              |
| Sanacorp                  | Wool fat         | 8002320010   | 1              |
| Sanacorp                  | Wool fat         | 17139303     | 1              |
| Sanacorp                  | Wool fat         | 8003158002   | 7              |
| Sanacorp                  | Wool fat         | 17167702     | 1              |
| Sanacorp                  | Wool fat         | 17139301     | 2              |
| Sanacorp                  | Wool fat         | 8004134002   | 1              |
| Sanacorp                  | Wool fat         | 17248103     | 1              |
| Sanacorp                  | Wool fat         | 17307505     | 2              |
| Sanacorp                  | Wool fat         | 18139307     | 1              |
| Sanacorp                  | Wool fat         | 18224302     | 1              |
| Sanacorp                  | Wool fat         | 18139305     | 1              |
| Sanacorp                  | Wool fat         | 19043405     | 1              |
| Sanacorp                  | Wool fat         | 19100504     | 2              |
| Sanacorp                  | Wool fat         | 19100502     | 2              |
| Sanacorp                  | Wool fat         | 19100506     | 2              |
| Sanacorp                  | Wool fat         | 192611005    | 4              |
| Sanacorp                  | Wool fat         | 192611004    | 3              |
| Sanacorp                  | Wool fat         | 19000845001  | 2              |
| Sanacorp EK:8,10 EUR...   | Wool fat         | 16345107     | 2              |
| Caelo                     | Wool fat         | 1713         | 1              |
| Sanacorp 14.11.19 EK 4,93 | Wool fat         | 19100506     | 1              |
| Caelo                     | Wool fat         | 12036703     | 7              |

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| Supplier                   | Substance                 | Batch            | Spectra |
|----------------------------|---------------------------|------------------|---------|
| Caelo                      | Wool fat                  | 12074501         | 2       |
| Euro OTC                   | Wool fat                  | 1000010938       | 2       |
| Sanacorp/ Lamotte          | Wool fat                  | 8003158002       | 1       |
| Sanacorp/ Lamotte          | Wool fat                  | 8004134002       | 1       |
| Sanacorp/ Lamotte          | Wool fat                  | 100010938        | 1       |
| Sanacorp/ Lamotte          | Wool fat                  | 1000012825       | 1       |
| Caelo                      | Wool fat                  | 12036702         | 4       |
| Caelo                      | Wool fat                  | 46/AKD3          | 1       |
| Sanaorp                    | Wool fat                  | 305553           | 1       |
| Sanacorp WE:18.04.16 EK... | Wool fat                  | 16003902         | 2       |
| Spirig (Galderma)          | Wool fat                  | 16044302         | 1       |
| Caelo                      | Wool fat                  | 12122404         | 17      |
| Caelo                      | Wool fat                  | 13213106         | 16      |
| Caelo                      | Wool fat                  | 13389202         | 1       |
| Caelo                      | Wool fat                  | 15198804         | 22      |
| vdl                        | Wool fat                  | 12224404         | 1       |
| Alliance Health.14.08.2... | Softisan <sup>®</sup> 378 |                  | 1       |
| Caelo                      | Softisan <sup>®</sup> 378 | 13370104         | 3       |
| Fagron                     | Softisan <sup>®</sup> 378 | 13D26-N12        | 9       |
| Fagron                     | Softisan <sup>®</sup> 378 | 20F25-F02-371909 | 5       |
| Fagron                     | Softisan <sup>®</sup> 378 | 12K27-N05        | 1       |
| THC Pharm/                 | Softisan <sup>®</sup> 378 |                  | 1       |
| THC Pharma                 | Softisan <sup>®</sup> 378 |                  | 1       |
|                            | Wool fat                  | 17307506         | 1       |
| Caelo                      | Wool fat                  | 12122403         | 10      |
| Caelo                      | Wool fat                  |                  | 5       |
| Caelo                      | Wool fat                  | 14086904         | 13      |
| Caelo                      | Wool fat                  | 15198802         | 23      |
| Caelo                      | Wool fat                  | 15050902         | 10      |
| Euro OTC                   | Wool fat                  | 1403023-01       | 1       |
| Euro OTC                   | Wool fat                  | 1502024-01       | 2       |
| Euro OTC                   | Wool fat                  |                  | 1       |
| Henry Lamotte              | Wool fat                  | 8003158002       | 4       |
| Henry Lamotte Oils GmbH    | Wool fat                  |                  | 1       |
| Henry Lamotte Oils GmbH... | Wool fat                  |                  | 1       |
| Sanacorp                   | Wool fat                  |                  | 1       |
| VDL 17.04.14;Preis 4,50    | Wool fat                  |                  | 1       |

- 235 621 spectra from 1121 *Apo-Ident* customers from a total of 46 271 batches from a further 341 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Softisan<sup>®</sup> 378 / Wool fat* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Softisan<sup>®</sup> 378 / Wool fat* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 720           | 0              | 63 219        |
| <b>Type B</b> | 0              | 560           | 0              | 90 831        |
| <b>Type C</b> | 0              | 5690          | 52             | 235 614       |

The substance/substance group *Softisan*<sup>®</sup> 378 / *Wool fat* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.1667 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 98.9286 %) |
| <b>Type C</b> | 100.0000 % (> 99.6843 %) | 99.0944 % (> 99.0421 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Softisan*<sup>®</sup> 378 / *Wool fat* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Emulsifying hydrophobic base gel DAC      | 14.34                  | —                              |
| Shea butter, refined                      | 14.61                  | —                              |
| Paraffin, yellow                          | 16.06                  | —                              |
| Pasta Cordes <sup>®</sup>                 | 16.26                  | —                              |
| Softisan <sup>®</sup> 649                 | 20.07                  | —                              |
| Wool alcohol ointment DAB                 | 20.39                  | —                              |
| Paraffin, white                           | 20.69                  | —                              |
| Laurel oil                                | 25.35                  | —                              |
| Isopropyl palmitate                       | 26.42                  | —                              |
| Paraffin, light liquid                    | 26.49                  | —                              |
| Wool alcohol ointment SR with white pa... | 26.88                  | —                              |
| Triglycerides, medium-chain               | 27.61                  | —                              |
| Squalane                                  | 28.58                  | —                              |
| Olive oil, native                         | 29.13                  | —                              |
| Camphor ointment                          | 29.92                  | —                              |
| Unguentum Cordes <sup>®</sup>             | 31.14                  | —                              |
| Permethrin 25% solution                   | 31.73                  | —                              |
| Paraffin, liquid                          | 32.04                  | —                              |
| Eye ointment, emulsifying DAC             | 32.15                  | —                              |
| Hydrophilic ointment DAB                  | 32.35                  | —                              |
| Peanut oil, refined                       | 32.99                  | —                              |
| Apricot kernel oil, refined               | 33.59                  | —                              |
| Triglycerol diisostearate                 | 33.96                  | —                              |
| Wool alcohol ointment SR/DAC              | 34.91                  | —                              |
| Hydrophobic base gel DAC                  | 35.64                  | —                              |
| Eye paraffin                              | 36.60                  | —                              |
| Isopropyl myristate                       | 36.87                  | —                              |
| Decyl oleate                              | 37.02                  | —                              |
| 2-ethylhexyl laurate                      | 39.38                  | —                              |
| Avocado oil, refined                      | 39.72                  | —                              |
| Salicylic acid concentrate 5%, white p... | 40.37                  | —                              |
| Metronidazole 25% in white petrolatum     | 43.50                  | —                              |

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| Substanz                               | Distance in<br>main model | Distance in<br>second-stage model |
|----------------------------------------|---------------------------|-----------------------------------|
| Abwaschbare Salbengrundlage (NRF S.31) | 44.20                     | —                                 |
| Sorbitan trioleate                     | 47.88                     | —                                 |
| Jojoba oil, native                     | 49.48                     | —                                 |
| Macrogol 8 stearate type I             | 51.16                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Softisan® 378 / Wool fat* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30743     | 31743                  | 5.02                            | 18.99                              |
| 30887     | 31117                  | 7.73                            | 15.32                              |
| 30925     | 31847                  | 5.62                            | 18.01                              |
| 31117     | 31117                  | 0.00                            | 14.05                              |
| 31472     | 31117                  | 3.92                            | 13.52                              |
| 31479     | 31743                  | 2.06                            | 16.26                              |
| 31533     | 31533                  | 0.00                            | 17.29                              |
| 31742     | 31743                  | 3.37                            | 18.39                              |
| 31743     | 31743                  | 0.00                            | 17.58                              |
| 31847     | 31847                  | 0.00                            | 18.87                              |
| 31952     | 31743                  | 1.78                            | 18.02                              |
| 32298     | 31117                  | 2.63                            | 14.02                              |
| 32964     | 32964                  | 0.00                            | 18.05                              |
| 33939     | 31743                  | 3.53                            | 18.71                              |
| 35145     | 32964                  | 5.55                            | 20.76                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Softisan® 649**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30770-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Softisan® 649

### Special notes

When selecting the *Softisan® 649* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Softisan® 649             | 3      | 3      | 14     |



## Second-stage model

For differentiation of the substance/substance group *Softisan*® 649 the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Softisan*® 649:

| Supplier | Substance             | Batch            | Sample ID | Spectra | Certificate |
|----------|-----------------------|------------------|-----------|---------|-------------|
| Fagron   | <i>Softisan</i> ® 649 | 12I10-N12        | 30770     | 40      | 1407601     |
| Fagron   | <i>Softisan</i> ® 649 | 15E13-B01-307859 | 31699     | 60      | 20150527    |
| Fagron   | <i>Softisan</i> ® 649 | 20F12-F02-374973 | 35462     | 40      | 20200724    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 140 spectra of 3 reference samples from the substance/substance group *Softisan*® 649. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 799 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a †. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 117 spectra of 3 reference samples from the substance/substance group *Softisan*® 649.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance             | Batch            | Sample ID | Spectra |
|----------|-----------------------|------------------|-----------|---------|
| Fagron   | <i>Softisan</i> ® 649 | 13C19-N03        | 31118     | 37      |
| Fagron   | <i>Softisan</i> ® 649 | 16H30-B03-325618 | 33249     | 40      |
| Fagron   | <i>Softisan</i> ® 649 | 18H13-B02-352761 | 34273     | 40      |

- 91 374 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 24 spectra from 19 *Apo-Ident* customers from 14 batches from the substance/substance group *Softisan® 649*.
- Among them are spectra of independent samples from 14 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance     | Batch            | Spectra |
|----------------------------|---------------|------------------|---------|
| Apotheke Leutenberg        | Softisan® 649 | 605218           | 1       |
| Apotheke Leutenberg        | Softisan® 649 | 801297           | 1       |
| Apotheke Leutenberg/ No... | Softisan® 649 | 801297           | 1       |
| Apotheke Leutenberg/AHD    | Softisan® 649 | 605218           | 1       |
| Apotheke Leutenberg/All... | Softisan® 649 | 801297           | 1       |
| Caelo                      | Softisan® 649 | 17K16-B06-345556 | 1       |
| Cremer                     | Softisan® 649 | 605218           | 1       |
| cremer oleo GmbH           | Softisan® 649 | 703250           | 1       |
| Cremer Oleo GmbH           | Softisan® 649 | 150430           | 1       |
| Cremer Oleo/Anzag          | Softisan® 649 | 409134           | 1       |
| Cremer Oleo/Anzag          | Softisan® 649 | 150430           | 1       |
| Cremer Oleo/Sanacorp       | Softisan® 649 | 703250           | 1       |
| Fa. Cremer Oleon GmbH      | Softisan® 649 | 9041803          | 1       |
| Fagron                     | Softisan® 649 | 105945           | 1       |
| Fagron                     | Softisan® 649 | 708279           | 1       |
| Fagron                     | Softisan® 649 | 130905-60-1      | 1       |
| Fagron                     | Softisan® 649 | 15E13-B01-315602 | 1       |
| Fagron                     | Softisan® 649 | 18H13-B02-352761 | 1       |
| Fagron                     | Softisan® 649 | 503154           | 1       |
| Nordmann, Rassmann GmbH... | Softisan® 649 | 810328           | 1       |
| Noweda /938705 / IOI Ol... | Softisan® 649 | 801297           | 1       |
| Oleo/Sanacorp              | Softisan® 649 | 801297           | 1       |
| Oleochemicals              | Softisan® 649 | 605218           | 1       |
| Pharmachem                 | Softisan® 649 | 605218           | 1       |

- 241 339 spectra from 1121 *Apo-Ident* customers from a total of 46 992 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Softisan® 649* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Softisan® 649* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following

table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 140           | 0              | 63 799        |
| Type B | 0              | 117           | 0              | 91 374        |
| Type C | 0              | 24            | 0              | 241 339       |

The substance/substance group *Softisan*<sup>®</sup> 649 can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9799 %) | 100.0000 % (> 95.7143 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 94.8718 %) |
| Type C | 100.0000 % (> 99.6852 %) | 100.0000 % (> 75.0000 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Softisan*<sup>®</sup> 649 in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                              | Distance in main model | Distance in second-stage model |
|----------------------------------------|------------------------|--------------------------------|
| Pasta Cordes <sup>®</sup>              | 24.18                  | —                              |
| Softisan <sup>®</sup> 378              | 25.23                  | —                              |
| Triglycerol diisostearate              | 25.91                  | —                              |
| Shea butter, refined                   | 28.70                  | —                              |
| Wool fat                               | 33.89                  | —                              |
| Hydrophilic ointment DAB               | 40.23                  | —                              |
| Paraffin, yellow                       | 42.39                  | —                              |
| Permethrin 25% solution                | 42.99                  | —                              |
| Abwaschbare Salbengrundlage (NRF S.31) | 46.45                  | —                              |
| Castor oil                             | 46.98                  | —                              |
| Macrogol 8 stearate type I             | 49.15                  | —                              |
| Emulsifying hydrophobic base gel DAC   | 49.18                  | —                              |
| Sorbitan trioleate                     | 50.06                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Softisan*<sup>®</sup> 649 is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested

reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30770     | 30770               | 0.00                         | 29.20                           |
| 31699     | 30770               | 9.93                         | 25.23                           |
| 35462     | 30770               | 5.47                         | 28.13                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Sorbitan trioleate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31031-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Sorbitan trioleate; Sorbitani trioleas

### Special notes

When selecting the *Sorbitan trioleate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Sorbitan trioleate        | 6      | 2      | 36     |

## Second-stage model

For differentiation of the substance/substance group *Sorbitan trioleate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Sorbitan trioleate*:

| Supplier | Substance          | Batch    | Sample ID | Spectra | Certificate |
|----------|--------------------|----------|-----------|---------|-------------|
| Caelo    | Sorbitan trioleate | 12171410 | 31031     | 40      | 1407273     |
| Caelo    | Sorbitan trioleate | 13317202 | 31130     | 40      | 20131017    |
| Caelo    | Sorbitan trioleate | 13317212 | 31459     | 60      | 20131017    |
| Caelo    | Sorbitan trioleate | 15337406 | 33441     | 40      | 20151110    |
| Caelo    | Sorbitan trioleate | 190812   | 34467     | 40      | 20190510*   |
| Caelo    | Sorbitan trioleate | 20001766 | 35301     | 40      | 20200727*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 260 spectra of 6 reference samples from the substance/substance group *Sorbitan trioleate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 679 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Sorbitan trioleate*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance          | Batch    | Sample ID | Spectra |
|----------|--------------------|----------|-----------|---------|
| Caelo    | Sorbitan trioleate | 17056001 | 33461     | 40      |
| Caelo    | Sorbitan trioleate | 180779   | 34080     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 107 spectra from 51 *Apo-Ident* customers from 40 batches from the substance/substance group *Sorbitan trioleate*.
- Among them are spectra of independent samples from 36 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance          | Batch       | Spectra |
|----------------------|--------------------|-------------|---------|
| AHD                  | Sorbitan trioleate | 20001766001 | 1       |
| Caelo                | Sorbitan trioleate | 1877905     | 1       |
| Caelo                | Sorbitan trioleate | 10109108    | 1       |
| Caelo                | Sorbitan trioleate | 12171408    | 3       |
| Caelo                | Sorbitan trioleate | 11284608    | 1       |
| Caelo                | Sorbitan trioleate | 11284603    | 1       |
| Caelo                | Sorbitan trioleate | 11117102    | 1       |
| Caelo                | Sorbitan trioleate | 1217408     | 1       |
| Caelo                | Sorbitan trioleate | 13317204    | 1       |
| Caelo                | Sorbitan trioleate | 14218205    | 1       |
| Caelo                | Sorbitan trioleate | 14218202    | 1       |
| Caelo                | Sorbitan trioleate | 15064909    | 1       |
| Caelo                | Sorbitan trioleate | 15064908    | 1       |
| Caelo                | Sorbitan trioleate | 15064905    | 2       |
| Caelo                | Sorbitan trioleate | 15337403    | 4       |
| Caelo                | Sorbitan trioleate | 15337405    | 3       |
| Caelo                | Sorbitan trioleate | 15337404    | 5       |
| Caelo                | Sorbitan trioleate | 17056001    | 7       |
| Caelo                | Sorbitan trioleate | 17056004    | 7       |
| Caelo                | Sorbitan trioleate | 18077906    | 5       |
| Caelo                | Sorbitan trioleate | 18077908    | 4       |
| Caelo                | Sorbitan trioleate | 180779      | 1       |
| Caelo                | Sorbitan trioleate | 11284601    | 1       |
| Caelo                | Sorbitan trioleate | 12171405    | 1       |
| Caelo                | Sorbitan trioleate | 18039701    | 2       |
| Caelo                | Sorbitan trioleate | 2001766001  | 1       |
| Caelo                | Sorbitan trioleate | 15182502    | 2       |
| Caelo                | Sorbitan trioleate | 13317213    | 1       |
| Caelo                | Sorbitan trioleate | 18077905    | 9       |
| Caelo                | Sorbitan trioleate | 18077909    | 7       |
| Caelo                | Sorbitan trioleate | 15064903    | 2       |
| Caelo                | Sorbitan trioleate | 13317209    | 2       |
| Caelo                | Sorbitan trioleate | 19081203    | 2       |
| Caelo                | Sorbitan trioleate | 11284607    | 1       |
| Caelo                | Sorbitan trioleate | 15064901    | 1       |
| Caesar & Lorenz GmbH | Sorbitan trioleate | 15337404    | 1       |

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| Supplier             | Substance          | Batch       | Spectra |
|----------------------|--------------------|-------------|---------|
| Caesar & Lorenz GmbH | Sorbitan trioleate | 17056004    | 1       |
| Caesar & Lorenz GmbH | Sorbitan trioleate | 20001766001 | 1       |
| Caesar & Loretz GmbH | Sorbitan trioleate | 19081203    | 1       |
| Caesar & Loretz GmbH | Sorbitan trioleate | 12171405    | 1       |
| Caesar&Loretz GmbH   | Sorbitan trioleate | 15064903    | 1       |
| Caesar/Lorenz        | Sorbitan trioleate | 13317210    | 1       |
| Euro OTC             | Sorbitan trioleate | 15064903    | 1       |
| Gehe                 | Sorbitan trioleate | 12171408    | 1       |
| GEHE                 | Sorbitan trioleate | 15337404    | 1       |
| GEHE                 | Sorbitan trioleate | 17056001    | 1       |
| Caelo                | Sorbitan trioleate | 15337406    | 3       |
| Caelo                | Sorbitan trioleate | 13317212    | 5       |
| Caelo                | Sorbitan trioleate | 190812      | 2       |
| Caelo                | Sorbitan trioleate | 20001766    | 1       |

- 241 256 spectra from 1121 *Apo-Ident* customers from a total of 46 966 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Sorbitan trioleate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Sorbitan trioleate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 260           | 0              | 63 679        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 106           | 1              | 241 256       |

The substance/substance group *Sorbitan trioleate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6923 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.0654 % (> 96.2617 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Sorbitan trioleate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                         | Distance in<br>main model | Distance in<br>second-stage model |
|-----------------------------------|---------------------------|-----------------------------------|
| Almond oil, refined               | 13.27                     | —                                 |
| Castor oil                        | 18.09                     | —                                 |
| Apricot kernel oil, refined       | 18.97                     | —                                 |
| Soy lecithin, liquid              | 25.41                     | —                                 |
| Avocado oil, refined              | 25.44                     | —                                 |
| Olive oil, native                 | 25.73                     | —                                 |
| Sorbitan- and glycerol monooleate | 27.46                     | —                                 |
| Laurel oil                        | 27.71                     | —                                 |
| Peanut oil, refined               | 30.54                     | —                                 |
| Shea butter, refined              | 31.53                     | —                                 |
| Sesame oil, refined               | 32.69                     | —                                 |
| Soy oil, refined                  | 36.10                     | —                                 |
| Oleyl oleate (stabilised)         | 36.22                     | —                                 |
| Pumpkin seed oil, pressed         | 37.13                     | —                                 |
| Sunflower oil, refined            | 37.33                     | —                                 |
| Wheatgerm oil, refined            | 38.89                     | —                                 |
| Decyl oleate                      | 40.01                     | —                                 |
| Softisan <sup>®</sup> 649         | 40.87                     | —                                 |
| Rapeseed oil, refined             | 42.10                     | —                                 |
| Grape seed oil, refined           | 42.90                     | —                                 |
| Safflower oil, refined type I     | 43.43                     | —                                 |
| Corn oil, refined                 | 43.45                     | —                                 |
| Triglycerol diisostearate         | 45.15                     | —                                 |
| Jobba oil, native                 | 48.08                     | —                                 |
| Pasta Cordes <sup>®</sup>         | 53.33                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Sorbitan trioleate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31031     | 31031                  | 0.00                            | 21.86                              |
| 31130     | 34467                  | 3.83                            | 24.96                              |
| 31459     | 34467                  | 3.93                            | 23.94                              |
| 33441     | 34467                  | 5.04                            | 24.89                              |
| 34467     | 34467                  | 0.00                            | 27.22                              |
| 35301     | 35301                  | 0.00                            | 28.36                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Spearmint oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30668-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Spearmint oil; Oleum menthae crispae

### Special notes

When selecting the *Spearmint oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Spearmint oil             | 6      | 3      | 20     |



## Second-stage model

For differentiation of the substance/substance group *Spearmint oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Spearmint oil*:

| Supplier | Substance     | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------|----------|-----------|---------|-------------|
| Caelo    | Spearmint oil | 11346805 | 30668     | 40      | 20111206    |
| Caelo    | Spearmint oil | 13363904 | 31303     | 40      | 1407357     |
| Caelo    | Spearmint oil | 13363904 | 31419     | 60      | 20131118    |
| Caelo    | Spearmint oil | 181837   | 34446     | 40      | 20180628*   |
| Caelo    | Spearmint oil | 191137   | 34447     | 40      | 20190430*   |
| Caelo    | Spearmint oil | 181935   | 34448     | 40      | 20180718*   |
| Caelo    | Spearmint oil | 192456   | 34709     | 40      | 20190927*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 300 spectra of 7 reference samples from the substance/substance group *Spearmint oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 639 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Spearmint oil*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance     | Batch  | Sample ID | Spectra |
|----------|---------------|--------|-----------|---------|
| Caelo    | Spearmint oil | 161284 | 32205     | 40      |
| Caelo    | Spearmint oil | 172396 | 33912     | 40      |
| Caelo    | Spearmint oil | 191961 | 34621     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 31 spectra from 17 *Apo-Ident* customers from 21 batches from the substance/substance group *Spearmint oil*.
- Among them are spectra of independent samples from 20 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance     | Batch     | Spectra |
|----------|---------------|-----------|---------|
| Caelo    | Spearmint oil | 12206910  | 1       |
| Caelo    | Spearmint oil | 25062015B | 1       |
| Caelo    | Spearmint oil | 15013921  | 1       |
| Caelo    | Spearmint oil | 150013904 | 1       |
| Caelo    | Spearmint oil | 15013909  | 1       |
| Caelo    | Spearmint oil | 16128403  | 1       |
| Caelo    | Spearmint oil | 16128405  | 3       |
| Caelo    | Spearmint oil | 16128408  | 1       |
| Caelo    | Spearmint oil | 16128404  | 1       |
| Caelo    | Spearmint oil | 38/17     | 1       |
| Caelo    | Spearmint oil | 17239605  | 1       |
| Caelo    | Spearmint oil | 17239608  | 1       |
| Caelo    | Spearmint oil | 18183704  | 2       |
| Caelo    | Spearmint oil | 192456003 | 1       |
| Caelo    | Spearmint oil | 16128409  | 1       |
| Caelo    | Spearmint oil | 14147608  | 2       |
| Caelo    | Spearmint oil | 17239602  | 2       |
| Caelo    | Spearmint oil | 16128402  | 1       |
| L12      | Spearmint oil | 16128405  | 1       |
| L12      | Spearmint oil | 17239602  | 1       |
| Noweda   | Spearmint oil | 11346805  | 1       |
| Caelo    | Spearmint oil | 12206913  | 1       |
| Caelo    | Spearmint oil | 13093402  | 1       |
| Sanacorp | Spearmint oil | 13093402  | 1       |
| Sanacorp | Spearmint oil | 16128409  | 1       |
| Sanacorp | Spearmint oil | 17239602  | 1       |

- 241 332 spectra from 1121 *Apo-Ident* customers from a total of 46 985 batches from a further

342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Spearmint oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Spearmint oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 300           | 0              | 63 639        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 30            | 1              | 241 332       |

The substance/substance group *Spearmint oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.0000 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6852 %) | 96.7742 % (> 87.0968 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Spearmint oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance         | Distance in main model | Distance in second-stage model |
|-------------------|------------------------|--------------------------------|
| Caraway oil       | 19.65                  | —                              |
| Dwarf pine oil    | 24.09                  | —                              |
| Bergamot oil      | 44.48                  | —                              |
| Juniper oil       | 48.56                  | —                              |
| Bitter orange oil | 54.21                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Spearmint oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30668     | 31303               | 12.00                        | 38.60                           |
| 31303     | 31303               | 0.00                         | 39.27                           |
| 31419     | 34447               | 3.00                         | 41.42                           |
| 34446     | 34446               | 0.00                         | 40.57                           |
| 34447     | 34447               | 0.00                         | 38.65                           |
| 34448     | 34448               | 0.00                         | 37.57                           |
| 34709     | 34709               | 0.00                         | 38.29                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Spirit of ether</b>                                           |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30707-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Spirit of ether; Spiritus aethereus

### Special notes

When selecting the *Spirit of ether* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Spirit of ether           | 4      | 2      | 8      |

## Second-stage model

For differentiation of the substance/substance group *Spirit of ether* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Spirit of ether*:

| Supplier | Substance       | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------------|----------|-----------|---------|-------------|
| Caelo    | Spirit of ether | 12074603 | 30707     | 40      | 20120320    |
| Caelo    | Spirit of ether | 13131805 | 31207     | 40      | 1403111     |
| Caelo    | Spirit of ether | 181156   | 34065     | 40      | 20180427*   |
| Caelo    | Spirit of ether | 191998   | 34703     | 40      | 20190731*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Spirit of ether*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Spirit of ether*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



| Supplier | Substance       | Batch    | Sample ID | Spectra |
|----------|-----------------|----------|-----------|---------|
| Caelo    | Spirit of ether | 15442201 | 32566     | 40      |
| Caelo    | Spirit of ether | 15442203 | 33218     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 14 spectra from 5 *Apo-Ident* customers from 10 batches from the substance/substance group *Spirit of ether*.
- Among them are spectra of independent samples from 8 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier  | Substance       | Batch    | Spectra |
|-----------|-----------------|----------|---------|
| Caelo     | Spirit of ether | 14339701 | 1       |
| Caelo     | Spirit of ether | 14339707 | 1       |
| Caelo     | Spirit of ether | 19199801 | 1       |
| Caelo     | Spirit of ether | 13131807 | 1       |
| Caelo     | Spirit of ether | 11375512 | 1       |
| Caelo     | Spirit of ether | 11375509 | 1       |
| Caelo     | Spirit of ether | 14339702 | 2       |
| Gehe      | Spirit of ether | 15442203 | 1       |
| Gepepharm | Spirit of ether | 15442203 | 1       |
| Caelo     | Spirit of ether | 12074603 | 2       |
| Caelo     | Spirit of ether | 13131805 | 2       |

- 241 349 spectra from 1121 *Apo-Ident* customers from a total of 46 996 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Spirit of ether* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Spirit of ether* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 160           | 0              | 63 779        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 13            | 1              | 241 349       |

The substance/substance group *Spirit of ether* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6855 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Spirit of ether* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in main model | Distance in second-stage model |
|--------------|------------------------|--------------------------------|
| Dexpanthenol | 79.10                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Spirit of ether* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30707     | 34065               | 5.53                         | 131.68                          |
| 31207     | 31207               | 0.00                         | 141.70                          |
| 34065     | 34065               | 0.00                         | 135.85                          |
| 34703     | 34703               | 0.00                         | 132.94                          |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Spirit soap**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30546-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Spirit soap; Spiritus saponatus

### Special notes

When selecting the *Spirit soap* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Spirit soap               | 4      | 2      | 58     |

## Second-stage model

For differentiation of the substance/substance group *Spirit soap* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Spirit soap*:

| Supplier | Substance   | Batch    | Sample ID | Spectra | Certificate |
|----------|-------------|----------|-----------|---------|-------------|
| Caelo    | Spirit soap | 12247110 | 31153     | 40      | 1403401     |
| Caelo    | Spirit soap | 13278409 | 31393     | 40      | 20130829    |
| Caelo    | Spirit soap | 16130209 | 33443     | 40      | 20160510    |
| Caelo    | Spirit soap | 16130209 | 33456     | 40      | 20160510    |
| Caelo    | Spirit soap | 173045   | 33893     | 40      | 20171204*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 200 spectra of 5 reference samples from the substance/substance group *Spirit soap*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 739 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Spirit soap*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance   | Batch  | Sample ID | Spectra |
|----------|-------------|--------|-----------|---------|
| Caelo    | Spirit soap | 182955 | 34332     | 40      |
| Caelo    | Spirit soap | 183012 | 34333     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 149 spectra from 61 *Apo-Ident* customers from 61 batches from the substance/substance group *Spirit soap*.
- Among them are spectra of independent samples from 58 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier              | Substance   | Batch     | Spectra |
|-----------------------|-------------|-----------|---------|
| AHD                   | Spirit soap | 16130209  | 1       |
| AHD                   | Spirit soap | 17304502  | 1       |
| AHD                   | Spirit soap | 18295503  | 1       |
| AHD                   | Spirit soap | 18295504  | 1       |
| Anzag                 | Spirit soap | 13278409  | 1       |
| Anzag 8.10.14 EK 4.88 | Spirit soap | 13278403  | 1       |
| Caelo                 | Spirit soap | 12247105  | 2       |
| Caelo                 | Spirit soap | 12247108  | 7       |
| Caelo                 | Spirit soap | 3091306   | 1       |
| Caelo                 | Spirit soap | 10121303  | 1       |
| Caelo                 | Spirit soap | 13278403  | 8       |
| Caelo                 | Spirit soap | 12121402  | 1       |
| Caelo                 | Spirit soap | 14212712  | 1       |
| Caelo                 | Spirit soap | 14364902  | 4       |
| Caelo                 | Spirit soap | 14364905  | 1       |
| Caelo                 | Spirit soap | 9031501   | 1       |
| Caelo                 | Spirit soap | 27072013  | 1       |
| Caelo                 | Spirit soap | 6081516   | 1       |
| Caelo                 | Spirit soap | 14364906  | 6       |
| Caelo                 | Spirit soap | 14364904  | 3       |
| Caelo                 | Spirit soap | 16130205  | 3       |
| Caelo                 | Spirit soap | 11051704  | 1       |
| Caelo                 | Spirit soap | 17304504  | 1       |
| Caelo                 | Spirit soap | 19011801  | 1       |
| Caelo                 | Spirit soap | 7071805   | 1       |
| Caelo                 | Spirit soap | 7111804   | 1       |
| Caelo                 | Spirit soap | 17304507  | 2       |
| Caelo                 | Spirit soap | 182955001 | 1       |
| Caelo                 | Spirit soap | 18295505  | 1       |
| Caelo                 | Spirit soap | 12247102  | 1       |
| Caelo                 | Spirit soap | 18295501  | 1       |
| Caelo                 | Spirit soap | 182955002 | 1       |
| Caelo                 | Spirit soap | 18295507  | 1       |
| Caelo                 | Spirit soap | 18295504  | 1       |
| Caelo                 | Spirit soap | 17304501  | 2       |
| Caelo                 | Spirit soap | 9172002   | 1       |

*continued on the next page*

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| Supplier             | Substance   | Batch       | Spectra |
|----------------------|-------------|-------------|---------|
| Caelo                | Spirit soap | 2712Q-02323 | 1       |
| Caelo                | Spirit soap | 3913U-02323 | 1       |
| Caelo                | Spirit soap | 16130202    | 4       |
| Caelo                | Spirit soap | 16069902    | 1       |
| Caelo                | Spirit soap | 18295502    | 4       |
| Caelo                | Spirit soap | 14212703    | 1       |
| Caelo                | Spirit soap | 14364909    | 1       |
| Caelo                | Spirit soap | 13278408    | 2       |
| Caelo                | Spirit soap | 14212714    | 1       |
| Caelo                | Spirit soap | 14364901    | 2       |
| Caelo                | Spirit soap | 14364907    | 2       |
| Caelo                | Spirit soap | 16130201    | 4       |
| Caelo                | Spirit soap | 1730453     | 1       |
| Caelo                | Spirit soap | 17304502    | 2       |
| Caelo                | Spirit soap | 18295503    | 4       |
| Caelo                | Spirit soap | 16130207    | 3       |
| Caelo                | Spirit soap | 17304503    | 3       |
| Caelo                | Spirit soap | 12247104    | 2       |
| Caelo                | Spirit soap | 14212710    | 1       |
| Caelo                | Spirit soap | 16130204    | 4       |
| Caelo                | Spirit soap | 12247107    | 1       |
| Caelo                | Spirit soap | 12247109    | 2       |
| Caelo                | Spirit soap | 13278402    | 4       |
| Caelo                | Spirit soap | 13278405    | 3       |
| Caesar & Loretz GmbH | Spirit soap | 16130209    | 1       |
| Caesar & Loretz GmbH | Spirit soap | 18295501    | 1       |
| Caesar & Loretz GmbH | Spirit soap | 18295502    | 1       |
| Caesar&Lorenz        | Spirit soap | 14364906    | 1       |
| GEHE                 | Spirit soap | 17304502    | 1       |
| Caelo                | Spirit soap | 17304508    | 1       |
| Caelo                | Spirit soap | 14212706    | 6       |
| Caelo                | Spirit soap | 14212716    | 1       |
| Sanacorp             | Spirit soap | 12247102    | 1       |
| Caelo                | Spirit soap | 14212705    | 1       |
| Fagron               | Spirit soap | 16130201    | 1       |
| Caelo                | Spirit soap | 12247110    | 7       |
| Caelo                | Spirit soap | 13278409    | 6       |
| Caelo                | Spirit soap | 16130209    | 2       |

- 241 214 spectra from 1121 *Apo-Ident* customers from a total of 46 946 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Spirit soap* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Spirit soap* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 200           | 0              | 63 739        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 148           | 1              | 241 214       |

The substance/substance group *Spirit soap* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.3289 % (> 97.3154 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Spirit soap* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b>      | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|-----------------------|-------------------------------|---------------------------------------|
| Camphor spirit        | 39.68                         | —                                     |
| Isopropyl alcohol 70% | 41.27                         | —                                     |
| Glycolic acid 70%     | 74.56                         | —                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Spirit soap* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31153            | 31153                      | 0.00                                | 36.91                                  |
| 31393            | 31153                      | 3.38                                | 37.80                                  |
| 33443            | 31153                      | 7.19                                | 36.31                                  |
| 33456            | 31153                      | 2.91                                | 37.98                                  |
| 33893            | 33893                      | 0.00                                | 40.86                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all



substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Spruce needle oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31414-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Spruce needle oil; Oleum pini sibiricum

### Special notes

When selecting the *Spruce needle oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Spruce needle oil         | 3      | 2      | 20     |

## Second-stage model

For differentiation of the substance/substance group *Spruce needle oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Spruce needle oil*:

| Supplier | Substance         | Batch       | Sample ID | Spectra | Certificate |
|----------|-------------------|-------------|-----------|---------|-------------|
| Caelo    | Spruce needle oil | 13152004    | 31414     | 40      | 1412281     |
| Caelo    | Spruce needle oil | 13152004    | 31618     | 60      | 20130617    |
| Caelo    | Spruce needle oil | 14348607    | 31787     | 60      | 20141202    |
| Caelo    | Spruce needle oil | 19000518006 | 35165     | 40      | 2104234     |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 200 spectra of 4 reference samples from the substance/substance group *Spruce needle oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 3 different batches.
- 63 739 spectra from a total of 1304 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Spruce needle oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance         | Batch  | Sample ID | Spectra |
|----------|-------------------|--------|-----------|---------|
| Caelo    | Spruce needle oil | 163511 | 33095     | 40      |
| Caelo    | Spruce needle oil | 171966 | 33682     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 55 spectra from 29 *Apo-Ident* customers from 21 batches from the substance/substance group *Spruce needle oil*.
- Among them are spectra of independent samples from 20 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance         | Batch        | Spectra |
|----------------------------|-------------------|--------------|---------|
| Apotheker Bauer & Cie      | Spruce needle oil | 91697-89-1   | 1       |
| Caelo                      | Spruce needle oil | 13389508     | 1       |
| Caelo                      | Spruce needle oil | 15418210     | 2       |
| Caelo                      | Spruce needle oil | 8051802      | 1       |
| Caelo                      | Spruce needle oil | 3071717      | 1       |
| Caelo                      | Spruce needle oil | 18129710     | 4       |
| Caelo                      | Spruce needle oil | 17196602     | 6       |
| Caelo                      | Spruce needle oil | 3323         | 1       |
| Caelo                      | Spruce needle oil | 15380402     | 2       |
| Caelo                      | Spruce needle oil | 18129709     | 2       |
| Caelo                      | Spruce needle oil | 17196601     | 8       |
| Caelo                      | Spruce needle oil | 15418201     | 1       |
| Caelo                      | Spruce needle oil | 15418209     | 1       |
| Caesar & Loretz GmbH       | Spruce needle oil | 18129704     | 1       |
| Caesar & Loretz GmbH       | Spruce needle oil | 17196603     | 2       |
| Caesar & Loretz GmbH       | Spruce needle oil | 17196602     | 1       |
| Caesar & Loretz GmbH       | Spruce needle oil | 18129703     | 2       |
| Caesar & Loretz GmbH/Je... | Spruce needle oil | 18129710     | 3       |
| Caesar & Loretz GmbH/Ph... | Spruce needle oil | 18129703     | 1       |
| Fiebig                     | Spruce needle oil | 1716601      | 1       |
| Fiebig                     | Spruce needle oil | 17196601     | 7       |
| Gehe                       | Spruce needle oil | 15418209     | 1       |
| Nachprüfung                | Spruce needle oil | 2914A-02006  | 1       |
| Caelo                      | Spruce needle oil | 16351102     | 1       |
| Sanacorp                   | Spruce needle oil | 17196601     | 1       |
| Taoasis                    | Spruce needle oil | 22336-122331 | 1       |
| Caelo                      | Spruce needle oil | 14348607     | 1       |

- 241 308 spectra from 1121 *Apo-Ident* customers from a total of 46 985 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Spruce needle oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all

relevant spectra of the various substances were compared with *Spruce needle oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 200           | 0              | 63 739        |
| Type B | 0              | 80            | 0              | 91 411        |
| Type C | 0              | 54            | 1              | 241 308       |

The substance/substance group *Spruce needle oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.0000 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| Type C | 100.0000 % (> 99.6850 %) | 98.1818 % (> 92.7273 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Spruce needle oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance        | Distance in main model | Distance in second-stage model |
|------------------|------------------------|--------------------------------|
| Sage oil         | 12.49                  | —                              |
| Turpentine oil   | 24.91                  | —                              |
| Eucalyptus oil   | 29.46                  | —                              |
| Myrtle oil       | 34.83                  | —                              |
| Juniper wood oil | 35.67                  | —                              |
| Rosemary oil     | 36.84                  | —                              |
| Dwarf pine oil   | 43.38                  | —                              |
| Cineole          | 44.51                  | —                              |
| Cypress oil      | 52.77                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Spruce needle oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31414     | 31414               | 0.00                         | 20.43                           |
| 31618     | 31414               | 2.11                         | 19.10                           |
| 31787     | 31414               | 5.40                         | 19.40                           |
| 35165     | 35165               | 0.00                         | 26.85                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.





# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Squalane**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31327-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Squalane; Squalanum

### Special notes

When selecting the *Squalane* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Squalane                  | 5      | 1      | 3      |

## Second-stage model

For differentiation of the substance/substance group *Squalane* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Squalane*:

| Supplier | Substance | Batch    | Sample ID | Spectra | Certificate |
|----------|-----------|----------|-----------|---------|-------------|
| Caelo    | Squalane  | 13202603 | 31327     | 40      | 1504359     |
| Caelo    | Squalane  | 13202603 | 31328     | 40      | 20130809    |
| Caelo    | Squalane  | 13202603 | 31329     | 40      | 20130809    |
| Caelo    | Squalane  | 14330704 | 32075     | 40      | 9465        |
| Caelo    | Squalane  | 16030504 | 32302     | 40      | 20160205    |
| Caelo    | Squalane  | 171380   | 33317     | 40      | 20170609*   |
| Caelo    | Squalane  | 19232102 | 34684     | 40      | 20190923    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 280 spectra of 7 reference samples from the substance/substance group *Squalane*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 659 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 40 spectra of 1 reference samples from the substance/substance group *Squalane*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 1 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance | Batch    | Sample ID | Spectra |
|----------|-----------|----------|-----------|---------|
| Caelo    | Squalane  | 17138001 | 33422     | 40      |

- 91 451 spectra from a total of 2015 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4 spectra from 2 *Apo-Ident* customers from 4 batches from the substance/substance group *Squalane*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier        | Substance | Batch     | Spectra |
|-----------------|-----------|-----------|---------|
| Euro OTC        | Squalane  | 316001302 | 1       |
| L12             | Squalane  | 117001301 | 1       |
| Spinnrad/Noweda | Squalane  | 116001301 | 1       |
| Caelo           | Squalane  | 16030504  | 1       |

- 241 359 spectra from 1121 *Apo-Ident* customers from a total of 47 002 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Squalane* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Squalane* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 280           | 0              | 63 659        |
| <b>Type B</b> | 0              | 40            | 0              | 91 451        |
| <b>Type C</b> | 0              | 3             | 1              | 241 359       |

The substance/substance group *Squalane* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.8571 %) |
| Type B | 100.0000 % (> 99.9658 %) | 100.0000 % (> 85.0000 %) |
| Type C | 100.0000 % (> 99.6871 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Squalane* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                            | Distance in main model | Distance in second-stage model |
|--------------------------------------|------------------------|--------------------------------|
| Triglycerides, medium-chain          | 14.26                  | —                              |
| Wool fat                             | 16.92                  | —                              |
| 2-ethylhexyl laurate                 | 21.16                  | 100.94                         |
| Emulsifying hydrophobic base gel DAC | 22.52                  | —                              |
| Softisan® 649                        | 30.23                  | —                              |
| Hydrophobic base gel DAC             | 31.21                  | —                              |
| Camphor ointment                     | 32.84                  | —                              |
| Paraffin, light liquid               | 33.98                  | —                              |
| Apricot kernel oil, refined          | 35.14                  | —                              |
| Peanut oil, refined                  | 35.54                  | —                              |
| Pasta Cordes®                        | 36.26                  | —                              |
| Olive oil, native                    | 37.24                  | —                              |
| Laurel oil                           | 37.57                  | —                              |
| Shea butter, refined                 | 38.61                  | —                              |
| Decyl oleate                         | 38.79                  | —                              |
| Guaiazulene 25%, water-soluble       | 41.33                  | —                              |
| Sorbitan trioleate                   | 44.42                  | —                              |
| Avocado oil, refined                 | 45.02                  | —                              |
| Isopropyl palmitate                  | 45.29                  | —                              |
| Soy lecithin, liquid                 | 47.70                  | —                              |
| Paraffin, liquid                     | 47.76                  | —                              |
| Isopropyl myristate                  | 50.43                  | —                              |
| ⋮                                    | ⋮                      | ⋮                              |
| Wool alcohol cream SR                | >50                    | 41.37                          |
| Base cream DAC                       | >50                    | 61.82                          |
| Eucerin® cum Aqua                    | >50                    | 62.56                          |
| Wool alcohol cream DAB               | >50                    | 80.01                          |
| Lanette® ointment (conserved)        | >50                    | 87.99                          |
| Non-ionic hydrophil ointment         | >50                    | 91.39                          |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Squalane* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31327     | 31327               | 0.00                         | 14.60                           |
| 31328     | 31327               | 1.06                         | 14.36                           |
| 31329     | 31327               | 1.81                         | 14.56                           |
| 32075     | 32075               | 0.00                         | 15.53                           |
| 32302     | 32075               | 2.92                         | 13.99                           |
| 33317     | 33317               | 0.00                         | 15.90                           |
| 34684     | 31327               | 5.64                         | 15.08                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Syrups</b>                                                    |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30753-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Syrups; Althae sirupus (konserviert); Cherry syrup (conserved); Fennel honey (conserved); Ipecacuanha syrup (NRF 19.1); Marshmallow syrup (conserved); Mel foeniculi (konserviert); Raspberry syrup (conserved); Ribwort plantain syrup (conserved); Sirupus cerasi (konserviert); Sirupus ipecacuanhae; Sirupus plantaginis lanceolatae; Sirupus rubi idaei; Sirupus simplex; Sorbitol, liquid (non crystallising); Sorbitolum liquidum non cristallisabile; Sugar syrup DAB

### Special notes

When selecting the *Syrups* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Syrups                    | 43     | 49     | 829    |



## Second-stage model

For differentiation of the substance/substance group *Syrups* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Syrups*:

| Supplier | Substance           | Batch     | Sample ID | Spectra | Certificate |
|----------|---------------------|-----------|-----------|---------|-------------|
| Caelo    | Cherry syrup (co... | 13278301  | 31155     | 40      | 1402568     |
| Caelo    | Cherry syrup (co... | 14034503  | 31359     | 60      | 20140131    |
| Caelo    | Cherry syrup (co... | 163453    | 33099     | 40      | 20161221*   |
| Caelo    | Fennel honey (co... | 12247203  | 30900     | 60      | 1402574     |
| Caelo    | Fennel honey (co... | 14045202  | 31598     | 60      | 20140317    |
| Caelo    | Fennel honey (co... | 181580    | 34233     | 40      | 20180704*   |
| Caelo    | Fennel honey (co... | 192389    | 34734     | 40      | 20190918*   |
| Caelo    | Fennel honey (co... | 21001359  | 35552     | 60      | 20210507*   |
| apomix   | Ipecacuanha syru... | 03A171016 | 33420     | 40      | 20161019    |
| apomix   | Ipecacuanha syru... | 02A200616 | 33421     | 40      | 20160627    |
| apomix   | Ipecacuanha syru... | 02A200420 | 35290     | 40      | 20201027    |
| Fagron   | Ipecacuanha syru... | 13G23-M02 | 31181     | 40      | 1404013     |
| Fagron   | Ipecacuanha syru... | 02B200616 | 33263     | 40      | 20160627    |
| Caelo    | Marshmallow syru... | 12067103  | 30753     | 40      | 20120312    |
| Caelo    | Marshmallow syru... | 12303106  | 31147     | 40      | 1404662     |
| Caelo    | Marshmallow syru... | 13410907  | 31365     | 40      | 20140318    |
| Caelo    | Marshmallow syru... | 161233    | 32210     | 40      | 20160427*   |
| Caelo    | Marshmallow syru... | 171283    | 33331     | 40      | 20170511*   |
| Caelo    | Marshmallow syru... | 190100    | 34477     | 40      | 20190206*   |
| Caelo    | Marshmallow syru... | 192181    | 34664     | 40      | 20190819*   |
| Caelo    | Raspberry syrup ... | 13122003  | 31051     | 40      | 1402567     |
| Caelo    | Raspberry syrup ... | 14114303  | 31467     | 60      | 20140411    |
| Euro OTC | Raspberry syrup ... | 1508015   | 31773     | 60      | 20150814*   |
| Euro OTC | Raspberry syrup ... | 1511024   | 31802     | 60      | 20150511*   |
| Euro OTC | Raspberry syrup ... | 1605008   | 32284     | 40      | 20160513*   |
| Euro OTC | Raspberry syrup ... | 1701022   | 32984     | 40      | 20170126*   |
| Euro OTC | Raspberry syrup ... | 2010023   | 35138     | 40      | 20201111*   |
| Caelo    | Ribwort plantain... | 11380011  | 30897     | 60      | 20120112    |
| Caelo    | Ribwort plantain... | 13152307  | 31218     | 40      | 1404663     |
| Caelo    | Ribwort plantain... | 182898    | 34329     | 40      | 20181211*   |
| Caelo    | Ribwort plantain... | 191483    | 34600     | 40      | 20190618*   |
| Caelo    | Sorbitol, liquid... | 12124910  | 30870     | 40      | 20120525    |
| Caelo    | Sorbitol, liquid... | 13060206  | 31124     | 40      | 20130306    |
| Caelo    | Sorbitol, liquid... | 14034706  | 31353     | 60      | 8780        |
| Euro OTC | Sorbitol, liquid... | 1604020   | 32277     | 40      | 20160511*   |
| Euro OTC | Sorbitol, liquid... | 1702011   | 33228     | 40      | 20170220*   |
| Euro OTC | Sorbitol, liquid... | 2003010   | 34831     | 40      | 20200318*   |
| apomix   | Sugar syrup DAB     | 73A101013 | 31175     | 40      | 1403164     |
| apomix   | Sugar syrup DAB     | 30A130617 | 33505     | 40      | 20170616    |
| apomix   | Sugar syrup DAB     | 31A030619 | 34526     | 40      | 20190603    |
| Caelo    | Sugar syrup DAB     | 14134301  | 31355     | 60      | 20140514    |
| Caelo    | Sugar syrup DAB     | 153348    | 31877     | 60      | 20151014*   |
| Caelo    | Sugar syrup DAB     | 20003766  | 35164     | 40      | 20201208*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 1940 spectra of 43 reference samples from the substance/substance group *Syrups*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 43 different batches.
- 61 999 spectra from a total of 1264 batches from further 216 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 2050 spectra of 50 reference samples from the substance/substance group *Syrups*.
- Among them are spectra of independent samples from 49 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                     | Batch     | Sample ID | Spectra |
|----------|-------------------------------|-----------|-----------|---------|
| Caelo    | Cherry syrup (conserved)      | 16345303  | 33837     | 40      |
| Caelo    | Cherry syrup (conserved)      | 173511    | 33891     | 40      |
| Caelo    | Fennel honey (conserved)      | 16039406  | 33153     | 40      |
| Caelo    | Fennel honey (conserved)      | 190514    | 34454     | 40      |
| apomix   | Ipecacuanha syrup (NRF 19.1)  | 03B291118 | 34527     | 40      |
| Fagron   | Ipecacuanha syrup (NRF 19.1)  | 01A070817 | 33642     | 40      |
| Caelo    | Marshmallow syrup (conserved) | 160775    | 32215     | 40      |
| Caelo    | Marshmallow syrup (conserved) | 162136    | 32335     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 161516    | 32213     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 163454    | 33092     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 171284    | 33332     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 181909    | 34222     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 190098    | 34476     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 191533    | 34626     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 192399    | 34706     | 40      |
| Caelo    | Raspberry syrup (conserved)   | 21000519  | 35300     | 40      |
| Euro OTC | Raspberry syrup (conserved)   | 1603007   | 32193     | 40      |
| Euro OTC | Raspberry syrup (conserved)   | 1608003   | 32705     | 40      |
| Euro OTC | Raspberry syrup (conserved)   | 1610026   | 32833     | 40      |
| Euro OTC | Raspberry syrup (conserved)   | 1705037   | 33450     | 40      |

*continued on the next page*

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

continued from previous page

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Euro OTC | Raspberry syrup (conserved)     | 1709003  | 33660     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1712004  | 33930     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1803009  | 34092     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1807026  | 34190     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1810021  | 34299     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1901049  | 34432     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 1908010  | 34696     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 2003067  | 34829     | 40      |
| Euro OTC | Raspberry syrup (conserved)     | 2108008  | 35623     | 50      |
| Caelo    | Ribwort plantain syrup (cons... | 16335301 | 33457     | 40      |
| Caelo    | Ribwort plantain syrup (cons... | 18078901 | 34048     | 40      |
| Caelo    | Sorbitol, liquid (non crista... | 160788   | 32217     | 40      |
| Caelo    | Sorbitol, liquid (non crista... | 173054   | 33895     | 40      |
| Caelo    | Sorbitol, liquid (non crista... | 190223   | 34462     | 40      |
| Caelo    | Sorbitol, liquid (non crista... | 192342   | 34733     | 40      |
| Euro OTC | Sorbitol, liquid (non crista... | 1802020  | 34006     | 40      |
| Euro OTC | Sorbitol, liquid (non crista... | 1804019  | 34182     | 40      |
| Euro OTC | Sorbitol, liquid (non crista... | 1905010  | 34492     | 40      |
| Euro OTC | Sorbitol, liquid (non crista... | 2003063  | 34833     | 40      |
| Caelo    | Sugar syrup DAB                 | 170581   | 33126     | 40      |
| Caelo    | Sugar syrup DAB                 | 181757   | 34246     | 40      |
| Caelo    | Sugar syrup DAB                 | 182278   | 34247     | 40      |
| Caelo    | Sugar syrup DAB                 | 182964   | 34314     | 40      |
| Caelo    | Sugar syrup DAB                 | 21000066 | 35316     | 40      |
| Caelo    | Sugar syrup DAB                 | 21000067 | 35317     | 40      |
| Caelo    | Sugar syrup DAB                 | 21002020 | 35664     | 50      |
| Caelo    | Sugar syrup DAB                 | 21002120 | 35665     | 50      |
| Caelo    | Sugar syrup DAB                 | 21002664 | 35666     | 50      |
| Caelo    | Sugar syrup DAB                 | 21002665 | 35667     | 50      |
| Caelo    | Ribwort plantain syrup (cons... | 16335301 | 33458     | 40      |

- 89 441 spectra from a total of 1967 batches from further 338 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 2460 spectra from 455 *Apo-Ident* customers from 855 batches from the substance/substance group *Syrups*.
- Among them are spectra of independent samples from 827 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                | Batch     | Spectra |
|----------|--------------------------|-----------|---------|
| Anzag    | Cherry syrup (conserved) | 11291603  | 1       |
| Caelo    | Cherry syrup (conserved) | 14034502  | 2       |
| Caelo    | Cherry syrup (conserved) | 109212258 | 1       |
| Caelo    | Cherry syrup (conserved) | 11168902  | 1       |
| Caelo    | Cherry syrup (conserved) | 13166201  | 1       |
| Caelo    | Cherry syrup (conserved) | 16195502  | 1       |
| Caelo    | Cherry syrup (conserved) | 16345301  | 3       |
| Caelo    | Cherry syrup (conserved) | 17351101  | 3       |

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| Supplier                | Substance                     | Batch       | Spectra |
|-------------------------|-------------------------------|-------------|---------|
| Caelo                   | Cherry syrup (conserved)      | 1634503     | 1       |
| Caelo                   | Cherry syrup (conserved)      | 18080202    | 3       |
| Caelo                   | Cherry syrup (conserved)      | 18080205    | 2       |
| Caelo                   | Cherry syrup (conserved)      | 19180601    | 3       |
| Caelo                   | Cherry syrup (conserved)      | 20000134003 | 1       |
| Caelo                   | Cherry syrup (conserved)      | 12367501    | 2       |
| Caelo                   | Cherry syrup (conserved)      | 16029301    | 2       |
| Caelo                   | Cherry syrup (conserved)      | 14371001    | 1       |
| Caelo                   | Cherry syrup (conserved)      | 15149402    | 1       |
| Caesar & Loretz GmbH    | Cherry syrup (conserved)      | 19180601    | 3       |
| Caesar & Loretz GmbH    | Cherry syrup (conserved)      | 18080202    | 1       |
| Caesar & Loretz GmbH    | Cherry syrup (conserved)      | 191806002   | 2       |
| Caesar & Loretz GmbH    | Cherry syrup (conserved)      | 20000134003 | 1       |
| Caesar & Loretz GmbH    | Cherry syrup (conserved)      | 20000134006 | 1       |
| Phönix                  | Cherry syrup (conserved)      | 14114304    | 1       |
| Caelo                   | Fennel honey (conserved)      | 16039406    | 2       |
| Caelo                   | Fennel honey (conserved)      | 13152605    | 1       |
| Caelo                   | Fennel honey (conserved)      | 13152606    | 1       |
| Sanacorp                | Fennel honey (conserved)      | 18158002    | 2       |
| Sanacorp                | Fennel honey (conserved)      | 17032805    | 2       |
| Apomix                  | Ipecacuanha syrup (NRF 19.1)  | 01A090218   | 1       |
| apomix/apomix           | Ipecacuanha syrup (NRF 19.1)  | 1A190320    | 1       |
| Apomix/Gehe             | Ipecacuanha syrup (NRF 19.1)  | 3A170915    | 1       |
| Apomix/PKH Halle/Noweda | Ipecacuanha syrup (NRF 19.1)  | 1A070817    | 1       |
| Caelo                   | Ipecacuanha syrup (NRF 19.1)  | 13G23-M02   | 1       |
| Fagron                  | Ipecacuanha syrup (NRF 19.1)  | 3A170915    | 2       |
| Fagron                  | Ipecacuanha syrup (NRF 19.1)  | 14D17-M01   | 1       |
| Fagron                  | Ipecacuanha syrup (NRF 19.1)  | 11B10-M01   | 1       |
| Fagron                  | Ipecacuanha syrup (NRF 19.1)  | 15C11-M08   | 3       |
| ACM                     | Marshmallow syrup (conserved) | 1015        | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 13212910    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 13410909    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 12303101    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 14364804    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 16123301    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 16213606    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 17357505    | 4       |
| Caelo                   | Marshmallow syrup (conserved) | 19010012    | 3       |
| Caelo                   | Marshmallow syrup (conserved) | 19000641002 | 3       |
| Caelo                   | Marshmallow syrup (conserved) | 19218102    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 21001213004 | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 13212909    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 17128301    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 15418604    | 2       |
| Caelo                   | Marshmallow syrup (conserved) | 1(19010003) | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 13212908    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 15418606    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 16077502    | 2       |
| Caelo                   | Marshmallow syrup (conserved) | 17249904    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 18155105    | 5       |
| Caelo                   | Marshmallow syrup (conserved) | 17128309    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 17357502    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 18155101    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 18155104    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 1548604     | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 17249902    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 18155106    | 2       |
| Caesar & Loretz GmbH    | Marshmallow syrup (conserved) | 19010003    | 1       |
| Caelo                   | Marshmallow syrup (conserved) | 19218101    | 1       |
| Gehe                    | Marshmallow syrup (conserved) | 16213604    | 1       |

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| Supplier         | Substance                     | Batch                    | Spectra |
|------------------|-------------------------------|--------------------------|---------|
| Caelo            | Marshmallow syrup (conserved) | 15418605                 | 3       |
| Caelo            | Marshmallow syrup (conserved) | 14102602                 | 2       |
| Sanacorp         | Marshmallow syrup (conserved) | 13212909                 | 1       |
| Sanacorp         | Marshmallow syrup (conserved) | 17128301                 | 2       |
| Sanacorp         | Marshmallow syrup (conserved) | 17128305                 | 1       |
| Sanacorp         | Marshmallow syrup (conserved) | 17249904                 | 1       |
| Sanacorp         | Marshmallow syrup (conserved) | 18155106                 | 2       |
| Sanacorp         | Marshmallow syrup (conserved) | 17357505                 | 1       |
| Caelo            | Marshmallow syrup (conserved) | 19010005                 | 1       |
| A.H.D.           | Raspberry syrup (conserved)   | 12367602                 | 2       |
| AHD              | Raspberry syrup (conserved)   | 13122001                 | 1       |
| Anzag            | Raspberry syrup (conserved)   | 1306006-01               | 1       |
| Anzag 13.11.12   | Raspberry syrup (conserved)   | 12283101                 | 1       |
| Anzag 31.10.12   | Raspberry syrup (conserved)   | 1205001-01               | 1       |
| Bionorica Ethics | Raspberry syrup (conserved)   | 1908010-01CH30055811/001 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 24071802                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 11291404                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12038502                 | 2       |
| Caelo            | Raspberry syrup (conserved)   | 4071203                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12038501                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 1081201                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 24081201                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12161705                 | 4       |
| Caelo            | Raspberry syrup (conserved)   | 17101202                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12121203                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 3011301                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12283103                 | 2       |
| Caelo            | Raspberry syrup (conserved)   | 8021301                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 12367602                 | 7       |
| Caelo            | Raspberry syrup (conserved)   | 15051312                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 15071302                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 13122002                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 24091302                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 13194302                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 18111308                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 11021405                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14114302                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14243401                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 4101405                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 3121404                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14243403                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14243405                 | 2       |
| Caelo            | Raspberry syrup (conserved)   | 140903901                | 1       |
| Caelo            | Raspberry syrup (conserved)   | 5021510                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14371106                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 14371105                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 13051501                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 15149205                 | 9       |
| Caelo            | Raspberry syrup (conserved)   | 15320801                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 15320803                 | 4       |
| Caelo            | Raspberry syrup (conserved)   | 15320804                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 11031705                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 161002601                | 1       |
| Caelo            | Raspberry syrup (conserved)   | 16345401                 | 5       |
| Caelo            | Raspberry syrup (conserved)   | 24061707                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 7091702                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 17128404                 | 13      |
| Caelo            | Raspberry syrup (conserved)   | 18121706                 | 1       |
| Caelo            | Raspberry syrup (conserved)   | 7051802                  | 1       |
| Caelo            | Raspberry syrup (conserved)   | 17111805                 | 1       |

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| Supplier                   | Substance                   | Batch               | Spectra |
|----------------------------|-----------------------------|---------------------|---------|
| Caelo                      | Raspberry syrup (conserved) | 19153301            | 12      |
| Caelo                      | Raspberry syrup (conserved) | 192399003           | 10      |
| Caelo                      | Raspberry syrup (conserved) | 20000558002         | 1       |
| Caelo                      | Raspberry syrup (conserved) | CH-B1810021-01      | 1       |
| Caelo                      | Raspberry syrup (conserved) | 3961/V07/14         | 1       |
| Caelo                      | Raspberry syrup (conserved) | 1712004-01          | 1       |
| Caelo                      | Raspberry syrup (conserved) | 192399004           | 5       |
| Caelo                      | Raspberry syrup (conserved) | 1608003-01          | 5       |
| Caelo                      | Raspberry syrup (conserved) | 13393601            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 18190901            | 13      |
| Caelo                      | Raspberry syrup (conserved) | 1105022-01          | 1       |
| Caelo                      | Raspberry syrup (conserved) | 13338001            | 10      |
| Caelo                      | Raspberry syrup (conserved) | 16003601            | 14      |
| Caelo                      | Raspberry syrup (conserved) | 14371108            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 192390004           | 1       |
| Caelo                      | Raspberry syrup (conserved) | 13122001            | 10      |
| Caelo                      | Raspberry syrup (conserved) | 1210004-01          | 1       |
| Caelo                      | Raspberry syrup (conserved) | 1803009-01          | 2       |
| Caelo                      | Raspberry syrup (conserved) | 18190905            | 4       |
| Caelo                      | Raspberry syrup (conserved) | 14114306            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 14371107            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 13194301            | 6       |
| Caelo                      | Raspberry syrup (conserved) | 151102401           | 1       |
| Caelo                      | Raspberry syrup (conserved) | 249(CH30045626/001) | 1       |
| Caelo                      | Raspberry syrup (conserved) | 19009801            | 11      |
| Caelo                      | Raspberry syrup (conserved) | 15149202            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 17128405            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 18096701            | 18      |
| Caelo                      | Raspberry syrup (conserved) | 18096703            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 19009803            | 5       |
| Caelo                      | Raspberry syrup (conserved) | 11169003            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 15320813            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 17128402            | 2       |
| Caelo                      | Raspberry syrup (conserved) | 2x13122001          | 1       |
| Caelo                      | Raspberry syrup (conserved) | 13393602            | 4       |
| Caelo                      | Raspberry syrup (conserved) | 14114304            | 7       |
| Caelo                      | Raspberry syrup (conserved) | 14114305            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 14371104            | 1       |
| Caelo                      | Raspberry syrup (conserved) | 15149201            | 3       |
| Caelo                      | Raspberry syrup (conserved) | 16345404            | 5       |
| Caesar & Loretz            | Raspberry syrup (conserved) | 15149203            | 1       |
| Caesar & Loretz            | Raspberry syrup (conserved) | 16345403            | 3       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 18096701            | 2       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 18190903            | 2       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 18190905            | 1       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 19009801            | 5       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 19153301            | 3       |
| Caesar & Loretz GmbH       | Raspberry syrup (conserved) | 20000558002         | 1       |
| Caesar & Loretz GmbH/ P... | Raspberry syrup (conserved) | 19009803            | 1       |
| Caesar & Loretz/ Caesar... | Raspberry syrup (conserved) | 17128409            | 1       |
| Caesar & Loretz/ Caesar... | Raspberry syrup (conserved) | 18080601            | 1       |
| Caesar & Loretz/ Noweda    | Raspberry syrup (conserved) | 13122003            | 1       |
| Caesar & Loretz/ Noweda    | Raspberry syrup (conserved) | 18096702            | 1       |
| Caesar & Loretz/Noweda     | Raspberry syrup (conserved) | 16151603            | 1       |
| Caesar&Loretz              | Raspberry syrup (conserved) | 15320804            | 1       |
| Caesar&Loretz              | Raspberry syrup (conserved) | 15320801            | 1       |
| Caesar&Loretz              | Raspberry syrup (conserved) | 16003602            | 1       |
| Caesar&Loretz              | Raspberry syrup (conserved) | 16151602            | 2       |
| Cealo                      | Raspberry syrup (conserved) | 15149202            | 3       |
| Cealo/ Noweda              | Raspberry syrup (conserved) | 1712004-01          | 1       |

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| Supplier         | Substance                   | Batch           | Spectra |
|------------------|-----------------------------|-----------------|---------|
| Dr. Wolff        | Raspberry syrup (conserved) | 1310016-01      | 1       |
| EuRho            | Raspberry syrup (conserved) | 1205001-01      | 3       |
| EuRho            | Raspberry syrup (conserved) | 1603007-01      | 1       |
| Eurho / Sanacorp | Raspberry syrup (conserved) | 1110025-01      | 2       |
| Eurho / Sanacorp | Raspberry syrup (conserved) | 1302026-01      | 2       |
| EuRho Anzag      | Raspberry syrup (conserved) | 1210004-01      | 1       |
| EuRho/ Anzag     | Raspberry syrup (conserved) | 253(1901049-01) | 1       |
| Eurho/Phönix     | Raspberry syrup (conserved) | 1409039-01      | 1       |
| EuRho/Sanacorp   | Raspberry syrup (conserved) | 1302026-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 140300201       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 11081402        | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1501011-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1508015-01      | 4       |
| Euro OTC         | Raspberry syrup (conserved) | 1603007-01      | 11      |
| Euro OTC         | Raspberry syrup (conserved) | 1605008-01      | 10      |
| Euro OTC         | Raspberry syrup (conserved) | 30039701/001    | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1803009-01      | 9       |
| Euro OTC         | Raspberry syrup (conserved) | 171200401       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 180300901       | 2       |
| Euro OTC         | Raspberry syrup (conserved) | 190104901       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 180702601       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 190801001       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 160500801       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 2003067-01      | 5       |
| Euro OTC         | Raspberry syrup (conserved) | CH30052900/001  | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1205001-01      | 4       |
| Euro OTC         | Raspberry syrup (conserved) | 1511023-01      | 3       |
| Euro OTC         | Raspberry syrup (conserved) | 1406031-01      | 5       |
| Euro OTC         | Raspberry syrup (conserved) | 170102201       | 3       |
| Euro OTC         | Raspberry syrup (conserved) | 1810021-01      | 9       |
| Euro OTC         | Raspberry syrup (conserved) | 1210004-01      | 14      |
| Euro OTC         | Raspberry syrup (conserved) | 121000401       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 13802025-01     | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 250(1807026-01) | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 251(1807026-01) | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 252(1310021-01) | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 300052900/001   | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1709004-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 181021-01       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 2003067         | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 2010023-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1712004-01      | 14      |
| Euro OTC         | Raspberry syrup (conserved) | 1807026-01      | 14      |
| Euro OTC         | Raspberry syrup (conserved) | 1901049-01      | 12      |
| Euro OTC         | Raspberry syrup (conserved) | 1709003-01      | 9       |
| Euro OTC         | Raspberry syrup (conserved) | CH30041714/001  | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1302023-01      | 2       |
| Euro OTC         | Raspberry syrup (conserved) | 1306006-01      | 2       |
| Euro OTC         | Raspberry syrup (conserved) | 1302026-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1310016-01      | 9       |
| Euro OTC         | Raspberry syrup (conserved) | 160508-01       | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1608003-01      | 3       |
| Euro OTC         | Raspberry syrup (conserved) | 1701022-02      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1610026-01      | 5       |
| Euro OTC         | Raspberry syrup (conserved) | 1504011-01      | 3       |
| Fagron           | Raspberry syrup (conserved) | 16345404        | 1       |
| Fagron           | Raspberry syrup (conserved) | 1501011-01      | 1       |
| Euro OTC         | Raspberry syrup (conserved) | 1705037-01      | 15      |
| Fiebig/Europharm | Raspberry syrup (conserved) | 1610026-01      | 1       |
| Fiebig/Europharm | Raspberry syrup (conserved) | 1701022-01      | 10      |

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| Supplier              | Substance                          | Batch                | Spectra |
|-----------------------|------------------------------------|----------------------|---------|
| Gehe                  | Raspberry syrup (conserved)        | 12161702             | 1       |
| Gehe                  | Raspberry syrup (conserved)        | 12367602             | 1       |
| Gehe                  | Raspberry syrup (conserved)        | 1409039-01           | 1       |
| Gehe                  | Raspberry syrup (conserved)        | 1508015-01           | 1       |
| Gehe                  | Raspberry syrup (conserved)        | 1608003-01           | 1       |
| Gehe                  | Raspberry syrup (conserved)        | 17128404             | 1       |
| Caelo                 | Raspberry syrup (conserved)        | 18190903             | 11      |
| Gehe/Euro             | Raspberry syrup (conserved)        | 1705037-01           | 1       |
| Gehe/Euro             | Raspberry syrup (conserved)        | 1709003-01           | 1       |
| Gehe/Euro             | Raspberry syrup (conserved)        | CH30043518/001       | 1       |
| Intern Drogen/Phoenix | Raspberry syrup (conserved)        | 18096703             | 1       |
| jenne eurho           | Raspberry syrup (conserved)        | 1302026-01           | 1       |
| Caelo                 | Raspberry syrup (conserved)        | 1302026-01           | 3       |
| L10                   | Raspberry syrup (conserved)        | 17128402             | 4       |
| L10                   | Raspberry syrup (conserved)        | 18096701             | 5       |
| L12                   | Raspberry syrup (conserved)        | 16345401             | 1       |
| L12                   | Raspberry syrup (conserved)        | 16345404             | 4       |
| L12                   | Raspberry syrup (conserved)        | 18190901             | 3       |
| Caelo                 | Raspberry syrup (conserved)        | 16151601             | 11      |
| Midas                 | Raspberry syrup (conserved)        | 17128404             | 6       |
| Midas                 | Raspberry syrup (conserved)        | 18096703             | 3       |
| MIDAS                 | Raspberry syrup (conserved)        | 190009801            | 1       |
| MIDAS                 | Raspberry syrup (conserved)        | 19009801             | 4       |
| noweda                | Raspberry syrup (conserved)        | 13393605             | 1       |
| Noweda                | Raspberry syrup (conserved)        | 1712004-01           | 1       |
| Noweda                | Raspberry syrup (conserved)        | 1803009-01           | 1       |
| Noweda                | Raspberry syrup (conserved)        | 1901049-01           | 1       |
| Noweda                | Raspberry syrup (conserved)        | 19009801             | 1       |
| Noweda 04.08.15       | Raspberry syrup (conserved)        | 1501011-01           | 1       |
| Caelo                 | Raspberry syrup (conserved)        | 1615101              | 1       |
| Euro OTC              | Raspberry syrup (conserved)        | 1701022-01           | 5       |
| Euro OTC              | Raspberry syrup (conserved)        | 1302026-01-335031904 | 1       |
| Phoenix               | Raspberry syrup (conserved)        | 13338001             | 1       |
| Phoenix               | Raspberry syrup (conserved)        | 14243405             | 2       |
| Phoenix               | Raspberry syrup (conserved)        | 1807026-01           | 2       |
| phoenix 14.11.14      | Raspberry syrup (conserved)        | 14114306             | 1       |
| phönix                | Raspberry syrup (conserved)        | 12038501             | 1       |
| Phönix                | Raspberry syrup (conserved)        | 14114303             | 2       |
| Phönix                | Raspberry syrup (conserved)        | 141114303            | 1       |
| Phönix                | Raspberry syrup (conserved)        | 18096701             | 1       |
| Phönix                | Raspberry syrup (conserved)        | ch30046807/001       | 1       |
| Phönix                | Raspberry syrup (conserved)        | 1901049-01           | 1       |
| Euro OTC              | Raspberry syrup (conserved)        | 1511024-01           | 6       |
| Sanacorp              | Raspberry syrup (conserved)        | 12283103             | 3       |
| Sanacorp              | Raspberry syrup (conserved)        | 13194301             | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 14243405             | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 1508015-01           | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 180300901            | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 18190901             | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 19009801             | 1       |
| Sanacorp              | Raspberry syrup (conserved)        | 1701022-01           | 1       |
| Caelo                 | Raspberry syrup (conserved)        | 12283101             | 2       |
| Euro OTC              | Raspberry syrup (conserved)        | 1908010-01           | 11      |
| Caelo                 | Ribwort plantain syrup (conserved) | 12347501             | 1       |
| Caelo                 | Ribwort plantain syrup (conserved) | 12347506             | 2       |
| Caelo                 | Ribwort plantain syrup (conserved) | 13152308             | 3       |
| Caelo                 | Ribwort plantain syrup (conserved) | 13152304             | 1       |
| Caelo                 | Ribwort plantain syrup (conserved) | 16029009             | 8       |
| Caelo                 | Ribwort plantain syrup (conserved) | 16029007             | 1       |
| Caelo                 | Ribwort plantain syrup (conserved) | 16335301             | 1       |

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| Supplier            | Substance                       | Batch       | Spectra |
|---------------------|---------------------------------|-------------|---------|
| Caelo               | Ribwort plantain syrup (cons... | 18289801    | 11      |
| Caelo               | Ribwort plantain syrup (cons... | 19148301    | 3       |
| Caelo               | Ribwort plantain syrup (cons... | 13152305    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 15076003    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 16029005    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 18078901    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 191483002   | 2       |
| Caelo               | Ribwort plantain syrup (cons... | 18289803    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 20001180002 | 1       |
| L10                 | Ribwort plantain syrup (cons... | 18078902    | 9       |
| L12                 | Ribwort plantain syrup (cons... | 16335302    | 5       |
| L12                 | Ribwort plantain syrup (cons... | 163335305   | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 16029002    | 2       |
| L31                 | Ribwort plantain syrup (cons... | 16335305    | 1       |
| Caelo               | Ribwort plantain syrup (cons... | 14125702    | 2       |
| Sanacorp            | Ribwort plantain syrup (cons... | 13152303    | 1       |
| Sanacorp            | Ribwort plantain syrup (cons... | 16029009    | 1       |
| Sanacorp            | Ribwort plantain syrup (cons... | 16335302    | 1       |
| Sanacorp            | Ribwort plantain syrup (cons... | 18078902    | 3       |
| Sanacorp            | Ribwort plantain syrup (cons... | 16335305    | 1       |
| Sanacorp            | Ribwort plantain syrup (cons... | 18289801    | 2       |
| Caelo               | Sorbitol, liquid (non crista... | 17305413    | 2       |
| Caelo               | Sorbitol, liquid (non crista... | 15175307    | 1       |
| Alliance Healthcare | Sorbitol, liquid (non crista... | 19163403    | 1       |
| Anzag               | Sorbitol, liquid (non crista... | 120701201   | 1       |
| Euro OTC            | Sorbitol, liquid (non crista... | 170201102   | 1       |
| apo ident           | Sorbitol, liquid (non crista... | 1702011-02  | 1       |
| apo-ident           | Sorbitol, liquid (non crista... | 1804019-01  | 1       |
| apo-ident/Phönix    | Sorbitol, liquid (non crista... | 1702011-02  | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 12124903    | 2       |
| Caelo               | Sorbitol, liquid (non crista... | 26071209    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 22011306    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 12124906    | 2       |
| Caelo               | Sorbitol, liquid (non crista... | 12124908    | 2       |
| Caelo               | Sorbitol, liquid (non crista... | 12124912    | 4       |
| Caelo               | Sorbitol, liquid (non crista... | 8051306     | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 12124914    | 5       |
| Caelo               | Sorbitol, liquid (non crista... | 2071305     | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 28081301    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 13060204    | 5       |
| Caelo               | Sorbitol, liquid (non crista... | 3031404     | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 13233807    | 4       |
| Caelo               | Sorbitol, liquid (non crista... | 14169404    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 14298105    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 14298101    | 7       |
| Caelo               | Sorbitol, liquid (non crista... | 14298102    | 3       |
| Caelo               | Sorbitol, liquid (non crista... | 15175306    | 3       |
| Caelo               | Sorbitol, liquid (non crista... | 14169401    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 15175311    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 16078806    | 7       |
| Caelo               | Sorbitol, liquid (non crista... | 16078803    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 16078810    | 8       |
| Caelo               | Sorbitol, liquid (non crista... | 25021706    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 15437900    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 16078808    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 17027005    | 12      |
| Caelo               | Sorbitol, liquid (non crista... | 1702011-01  | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 16078814    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 21041803    | 1       |
| Caelo               | Sorbitol, liquid (non crista... | 17305403    | 3       |

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| Supplier             | Substance                       | Batch        | Spectra |
|----------------------|---------------------------------|--------------|---------|
| Caelo                | Sorbitol, liquid (non crista... | 8322001      | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 18322002     | 5       |
| Caelo                | Sorbitol, liquid (non crista... | 18322005     | 10      |
| Caelo                | Sorbitol, liquid (non crista... | 20000571003  | 4       |
| Caelo                | Sorbitol, liquid (non crista... | 16078807     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 20(17305409) | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 1207012-02   | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 17027014     | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 1804019-01   | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 14169403     | 4       |
| Caelo                | Sorbitol, liquid (non crista... | 17305409     | 12      |
| Caelo                | Sorbitol, liquid (non crista... | 18322001     | 21      |
| Caelo                | Sorbitol, liquid (non crista... | 20000571005  | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 1207012-01   | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 15437907     | 4       |
| Caelo                | Sorbitol, liquid (non crista... | 19022301     | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 19163404     | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 19234202     | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 18062004     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 13102003     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 3274         | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 19(17027010) | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 19022302     | 10      |
| Caelo                | Sorbitol, liquid (non crista... | 15437906     | 6       |
| Caelo                | Sorbitol, liquid (non crista... | 21000097003  | 4       |
| Caelo                | Sorbitol, liquid (non crista... | 21000976005  | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 13233801     | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 14034702     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 11255613     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 13060203     | 5       |
| Caelo                | Sorbitol, liquid (non crista... | 13060211     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 13233810     | 6       |
| Caelo                | Sorbitol, liquid (non crista... | 123456789    | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 1702011-02   | 3       |
| Caelo                | Sorbitol, liquid (non crista... | E77P         | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 20000571007  | 11      |
| Caelo                | Sorbitol, liquid (non crista... | 1519302      | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 17027011     | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 19322001     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 16078811     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 1412031-01   | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 17027010     | 11      |
| Caelo                | Sorbitol, liquid (non crista... | 1730401      | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 19234201     | 14      |
| Caelo                | Sorbitol, liquid (non crista... | 12/18-N09    | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 1309026-01   | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 15159301     | 6       |
| Caelo                | Sorbitol, liquid (non crista... | 15175301     | 1       |
| Caelo                | Sorbitol, liquid (non crista... | 15175309     | 5       |
| Caelo                | Sorbitol, liquid (non crista... | 17305406     | 7       |
| Caelo                | Sorbitol, liquid (non crista... | 1804019-02   | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 13233808     | 3       |
| Caelo                | Sorbitol, liquid (non crista... | 14169409     | 2       |
| Caelo                | Sorbitol, liquid (non crista... | 15159302     | 6       |
| Caelo                | Sorbitol, liquid (non crista... | 17305401     | 23      |
| Caelo                | Sorbitol, liquid (non crista... | 17305412     | 11      |
| Caelo                | Sorbitol, liquid (non crista... | 15175310     | 3       |
| Caesar & Lorenz GmbH | Sorbitol, liquid (non crista... | 17027010     | 1       |
| Caesar & Loretz GmbH | Sorbitol, liquid (non crista... | 14298101     | 1       |
| Caesar & Loretz GmbH | Sorbitol, liquid (non crista... | 18322005     | 2       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 18322001         | 1       |
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 19022302         | 3       |
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 19163403         | 1       |
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 19234201         | 5       |
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 20000571003      | 4       |
| Caesar & Loretz GmbH       | Sorbitol, liquid (non crista... | 20000571007      | 1       |
| Caesar & Loretz GmbH / ... | Sorbitol, liquid (non crista... | 18322001         | 1       |
| Caesar & Loretz GmbH/Sa... | Sorbitol, liquid (non crista... | 19163403         | 1       |
| Caesar & Loretz Hilden     | Sorbitol, liquid (non crista... | 18322001         | 1       |
| Caesar & Loretz Hilden     | Sorbitol, liquid (non crista... | 19234201         | 1       |
| Caesar u Loretz            | Sorbitol, liquid (non crista... | 13060206         | 1       |
| EuRho                      | Sorbitol, liquid (non crista... | 1207012-02       | 1       |
| EuRho                      | Sorbitol, liquid (non crista... | 1309026-02       | 1       |
| EuRho                      | Sorbitol, liquid (non crista... | 1604020-02       | 1       |
| EuRho /Gehe                | Sorbitol, liquid (non crista... | 1309026-02       | 1       |
| EuRho 12.2.14              | Sorbitol, liquid (non crista... | 1309026-01       | 1       |
| EuRho/Phoenix              | Sorbitol, liquid (non crista... | 1804019-02       | 1       |
| EuRho/Phönix               | Sorbitol, liquid (non crista... | 1412031-02       | 1       |
| Euro OCT / Noveda          | Sorbitol, liquid (non crista... | 2003010-01       | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1412031-01       | 10      |
| Euro OTC                   | Sorbitol, liquid (non crista... | 141203101        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 15437906         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1604020-02       | 2       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1604020-03       | 3       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 21041804         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 2003010-01       | 12      |
| Euro OTC                   | Sorbitol, liquid (non crista... | 2003063-01       | 3       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1905010-01       | 15      |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1207012-01       | 4       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1102001-02       | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1702011-01       | 4       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1905010-02       | 5       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1207012-02       | 3       |
| Euro OTC                   | Sorbitol, liquid (non crista... | E807Q            | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 180401901        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1309026-01       | 4       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 190501001        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1412031-02       | 4       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1604020-01       | 9       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 19050-01         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 200306301        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 18322001         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | E415T            | 1       |
| Euro/Noveda                | Sorbitol, liquid (non crista... | 170201102        | 1       |
| Euro/Sanacorp              | Sorbitol, liquid (non crista... | 18419-01         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 195010-02        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1804018-01       | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1804019-02       | 14      |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1804019-01       | 18      |
| Euro OTC                   | Sorbitol, liquid (non crista... | 130902602        | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1702011-02       | 9       |
| Fagron                     | Sorbitol, liquid (non crista... | 17D25-B09-345911 | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 11G18-N14        | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 12E08-N09        | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 13E24-B01        | 2       |
| Fagron                     | Sorbitol, liquid (non crista... | 21081406         | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 139026           | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 29081505         | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 23021702         | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 16078810         | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Fagron                     | Sorbitol, liquid (non crista... | 26081708         | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 3041801          | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 16G06-B08        | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 3396             | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 4117I-02299      | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 3918M-02299      | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 2013M-02299      | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 4216Q-02299      | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 10323008         | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 12E08-N09        | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 1207012-01       | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 12124910         | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 12K07-N04        | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 1207012-02       | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 12118-N09        | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 120701202        | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 17305401         | 1       |
| Gehe                       | Sorbitol, liquid (non crista... | 190501001        | 1       |
| GEHE                       | Sorbitol, liquid (non crista... | 17305409         | 1       |
| Gehe amax                  | Sorbitol, liquid (non crista... | 1804019-02       | 1       |
| Fagron                     | Sorbitol, liquid (non crista... | 13J04-B01-289676 | 1       |
| Ichthyol/Gehe              | Sorbitol, liquid (non crista... | 1309026-01       | 1       |
| Caelo                      | Sorbitol, liquid (non crista... | 18322006         | 2       |
| Caelo                      | Sorbitol, liquid (non crista... | 1832202          | 1       |
| Caelo                      | Sorbitol, liquid (non crista... | 17027006         | 1       |
| Maros / Jenne              | Sorbitol, liquid (non crista... | 17027014         | 1       |
| Noweda                     | Sorbitol, liquid (non crista... | 17305401         | 1       |
| Euro OTC                   | Sorbitol, liquid (non crista... | 1309026-02       | 5       |
| Phoenix                    | Sorbitol, liquid (non crista... | 1309026-02       | 1       |
| Phoenix                    | Sorbitol, liquid (non crista... | 3068             | 1       |
| Phoenix                    | Sorbitol, liquid (non crista... | 3131             | 1       |
| Phoenix                    | Sorbitol, liquid (non crista... | 17305409         | 1       |
| Phoenix                    | Sorbitol, liquid (non crista... | 200582306        | 1       |
| Caelo                      | Sorbitol, liquid (non crista... | 13233803         | 3       |
| Phönix                     | Sorbitol, liquid (non crista... | 19005010-01      | 5       |
| Caelo                      | Sorbitol, liquid (non crista... | 19163403         | 6       |
| sanacorp                   | Sorbitol, liquid (non crista... | 1905010-02       | 1       |
| Sanacorp                   | Sorbitol, liquid (non crista... | 20000571003      | 1       |
| Sanacorp                   | Sorbitol, liquid (non crista... | 20000571007      | 1       |
| AHD / apomix               | Sugar syrup DAB                 | 24A180316        | 1       |
| Alliance H.                | Sugar syrup DAB                 | 37/A030616       | 1       |
| Alliance health            | Sugar syrup DAB                 | 11A280115        | 1       |
| AMH Niemann                | Sugar syrup DAB                 | 1A130114         | 1       |
| AMH Niemann GmbH           | Sugar syrup DAB                 | 74A241014        | 1       |
| AMH Niemann GmbH           | Sugar syrup DAB                 | 30A200415        | 1       |
| AMH Niemann GmbH           | Sugar syrup DAB                 | 50A020715        | 1       |
| AMH Niemann GmbH           | Sugar syrup DAB                 | 70A051015        | 1       |
| AMH Niemann GmbH           | Sugar syrup DAB                 | 85A261115        | 1       |
| AMH Niemann GmbH & Co.KG   | Sugar syrup DAB                 | 22A130315        | 1       |
| AMH Niemann GmbH & Co.K... | Sugar syrup DAB                 | 7A250116         | 1       |
| AMH Niemann GmbH & Co.K... | Sugar syrup DAB                 | 33A170516        | 1       |
| AMH Niemann GmbH / Sana... | Sugar syrup DAB                 | 49A290716        | 1       |
| AMH Niemann GmbH/ Gehe     | Sugar syrup DAB                 | 80A261118        | 1       |
| AMH Niemann GmbH/Noweda    | Sugar syrup DAB                 | 33A190617        | 2       |
| AMH Niemann GmbH/Noweda    | Sugar syrup DAB                 | 65A141117        | 2       |
| AMH Niemann/Sanacorp       | Sugar syrup DAB                 | 23A280318        | 1       |
| AMH Niemann/Sanacorp       | Sugar syrup DAB                 | 78A221118        | 1       |
| Anzag                      | Sugar syrup DAB                 | 44A260612        | 1       |
| Anzag                      | Sugar syrup DAB                 | 58A210813        | 1       |
| Anzag 17.01.2013           | Sugar syrup DAB                 | 88A051212        | 1       |

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| Supplier         | Substance       | Batch      | Spectra |
|------------------|-----------------|------------|---------|
| Anzag 25.01.2013 | Sugar syrup DAB | 71A091012  | 1       |
| Anzag/ PKH Halle | Sugar syrup DAB | 15A080319  | 1       |
| Anzag/apomix     | Sugar syrup DAB | 13A200217  | 4       |
| Apom/Noweda      | Sugar syrup DAB | 28A010617  | 1       |
| apomix           | Sugar syrup DAB | 23081202   | 1       |
| apomix           | Sugar syrup DAB | 35A250512  | 1       |
| apomix           | Sugar syrup DAB | 46A030712  | 1       |
| apomix           | Sugar syrup DAB | 43A260612  | 1       |
| apomix           | Sugar syrup DAB | 67A240912  | 1       |
| apomix           | Sugar syrup DAB | 20021307   | 1       |
| apomix           | Sugar syrup DAB | 16A210213  | 1       |
| apomix           | Sugar syrup DAB | 58A270712  | 1       |
| apomix           | Sugar syrup DAB | 66A210912  | 1       |
| apomix           | Sugar syrup DAB | 27A200313  | 1       |
| apomix           | Sugar syrup DAB | 11121305   | 1       |
| apomix           | Sugar syrup DAB | 45A050613  | 1       |
| apomix           | Sugar syrup DAB | 95A111213  | 1       |
| apomix           | Sugar syrup DAB | 19A040314  | 1       |
| apomix           | Sugar syrup DAB | 49A220714  | 1       |
| apomix           | Sugar syrup DAB | 36A140414  | 1       |
| apomix           | Sugar syrup DAB | 13101405   | 1       |
| apomix           | Sugar syrup DAB | 57A140814  | 1       |
| apomix           | Sugar syrup DAB | 76A061114  | 1       |
| apomix           | Sugar syrup DAB | 1A140115   | 1       |
| apomix           | Sugar syrup DAB | 26A080415  | 1       |
| apomix           | Sugar syrup DAB | 20A270215  | 1       |
| apomix           | Sugar syrup DAB | 71A091015  | 1       |
| apomix           | Sugar syrup DAB | 83A191115  | 1       |
| apomix           | Sugar syrup DAB | 59A070814  | 1       |
| apomix           | Sugar syrup DAB | 59A010914  | 1       |
| apomix           | Sugar syrup DAB | 55A130814  | 1       |
| apomix           | Sugar syrup DAB | 21A130315  | 1       |
| apomix           | Sugar syrup DAB | 41A120615  | 1       |
| apomix           | Sugar syrup DAB | 18081517   | 1       |
| apomix           | Sugar syrup DAB | 37A220515  | 1       |
| apomix           | Sugar syrup DAB | 11A120216  | 1       |
| apomix           | Sugar syrup DAB | 2A130116   | 1       |
| apomix           | Sugar syrup DAB | 22A170316  | 2       |
| apomix           | Sugar syrup DAB | 23A180316  | 1       |
| apomix           | Sugar syrup DAB | 35A300516  | 4       |
| apomix           | Sugar syrup DAB | 41A040716  | 1       |
| apomix           | Sugar syrup DAB | 24041801   | 1       |
| apomix           | Sugar syrup DAB | 44A040718  | 2       |
| apomix           | Sugar syrup DAB | 35A310518  | 1       |
| apomix           | Sugar syrup DAB | 62A260918  | 2       |
| apomix           | Sugar syrup DAB | 23A280318  | 1       |
| apomix           | Sugar syrup DAB | 26011907   | 1       |
| apomix           | Sugar syrup DAB | 67A101018  | 2       |
| apomix           | Sugar syrup DAB | 69A241018  | 2       |
| apomix           | Sugar syrup DAB | 75A151118  | 1       |
| apomix           | Sugar syrup DAB | 3A210119   | 1       |
| apomix           | Sugar syrup DAB | 80A261118  | 1       |
| apomix           | Sugar syrup DAB | 38A180719  | 1       |
| apomix           | Sugar syrup DAB | 23A140320  | 2       |
| Apomix           | Sugar syrup DAB | 47A050712  | 3       |
| Apomix           | Sugar syrup DAB | 12A010212  | 1       |
| Apomix           | Sugar syrup DAB | 25A200412  | 1       |
| Apomix           | Sugar syrup DAB | 81A-081112 | 1       |
| Apomix           | Sugar syrup DAB | 1A140113   | 1       |
| Apomix           | Sugar syrup DAB | 5A210113   | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Apomix                     | Sugar syrup DAB | 17A270213   | 1       |
| Apomix                     | Sugar syrup DAB | 10A3000113  | 1       |
| Apomix                     | Sugar syrup DAB | 32A120413   | 1       |
| Apomix                     | Sugar syrup DAB | 25A110313   | 1       |
| Apomix                     | Sugar syrup DAB | 94A281212   | 1       |
| Apomix                     | Sugar syrup DAB | 93A111213   | 1       |
| Apomix                     | Sugar syrup DAB | 22A050314   | 1       |
| Apomix                     | Sugar syrup DAB | 99A201213   | 1       |
| Apomix                     | Sugar syrup DAB | 21A050314   | 3       |
| Apomix                     | Sugar syrup DAB | 39A050614   | 1       |
| Apomix                     | Sugar syrup DAB | 48A210714   | 1       |
| Apomix                     | Sugar syrup DAB | 55A130814   | 1       |
| Apomix                     | Sugar syrup DAB | 76A231015   | 1       |
| Apomix                     | Sugar syrup DAB | 33A170516   | 1       |
| Apomix                     | Sugar syrup DAB | 24A180316   | 1       |
| Apomix                     | Sugar syrup DAB | 37A030616   | 2       |
| Apomix                     | Sugar syrup DAB | 49A290716   | 1       |
| Apomix                     | Sugar syrup DAB | 58A19816    | 1       |
| Apomix                     | Sugar syrup DAB | 58A190816   | 1       |
| Apomix                     | Sugar syrup DAB | 55a220816   | 1       |
| Apomix                     | Sugar syrup DAB | 43A110716   | 1       |
| Apomix                     | Sugar syrup DAB | 53A120816   | 3       |
| Apomix                     | Sugar syrup DAB | 83A151216   | 1       |
| Apomix                     | Sugar syrup DAB | 71A031116   | 1       |
| Apomix                     | Sugar syrup DAB | 65A041016   | 1       |
| Apomix                     | Sugar syrup DAB | 56A220816   | 1       |
| Apomix                     | Sugar syrup DAB | 8A230117    | 1       |
| Apomix                     | Sugar syrup DAB | 16A200317   | 1       |
| Apomix                     | Sugar syrup DAB | 19A150517   | 1       |
| Apomix                     | Sugar syrup DAB | 33A190617   | 1       |
| Apomix                     | Sugar syrup DAB | 35A200617   | 1       |
| Apomix                     | Sugar syrup DAB | 38A030717   | 1       |
| Apomix                     | Sugar syrup DAB | 50A240817   | 1       |
| Apomix                     | Sugar syrup DAB | 56A041017   | 1       |
| Apomix                     | Sugar syrup DAB | 66a141117   | 1       |
| Apomix                     | Sugar syrup DAB | 66A141117   | 1       |
| Apomix                     | Sugar syrup DAB | 17A060318   | 1       |
| Apomix                     | Sugar syrup DAB | 43A180618   | 1       |
| Apomix                     | Sugar syrup DAB | 66A101018   | 1       |
| Apomix                     | Sugar syrup DAB | 44A040718   | 1       |
| Apomix                     | Sugar syrup DAB | 12A190218   | 1       |
| Apomix                     | Sugar syrup DAB | 75A151118   | 2       |
| Apomix                     | Sugar syrup DAB | 15A080319   | 1       |
| Apomix                     | Sugar syrup DAB | 22A100419   | 1       |
| Apomix                     | Sugar syrup DAB | 31A030619   | 2       |
| Apomix                     | Sugar syrup DAB | 46A140819   | 1       |
| Apomix                     | Sugar syrup DAB | 45A050819   | 1       |
| Apomix                     | Sugar syrup DAB | 11A250321   | 1       |
| Apomix (AMH)               | Sugar syrup DAB | 72A081118   | 1       |
| Apomix (AMH)               | Sugar syrup DAB | 40A010819   | 1       |
| Apomix (AMH)               | Sugar syrup DAB | 56A071019   | 1       |
| Apomix (AMH)               | Sugar syrup DAB | 22A140320   | 1       |
| Apomix / Alliance Healt... | Sugar syrup DAB | 28A270519   | 1       |
| Apomix / Anzag             | Sugar syrup DAB | 1118Q-02263 | 1       |
| Apomix / Anzag             | Sugar syrup DAB | 28A270519   | 1       |
| Apomix / Anzag             | Sugar syrup DAB | 17A250220   | 2       |
| Apomix / Anzag             | Sugar syrup DAB | 30A150420   | 1       |
| Apomix / Gehe              | Sugar syrup DAB | 87A071215   | 1       |
| Apomix / Gehe              | Sugar syrup DAB | 69A241018   | 1       |
| Apomix / Kehr              | Sugar syrup DAB | 18A030314   | 1       |

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| Supplier               | Substance       | Batch     | Spectra |
|------------------------|-----------------|-----------|---------|
| Apomix / Kehr          | Sugar syrup DAB | 48A210714 | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 86A051214 | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 88A12124  | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 88A121214 | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 5A220115  | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 50A020715 | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 11A120216 | 2       |
| Apomix / Kehr          | Sugar syrup DAB | 27A110416 | 3       |
| Apomix / Kehr          | Sugar syrup DAB | 49A290716 | 3       |
| Apomix / Kehr          | Sugar syrup DAB | 63A260916 | 4       |
| Apomix / Kehr          | Sugar syrup DAB | 7A230117  | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 70328/4Hk | 1       |
| Apomix / Kehr          | Sugar syrup DAB | 72A041116 | 1       |
| apomix / Noweda        | Sugar syrup DAB | 35A310518 | 1       |
| apomix / Noweda        | Sugar syrup DAB | 78A221118 | 2       |
| Apomix / Noweda        | Sugar syrup DAB | 41A230513 | 1       |
| Apomix / Noweda        | Sugar syrup DAB | 51A090713 | 1       |
| Apomix / Noweda        | Sugar syrup DAB | 93A231214 | 1       |
| Apomix / Noweda        | Sugar syrup DAB | 30A190416 | 1       |
| Apomix / Noweda        | Sugar syrup DAB | 67A131016 | 1       |
| Apomix / Noweda        | Sugar syrup DAB | 31A030619 | 1       |
| Apomix /AHD            | Sugar syrup DAB | 38A010618 | 1       |
| Apomix /AHD            | Sugar syrup DAB | 43A180618 | 1       |
| Apomix /AHD            | Sugar syrup DAB | 62A260918 | 1       |
| Apomix /AHD            | Sugar syrup DAB | 15A080319 | 1       |
| Apomix /AHD            | Sugar syrup DAB | 31A030619 | 1       |
| Apomix /Alliance       | Sugar syrup DAB | 85A191113 | 1       |
| Apomix /Gehe           | Sugar syrup DAB | 46A140819 | 1       |
| Apomix Anzag           | Sugar syrup DAB | 49A100712 | 1       |
| apomix Fiebig          | Sugar syrup DAB | 77A261015 | 1       |
| Apomix Gehe            | Sugar syrup DAB | 32A020719 | 1       |
| Apomix Gehe            | Sugar syrup DAB | 50A030919 | 1       |
| Apomix Gehe            | Sugar syrup DAB | 56A021020 | 1       |
| Apomix Noweda          | Sugar syrup DAB | 41A310717 | 1       |
| apomix PKH GmbH Halle  | Sugar syrup DAB | 13A290115 | 1       |
| apomix PKH GmbH Halle  | Sugar syrup DAB | 17A250220 | 1       |
| Apomix PKH Halle       | Sugar syrup DAB | 60A120916 | 1       |
| Apomix PKH Halle       | Sugar syrup DAB | 52A110917 | 1       |
| Apomix PKH Halle       | Sugar syrup DAB | 34A300518 | 1       |
| Apomix PKH/V.d.L.      | Sugar syrup DAB | 37A240413 | 2       |
| Apomix PKH/V.d.L.      | Sugar syrup DAB | 9A290113  | 1       |
| Apomix PKH/V.d.L.      | Sugar syrup DAB | 64A050913 | 1       |
| Apomix PKH/V.d.L.      | Sugar syrup DAB | 7A310114  | 1       |
| apomix VDL             | Sugar syrup DAB | 93A111213 | 1       |
| Apomix, Noweda         | Sugar syrup DAB | 43A040613 | 2       |
| apomix/ AHD 01.03.17   | Sugar syrup DAB | 86A271216 | 1       |
| apomix/ AHD 11.01.2019 | Sugar syrup DAB | 47A130718 | 1       |
| apomix/ AHD 12.12.17   | Sugar syrup DAB | 50A240817 | 1       |
| apomix/ AHD 23.06.17   | Sugar syrup DAB | 15A200317 | 1       |
| apomix/ AHD 28.08.2018 | Sugar syrup DAB | 24A280318 | 1       |
| apomix/ Fiebig         | Sugar syrup DAB | 57A180816 | 3       |
| apomix/ Fiebig         | Sugar syrup DAB | 67A131016 | 1       |
| apomix/ Fiebig         | Sugar syrup DAB | 5A180117  | 3       |
| apomix/ Fiebig         | Sugar syrup DAB | 15A200317 | 1       |
| apomix/ Fiebig         | Sugar syrup DAB | 36A200617 | 5       |
| apomix/ Fiebig         | Sugar syrup DAB | 50A240817 | 3       |
| apomix/ Fiebig         | Sugar syrup DAB | 52A110917 | 3       |
| Apomix/ Gehe           | Sugar syrup DAB | 55A180712 | 2       |
| Apomix/ Gehe           | Sugar syrup DAB | 31A300418 | 1       |
| apomix/ Noweda         | Sugar syrup DAB | 72A091015 | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| apomix/ Noweda             | Sugar syrup DAB | 7A230117    | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 19A150517   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 65a141117   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 80A261118   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 63A211119   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 19A260220   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 23A140320   | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 24A190320   | 2       |
| apomix/ Noweda             | Sugar syrup DAB | 29A15020    | 1       |
| apomix/ Noweda             | Sugar syrup DAB | 29A150420   | 1       |
| Apomix/ Noweda             | Sugar syrup DAB | 65A141117   | 1       |
| apomix/ Phoenix            | Sugar syrup DAB | 76A301012   | 1       |
| apomix/ Phoenix            | Sugar syrup DAB | 11A060213   | 1       |
| apomix/ Phoenix            | Sugar syrup DAB | 21A010313   | 1       |
| apomix/ Phönix             | Sugar syrup DAB | 93A231214   | 1       |
| Apomix/ Phönix             | Sugar syrup DAB | 34A240413   | 1       |
| Apomix/ Phönix             | Sugar syrup DAB | 32A240415   | 1       |
| Apomix/ Phönix             | Sugar syrup DAB | 40A290515   | 2       |
| Apomix/ Phönix             | Sugar syrup DAB | 68A250915   | 1       |
| Apomix/ Phönix             | Sugar syrup DAB | 81A161115   | 4       |
| apomix/AHD                 | Sugar syrup DAB | 63A061117   | 2       |
| apomix/AHD                 | Sugar syrup DAB | 40A010819   | 1       |
| Apomix/AHD                 | Sugar syrup DAB | 68A241018   | 1       |
| Apomix/AHD                 | Sugar syrup DAB | 28A275019   | 1       |
| Apomix/AHD                 | Sugar syrup DAB | 41A010720   | 1       |
| apomix/alliance healthc... | Sugar syrup DAB | 76A231015   | 2       |
| apomix/alliance healthc... | Sugar syrup DAB | 3A150116    | 1       |
| apomix/alliance healthc... | Sugar syrup DAB | 3a150116    | 1       |
| apomix/alliance healthc... | Sugar syrup DAB | 72A041116   | 1       |
| apomix/alliance healthc... | Sugar syrup DAB | 83A151216   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 25A170314   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 7A230115    | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 68A230914   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 58A260815   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 71A091015   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 1A130116    | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 14A150216   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 22A170316   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 44A110716   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 68A131016   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 47A220817   | 1       |
| Apomix/Alliance Healthc... | Sugar syrup DAB | 43a180618   | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 2112I-02263 | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 1314I-02263 | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 1515Q-02263 | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 37A03616    | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 50A290716   | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 1116E-02263 | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 67A131016   | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 617Q-02263  | 1       |
| Apomix/Anzag               | Sugar syrup DAB | 59A290818   | 1       |
| Apomix/Fiebig              | Sugar syrup DAB | 70A281117   | 3       |
| Apomix/Fiebig              | Sugar syrup DAB | 1A160118    | 3       |
| Apomix/Fiebig              | Sugar syrup DAB | 18095601    | 3       |
| Apomix/Fiebig              | Sugar syrup DAB | 67A231219   | 1       |
| apomix/Gehe                | Sugar syrup DAB | 48A010715   | 1       |
| apomix/Gehe                | Sugar syrup DAB | 71A091015   | 3       |
| apomix/Gehe                | Sugar syrup DAB | 56A310715   | 1       |
| apomix/Gehe                | Sugar syrup DAB | 1A130116    | 1       |
| apomix/Gehe                | Sugar syrup DAB | 12A120219   | 1       |

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| Supplier             | Substance       | Batch     | Spectra |
|----------------------|-----------------|-----------|---------|
| apomix/Gehe          | Sugar syrup DAB | 25A190320 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 93A271212 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 9A030214  | 2       |
| Apomix/Gehe          | Sugar syrup DAB | o9A030214 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 18A030314 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 81A251114 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 60A020914 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 32A240415 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 15A100215 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 49A020715 | 2       |
| Apomix/Gehe          | Sugar syrup DAB | 1A140115  | 2       |
| Apomix/Gehe          | Sugar syrup DAB | 50A290716 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 89A111215 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 36A200617 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 20A120318 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 34A300518 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 46A130718 | 2       |
| Apomix/Gehe          | Sugar syrup DAB | 62A260918 | 1       |
| Apomix/Gehe          | Sugar syrup DAB | 27A090418 | 2       |
| Apomix/Gehe          | Sugar syrup DAB | 27A160519 | 2       |
| Apomix/GEHE          | Sugar syrup DAB | 17A030314 | 1       |
| apomix/gehe 04.09.17 | Sugar syrup DAB | 35a200617 | 1       |
| apomix/gehe 08.06.17 | Sugar syrup DAB | 21A160517 | 1       |
| apomix/gehe 190717   | Sugar syrup DAB | 25a310517 | 1       |
| apomix/gehe 28.04.17 | Sugar syrup DAB | 14a200217 | 1       |
| Apomix/Geilenkirchen | Sugar syrup DAB | 67A131016 | 1       |
| Apomix/Jenne         | Sugar syrup DAB | 39A260620 | 1       |
| apomix/Kehr          | Sugar syrup DAB | 11A280115 | 2       |
| apomix/Kehr          | Sugar syrup DAB | 43A110716 | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 30A200415 | 3       |
| Apomix/Kehr          | Sugar syrup DAB | 42A120615 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 57A260815 | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 72A091015 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 85A261115 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 3A150116  | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 51A010816 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 19A150517 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 29A130617 | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 23A290517 | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 44A070817 | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 45A210817 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 63A061117 | 3       |
| Apomix/Kehr          | Sugar syrup DAB | 3A180118  | 5       |
| Apomix/Kehr          | Sugar syrup DAB | 8A070218  | 2       |
| Apomix/Kehr          | Sugar syrup DAB | 27A090418 | 1       |
| Apomix/Kehr          | Sugar syrup DAB | 63A211119 | 1       |
| apomix/L12           | Sugar syrup DAB | 46A180716 | 3       |
| apomix/Now           | Sugar syrup DAB | 72A081118 | 1       |
| apomix/Now           | Sugar syrup DAB | 8A010219  | 1       |
| apomix/Now           | Sugar syrup DAB | 36A170719 | 1       |
| apomix/noweda        | Sugar syrup DAB | 57A131017 | 1       |
| apomix/Noweda        | Sugar syrup DAB | 39A050614 | 2       |
| apomix/Noweda        | Sugar syrup DAB | 78A221118 | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 57A180816 | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 41A040716 | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 79A241116 | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 8A230117  | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 86A271216 | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 9A250117  | 1       |
| Apomix/Noweda        | Sugar syrup DAB | 23A290517 | 1       |

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| Supplier                  | Substance       | Batch                | Spectra |
|---------------------------|-----------------|----------------------|---------|
| Apomix/Noweda             | Sugar syrup DAB | 25A310517            | 2       |
| Apomix/Noweda             | Sugar syrup DAB | 71A291117            | 1       |
| Apomix/Noweda             | Sugar syrup DAB | 51A170718            | 2       |
| Apomix/Noweda             | Sugar syrup DAB | 1A160118             | 1       |
| Apomix/Noweda             | Sugar syrup DAB | 45A040718            | 1       |
| Apomix/Noweda             | Sugar syrup DAB | 68A241018            | 2       |
| Apomix/Noweda             | Sugar syrup DAB | 7A270120             | 1       |
| Apomix/Noweda             | Sugar syrup DAB | 26A200320            | 3       |
| apomix/Phoenix            | Sugar syrup DAB | 20A280213            | 1       |
| apomix/Phoenix            | Sugar syrup DAB | 73A101013            | 1       |
| apomix/Phoenix            | Sugar syrup DAB | 25A080415            | 1       |
| apomix/Phoenix            | Sugar syrup DAB | 3A210119             | 3       |
| Apomix/Phoenix            | Sugar syrup DAB | 13A150216            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 81A161115            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 2A130116             | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 41A040716            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 50A240817            | 2       |
| Apomix/Phoenix            | Sugar syrup DAB | 67A271117            | 4       |
| Apomix/Phoenix            | Sugar syrup DAB | 11A190218            | 2       |
| Apomix/Phoenix            | Sugar syrup DAB | 45A210817            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 20A120318            | 2       |
| Apomix/Phoenix            | Sugar syrup DAB | 26A09418             | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 34A300518            | 2       |
| Apomix/Phoenix            | Sugar syrup DAB | 74A151118            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 64A211119            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 12A060220            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 39A010819            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 32A020719            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 27A200320            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 40A010720            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 44A050820            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 13A060220            | 1       |
| Apomix/Phoenix            | Sugar syrup DAB | 53A080920            | 1       |
| Apomix/Phoenix 03.11.2017 | Sugar syrup DAB | 50A240817            | 1       |
| apomix/Phönix             | Sugar syrup DAB | 214050314            | 1       |
| apomix/Phönix             | Sugar syrup DAB | 2A130116             | 1       |
| apomix/Phönix             | Sugar syrup DAB | 9A280116             | 1       |
| apomix/Phönix             | Sugar syrup DAB | 7A270120             | 1       |
| apomix/Phönix             | Sugar syrup DAB | 24A190320            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 59A270815            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 72A091015            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 74A151015            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 29A190416            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 21A160517            | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 6A050218             | 1       |
| Apomix/Phönix             | Sugar syrup DAB | 5218Q-02263          | 1       |
| apomix/Sanacorp           | Sugar syrup DAB | 96A161213            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 66A110913-3442311102 | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 35A070414            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 7A230115             | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 72A041116            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 84A231216            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 68A281117            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 3A180118             | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 53A300718            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 44A040718            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 66A101018            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 45A040718            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 80A261118            | 1       |
| Apomix/Sanacorp           | Sugar syrup DAB | 8A010219             | 1       |

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| Supplier          | Substance       | Batch                | Spectra |
|-------------------|-----------------|----------------------|---------|
| Apomix/Sancorp    | Sugar syrup DAB | 21A010313            | 1       |
| Apomix/Sancorp    | Sugar syrup DAB | 45A050613            | 1       |
| Apomix/Sancorp    | Sugar syrup DAB | 2A130114             | 1       |
| Apomix/Sancorp    | Sugar syrup DAB | 55A130814            | 1       |
| apomix/Spangro    | Sugar syrup DAB | 27A090418            | 1       |
| apomix/Spangro    | Sugar syrup DAB | 26090418             | 1       |
| apomix/Spangro    | Sugar syrup DAB | 53A300718            | 1       |
| apomix/Spangro    | Sugar syrup DAB | 69A241018            | 2       |
| Spangropharm      | Sugar syrup DAB | 5117A-02263          | 1       |
| apomixAMH/Phoenix | Sugar syrup DAB | 55A310715            | 1       |
| apomixAMH/Phoenix | Sugar syrup DAB | 7A250116             | 1       |
| ApomixNoweda      | Sugar syrup DAB | 5A180117             | 1       |
| ApomixNoweda      | Sugar syrup DAB | 36A200617            | 1       |
| ApomixNoweda      | Sugar syrup DAB | 67A271117            | 4       |
| ApomixNoweda      | Sugar syrup DAB | 11A190218            | 1       |
| ApomixNoweda      | Sugar syrup DAB | 40A040618            | 2       |
| Apommix-Sanacorp  | Sugar syrup DAB | 51A090713-3399310141 | 1       |
| Bombastus         | Sugar syrup DAB | 82A151216            | 1       |
| Bombastus         | Sugar syrup DAB | 30A190416            | 2       |
| Caelo             | Sugar syrup DAB | 20000600001          | 2       |
| Caelo             | Sugar syrup DAB | 14024001             | 1       |
| Caelo             | Sugar syrup DAB | 14189102             | 2       |
| Caelo             | Sugar syrup DAB | 14299801             | 4       |
| Caelo             | Sugar syrup DAB | 93A231214            | 1       |
| Caelo             | Sugar syrup DAB | 14337004             | 1       |
| Caelo             | Sugar syrup DAB | 15117002             | 1       |
| Caelo             | Sugar syrup DAB | 15150602             | 2       |
| Caelo             | Sugar syrup DAB | 16187902             | 6       |
| Caelo             | Sugar syrup DAB | 162140               | 1       |
| Caelo             | Sugar syrup DAB | 41A040716            | 1       |
| Caelo             | Sugar syrup DAB | 161879               | 1       |
| Caelo             | Sugar syrup DAB | 17129301             | 10      |
| Caelo             | Sugar syrup DAB | 29A130617            | 1       |
| Caelo             | Sugar syrup DAB | 17129001             | 5       |
| Caelo             | Sugar syrup DAB | 17304302             | 4       |
| Caelo             | Sugar syrup DAB | 18033401             | 10      |
| Caelo             | Sugar syrup DAB | 5A240118             | 1       |
| Caelo             | Sugar syrup DAB | 18130001             | 8       |
| Caelo             | Sugar syrup DAB | 66A101018            | 1       |
| Caelo             | Sugar syrup DAB | 18247602             | 5       |
| Caelo             | Sugar syrup DAB | 18296501             | 5       |
| Caelo             | Sugar syrup DAB | 19132001             | 11      |
| Caelo             | Sugar syrup DAB | 123456               | 1       |
| Caelo             | Sugar syrup DAB | 19234702             | 2       |
| Caelo             | Sugar syrup DAB | 19225101             | 3       |
| Caelo             | Sugar syrup DAB | 19000841001          | 6       |
| Caelo             | Sugar syrup DAB | 19000842001          | 1       |
| Caelo             | Sugar syrup DAB | 20001505001          | 1       |
| Caelo             | Sugar syrup DAB | 20001849001          | 3       |
| Caelo             | Sugar syrup DAB | 2001505001           | 1       |
| Caelo             | Sugar syrup DAB | 20003767001          | 2       |
| Caelo             | Sugar syrup DAB | 38A190514            | 1       |
| Caelo             | Sugar syrup DAB | 191132001            | 1       |
| Caelo             | Sugar syrup DAB | 22A130315            | 2       |
| Caelo             | Sugar syrup DAB | 17028002             | 8       |
| Caelo             | Sugar syrup DAB | 16345602             | 1       |
| Caelo             | Sugar syrup DAB | 42A050618            | 1       |
| Caelo             | Sugar syrup DAB | 59A290818            | 2       |
| Caelo             | Sugar syrup DAB | 19085102             | 2       |
| Caelo             | Sugar syrup DAB | 81A-251114           | 1       |

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| Supplier | Substance       | Batch       | Spectra |
|----------|-----------------|-------------|---------|
| Caelo    | Sugar syrup DAB | 35A300516   | 2       |
| Caelo    | Sugar syrup DAB | 76A171013   | 1       |
| Caelo    | Sugar syrup DAB | 21A010313   | 1       |
| Caelo    | Sugar syrup DAB | 23A180316   | 1       |
| Caelo    | Sugar syrup DAB | 53A120816   | 2       |
| Caelo    | Sugar syrup DAB | 58A270712   | 1       |
| Caelo    | Sugar syrup DAB | 16091501    | 5       |
| Caelo    | Sugar syrup DAB | 16214101    | 7       |
| Caelo    | Sugar syrup DAB | 15092001    | 1       |
| Caelo    | Sugar syrup DAB | 20001848001 | 2       |
| Caelo    | Sugar syrup DAB | 21000931001 | 1       |
| Caelo    | Sugar syrup DAB | 21002020001 | 1       |
| Caelo    | Sugar syrup DAB | 17260101    | 4       |
| Caelo    | Sugar syrup DAB | 19131901    | 3       |
| Caelo    | Sugar syrup DAB | 19234801    | 2       |
| Caelo    | Sugar syrup DAB | 20003010001 | 1       |
| Caelo    | Sugar syrup DAB | 21000066001 | 1       |
| Caelo    | Sugar syrup DAB | 20A270215   | 2       |
| Caelo    | Sugar syrup DAB | 77A061114   | 1       |
| Caelo    | Sugar syrup DAB | 79A241116   | 1       |
| Caelo    | Sugar syrup DAB | 35A200317   | 1       |
| Caelo    | Sugar syrup DAB | 17A240417   | 1       |
| Caelo    | Sugar syrup DAB | 20002430002 | 1       |
| Caelo    | Sugar syrup DAB | 15049102    | 1       |
| Caelo    | Sugar syrup DAB | 42A120615   | 1       |
| Caelo    | Sugar syrup DAB | 15427102    | 6       |
| Caelo    | Sugar syrup DAB | 21A170316   | 1       |
| Caelo    | Sugar syrup DAB | 30A190416   | 1       |
| Caelo    | Sugar syrup DAB | 17304301    | 2       |
| Caelo    | Sugar syrup DAB | 18032801    | 5       |
| Caelo    | Sugar syrup DAB | 18095601    | 10      |
| Caelo    | Sugar syrup DAB | 20A120318   | 1       |
| Caelo    | Sugar syrup DAB | 18227801    | 3       |
| Caelo    | Sugar syrup DAB | 18247503    | 3       |
| Caelo    | Sugar syrup DAB | 18296401    | 5       |
| Caelo    | Sugar syrup DAB | 59a290818   | 1       |
| Caelo    | Sugar syrup DAB | 8A010219    | 1       |
| Caelo    | Sugar syrup DAB | 17275702    | 6       |
| Caelo    | Sugar syrup DAB | 9A280116    | 3       |
| Caelo    | Sugar syrup DAB | 18095701    | 2       |
| Caelo    | Sugar syrup DAB | 18189801    | 3       |
| Caelo    | Sugar syrup DAB | 18247601    | 1       |
| Caelo    | Sugar syrup DAB | 18296502    | 2       |
| Caelo    | Sugar syrup DAB | 19010402    | 4       |
| Caelo    | Sugar syrup DAB | 19050701    | 5       |
| Caelo    | Sugar syrup DAB | 19131801    | 3       |
| Caelo    | Sugar syrup DAB | 19234701    | 3       |
| Caelo    | Sugar syrup DAB | 19000475001 | 1       |
| Caelo    | Sugar syrup DAB | 15315201    | 2       |
| Caelo    | Sugar syrup DAB | 16214002    | 5       |
| Caelo    | Sugar syrup DAB | 15334802    | 3       |
| Caelo    | Sugar syrup DAB | 13A1502216  | 1       |
| Caelo    | Sugar syrup DAB | 16345701    | 4       |
| Caelo    | Sugar syrup DAB | 18033002    | 7       |
| Caelo    | Sugar syrup DAB | 19010602    | 5       |
| Caelo    | Sugar syrup DAB | 19085101    | 5       |
| Caelo    | Sugar syrup DAB | 44A050613   | 1       |
| Caelo    | Sugar syrup DAB | 79A281013   | 2       |
| Caelo    | Sugar syrup DAB | 14189101    | 1       |
| Caelo    | Sugar syrup DAB | 14246001    | 1       |

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| Supplier                   | Substance       | Batch       | Spectra |
|----------------------------|-----------------|-------------|---------|
| Caelo                      | Sugar syrup DAB | 1829642     | 1       |
| Caelo                      | Sugar syrup DAB | 18296402    | 1       |
| Caelo                      | Sugar syrup DAB | 19000457001 | 8       |
| Caelo                      | Sugar syrup DAB | 20001506001 | 4       |
| Caelo                      | Sugar syrup DAB | 19085001    | 7       |
| Caecolo/Sanacorp           | Sugar syrup DAB | 5A240118    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 86A051214   | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 18296402    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19010402    | 2       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19085001    | 3       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19234702    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19234701    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19050701    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19234801    | 2       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19225101    | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 20000600001 | 2       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 19000842001 | 1       |
| Caesar & Loretz GmbH       | Sugar syrup DAB | 21000067001 | 2       |
| Caesar & Loretz GmbH / ... | Sugar syrup DAB | 17028002    | 2       |
| Caesar & Loretz GmbH/Gehe  | Sugar syrup DAB | 21000931001 | 1       |
| Caesar & Loretz GmbH/No... | Sugar syrup DAB | 19131901    | 1       |
| Caesar & Loretz GmbH/Sa... | Sugar syrup DAB | 19234702    | 1       |
| Euro OTC                   | Sugar syrup DAB | 1610008-01  | 2       |
| Euro OTC                   | Sugar syrup DAB | 13A150216   | 1       |
| Euro OTC                   | Sugar syrup DAB | 18033401    | 1       |
| Euro OTC                   | Sugar syrup DAB | 80A061115   | 1       |
| Euro OTC                   | Sugar syrup DAB | 28A010617   | 7       |
| Fagron                     | Sugar syrup DAB | 13089R      | 1       |
| Fagron                     | Sugar syrup DAB | 38A250413   | 1       |
| Fiebig                     | Sugar syrup DAB | 64A260916   | 5       |
| Fiebig/ Apomix             | Sugar syrup DAB | 60A120916   | 1       |
| Gehe                       | Sugar syrup DAB | 51A090713   | 1       |
| Gehe                       | Sugar syrup DAB | 41A220817   | 1       |
| Gehe                       | Sugar syrup DAB | 70A051118   | 1       |
| GEHE                       | Sugar syrup DAB | 18033401    | 1       |
| GEHE 07.02.2019            | Sugar syrup DAB | 18247502    | 1       |
| Gehe amax                  | Sugar syrup DAB | 19000457001 | 1       |
| Gehe amax                  | Sugar syrup DAB | 20001506001 | 1       |
| GEHE Kassel 07.02.2019     | Sugar syrup DAB | 18296402    | 1       |
| Gehe/ Apomix               | Sugar syrup DAB | 59A030812   | 1       |
| Gehe/AMHNIemann            | Sugar syrup DAB | 27A090418   | 1       |
| Caelo                      | Sugar syrup DAB | 17129101    | 2       |
| Caelo                      | Sugar syrup DAB | 18175701    | 4       |
| Gutenberg-Apotheke         | Sugar syrup DAB | 18A030314   | 1       |
| hochhaus-Apotheke          | Sugar syrup DAB | 67A131016   | 1       |
| hochhaus-Apotheke          | Sugar syrup DAB | 67A-131016  | 1       |
| Hochhaus-Apotheke          | Sugar syrup DAB | 64A260916   | 3       |
| Ichthyol/Gehe              | Sugar syrup DAB | 22A170316   | 1       |
| JENNE                      | Sugar syrup DAB | 16214101    | 1       |
| Kehr/Apomix                | Sugar syrup DAB | 66A160914   | 2       |
| Kehr/Apomix                | Sugar syrup DAB | 74A241014   | 2       |
| Kehr/Apomix                | Sugar syrup DAB | 88A121214   | 1       |
| Kehr/Apomix                | Sugar syrup DAB | 66A141117   | 2       |
| Kehr/Apomix                | Sugar syrup DAB | 35A310518   | 2       |
| Caelo                      | Sugar syrup DAB | 33A190617   | 1       |
| Klenk                      | Sugar syrup DAB | 13A150216   | 2       |
| L10                        | Sugar syrup DAB | 32A140617   | 1       |
| L10                        | Sugar syrup DAB | 4A240118    | 3       |
| L10                        | Sugar syrup DAB | 7A050218    | 3       |
| L10                        | Sugar syrup DAB | 12A190218   | 4       |

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| Supplier             | Substance       | Batch     | Spectra |
|----------------------|-----------------|-----------|---------|
| L10/apomix           | Sugar syrup DAB | 62A190916 | 6       |
| L10apomix            | Sugar syrup DAB | 70A051118 | 1       |
| L12                  | Sugar syrup DAB | 85A231216 | 2       |
| L12                  | Sugar syrup DAB | 12A300117 | 1       |
| L12                  | Sugar syrup DAB | 22A160517 | 5       |
| L12                  | Sugar syrup DAB | 39A170717 | 5       |
| L12                  | Sugar syrup DAB | 49A240817 | 1       |
| L12                  | Sugar syrup DAB | 58A131017 | 3       |
| L12                  | Sugar syrup DAB | 74A271217 | 2       |
| L12                  | Sugar syrup DAB | 50A170718 | 3       |
| L12                  | Sugar syrup DAB | 57A280818 | 2       |
| L12                  | Sugar syrup DAB | 82A121218 | 1       |
| L12                  | Sugar syrup DAB | 81A291118 | 1       |
| L12                  | Sugar syrup DAB | 60A210918 | 2       |
| L12/apomix           | Sugar syrup DAB | 12A120219 | 1       |
| L12/Apomix           | Sugar syrup DAB | 56A220816 | 3       |
| Caelo                | Sugar syrup DAB | 48A220716 | 1       |
| L30                  | Sugar syrup DAB | 80A251116 | 2       |
| L30                  | Sugar syrup DAB | 87A271216 | 3       |
| Nachprüfung          | Sugar syrup DAB | 42A220612 | 1       |
| Niemann GmbH & Co.KG | Sugar syrup DAB | 53A080814 | 1       |
| Nowe/Apom            | Sugar syrup DAB | 77A101116 | 2       |
| Noweda               | Sugar syrup DAB | 11A060213 | 1       |
| Noweda               | Sugar syrup DAB | 72A291117 | 1       |
| Noweda               | Sugar syrup DAB | 18A060318 | 1       |
| Noweda               | Sugar syrup DAB | 13A150219 | 1       |
| Noweda               | Sugar syrup DAB | 19010402  | 1       |
| Noweda               | Sugar syrup DAB | 13a150219 | 2       |
| Noweda / Apomix      | Sugar syrup DAB | 47A120613 | 1       |
| noweda/Apomix        | Sugar syrup DAB | 56A160813 | 1       |
| Noweda/Apomix        | Sugar syrup DAB | 87A051214 | 1       |
| Noweda/Apomix        | Sugar syrup DAB | 9A280116  | 1       |
| Caelo                | Sugar syrup DAB | 6A050218  | 1       |
| Caelo                | Sugar syrup DAB | 28A110418 | 1       |
| Phoenix              | Sugar syrup DAB | 43A040613 | 1       |
| Phoenix              | Sugar syrup DAB | 59A01914  | 1       |
| Phoenix              | Sugar syrup DAB | 30A300418 | 1       |
| Phoenix              | Sugar syrup DAB | 71A051118 | 1       |
| Phoenix              | Sugar syrup DAB | 10A110219 | 3       |
| Phoenix              | Sugar syrup DAB | 18296502  | 1       |
| Phoenix              | Sugar syrup DAB | 25A020519 | 2       |
| Phoenix              | Sugar syrup DAB | 19050701  | 2       |
| Phoenix              | Sugar syrup DAB | 44A050819 | 5       |
| Phoenix              | Sugar syrup DAB | 20A040419 | 1       |
| Phoenix              | Sugar syrup DAB | 62A111119 | 2       |
| PHOENIX              | Sugar syrup DAB | 19131801  | 1       |
| Phoenix/Apomix       | Sugar syrup DAB | 29A220313 | 1       |
| Phönix               | Sugar syrup DAB | 60A181017 | 1       |
| Phönix               | Sugar syrup DAB | 29A110418 | 1       |
| Phönix               | Sugar syrup DAB | 18095701  | 1       |
| Phönix               | Sugar syrup DAB | 18227801  | 1       |
| Phönix Gotha         | Sugar syrup DAB | 51A090713 | 3       |
| Phönix Gotha         | Sugar syrup DAB | 59A220813 | 1       |
| Phönix Gotha         | Sugar syrup DAB | 1A130114  | 1       |
| Phönix Gotha         | Sugar syrup DAB | 77A171013 | 1       |
| Phönix/ apomix       | Sugar syrup DAB | 66A110913 | 1       |
| Caelo                | Sugar syrup DAB | 17200501  | 2       |
| Euro OTC             | Sugar syrup DAB | 86A271216 | 1       |
| PhR                  | Sugar syrup DAB | 53a120816 | 1       |
| PhR                  | Sugar syrup DAB | 41a040716 | 1       |

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| Supplier                   | Substance                       | Batch     | Spectra |
|----------------------------|---------------------------------|-----------|---------|
| PhR                        | Sugar syrup DAB                 | 41A040716 | 1       |
| PhR                        | Sugar syrup DAB                 | 82a151216 | 1       |
| PhR                        | Sugar syrup DAB                 | 82A151216 | 2       |
| PhR                        | Sugar syrup DAB                 | 14A200217 | 1       |
| PhR                        | Sugar syrup DAB                 | 14a200217 | 1       |
| PhR                        | Sugar syrup DAB                 | 30A130617 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 42A310717 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 68A281117 | 2       |
| PhR Neidhardt              | Sugar syrup DAB                 | 73A271217 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 17A060318 | 2       |
| PhR Neidhardt              | Sugar syrup DAB                 | 43A180618 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 38A010618 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 54A010818 | 1       |
| PhR Neidhardt              | Sugar syrup DAB                 | 67A101018 | 2       |
| PKH                        | Sugar syrup DAB                 | 41A190612 | 1       |
| PKH / Phoenix              | Sugar syrup DAB                 | 93A231214 | 1       |
| PKH / Phoenix              | Sugar syrup DAB                 | 80A061115 | 2       |
| pkh Gehe 18,12.17          | Sugar syrup DAB                 | 68a281117 | 1       |
| PKH GmbH                   | Sugar syrup DAB                 | 30A190416 | 1       |
| PKH GmbH                   | Sugar syrup DAB                 | 14A200217 | 1       |
| PKH GmbH                   | Sugar syrup DAB                 | 4A240118  | 1       |
| PKH GmbH                   | Sugar syrup DAB                 | 68A281117 | 1       |
| PKH GmbH / Phoenix         | Sugar syrup DAB                 | 49A020715 | 1       |
| PKH Halle                  | Sugar syrup DAB                 | 19A040314 | 1       |
| PKH Halle - Apomix / AH... | Sugar syrup DAB                 | 11A190218 | 1       |
| PKH Halle (apomix) / AH... | Sugar syrup DAB                 | 43A070817 | 1       |
| PKH Halle / Phoenix        | Sugar syrup DAB                 | 57A180816 | 1       |
| PKH Halle/ Gehe 27.04.2... | Sugar syrup DAB                 | 5A180117  | 1       |
| PKH Halle/Ph               | Sugar syrup DAB                 | 38A180719 | 1       |
| PKH NO                     | Sugar syrup DAB                 | 3A271217  | 1       |
| PKH PH                     | Sugar syrup DAB                 | 44A040718 | 1       |
| PKH/Phoenix                | Sugar syrup DAB                 | 25A310517 | 1       |
| PKH-Halle/Sanacorp         | Sugar syrup DAB                 | 72A041013 | 2       |
| PKH-Halle/Sanacorp         | Sugar syrup DAB                 | 10A030214 | 1       |
| rPhR Neidhar               | Sugar syrup DAB                 | 30A190416 | 3       |
| Sanacorp                   | Sugar syrup DAB                 | 58A270712 | 1       |
| Sanacorp                   | Sugar syrup DAB                 | 82A081112 | 1       |
| Sanacorp                   | Sugar syrup DAB                 | 13A290115 | 1       |
| Sanacorp                   | Sugar syrup DAB                 | 17260101  | 1       |
| Caelo                      | Sugar syrup DAB                 | 51A070814 | 1       |
| Sanacorp/ apomix           | Sugar syrup DAB                 | 28A110416 | 1       |
| Sanacorp/ PKH Halle        | Sugar syrup DAB                 | 29A110512 | 1       |
| Sanacorp/AMHNiemann        | Sugar syrup DAB                 | 48A160718 | 2       |
| Sanacorp/Apomix            | Sugar syrup DAB                 | 67A231219 | 1       |
| Caelo                      | Cherry syrup (conserved)        | 14034503  | 1       |
| Caelo                      | Cherry syrup (conserved)        | 13278301  | 2       |
| Fagron                     | Ipecacuanha syrup (NRF 19.1)    | 13G23-M02 | 1       |
| Caelo                      | Marshmallow syrup (conserved)   | 13152307  | 2       |
| Caelo                      | Marshmallow syrup (conserved)   | 12303106  | 2       |
| Caelo                      | Raspberry syrup (conserved)     | 13122003  | 2       |
| Caelo                      | Raspberry syrup (conserved)     | 14114303  | 3       |
| noweda                     | Raspberry syrup (conserved)     |           | 1       |
| Caelo                      | Sorbitol, liquid (non crista... | 14034706  | 1       |
| Caelo                      | Sorbitol, liquid (non crista... | 13060206  | 2       |
| Phönix Gotha               | Sugar syrup DAB                 |           | 1       |

- 238 903 spectra from 1121 *Apo-Ident* customers from a total of 46 169 batches from a further 335 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are docu-

mented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Syrups* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Syrups* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1940          | 0              | 61 999        |
| <b>Type B</b> | 0              | 2044          | 6              | 89 441        |
| <b>Type C</b> | 0              | 2456          | 4              | 238 903       |

The substance/substance group *Syrups* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.6907 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 99.7073 % (> 99.5610 %)  |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.8374 % (> 99.7154 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Syrups* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                         | Distance in main model | Distance in second-stage model |
|-----------------------------------|------------------------|--------------------------------|
| Honey                             | 12.55                  | —                              |
| Viscous base solution (NRF p. 20) | 20.20                  | —                              |
| Glucose syrup                     | 23.62                  | —                              |
| Rose honey                        | 25.06                  | —                              |
| Condurango wine                   | 28.15                  | —                              |
| Liquorice juice purified, diluted | 29.51                  | —                              |
| Glycerine ointment (conserved)    | 36.86                  | —                              |
| Sodium lactate solution 50%       | 48.75                  | —                              |
| Lotio Cordes®                     | 49.41                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Syrups* is separated from critical neighbours in a second-stage model, all the

remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30753     | 31147               | 3.40                         | 44.64                           |
| 30870     | 32277               | 5.57                         | 32.85                           |
| 30897     | 31877               | 3.39                         | 42.69                           |
| 30900     | 30900               | 0.00                         | 29.65                           |
| 31051     | 31051               | 0.00                         | 39.10                           |
| 31124     | 31353               | 1.80                         | 32.65                           |
| 31147     | 31147               | 0.00                         | 45.65                           |
| 31155     | 31155               | 0.00                         | 37.77                           |
| 31175     | 31175               | 0.00                         | 42.74                           |
| 31181     | 31181               | 0.00                         | 41.71                           |
| 31218     | 31218               | 0.00                         | 39.76                           |
| 31353     | 31353               | 0.00                         | 32.84                           |
| 31355     | 31175               | 1.86                         | 44.52                           |
| 31359     | 31051               | 1.47                         | 37.21                           |
| 31365     | 31877               | 3.65                         | 46.39                           |
| 31467     | 31051               | 1.74                         | 39.90                           |
| 31598     | 30900               | 7.32                         | 26.62                           |
| 31773     | 31773               | 0.00                         | 32.07                           |
| 31802     | 31802               | 0.00                         | 32.86                           |
| 31877     | 31877               | 0.00                         | 43.99                           |
| 32210     | 32210               | 0.00                         | 42.33                           |
| 32277     | 32277               | 0.00                         | 32.65                           |
| 32284     | 32284               | 0.00                         | 35.10                           |
| 32984     | 32984               | 0.00                         | 30.45                           |
| 33099     | 33099               | 0.00                         | 43.17                           |
| 33228     | 33228               | 0.00                         | 35.01                           |
| 33263     | 31181               | 5.71                         | 40.86                           |
| 33331     | 33331               | 0.00                         | 45.82                           |
| 33420     | 31181               | 6.28                         | 43.22                           |
| 33421     | 31181               | 5.75                         | 44.17                           |
| 33505     | 35164               | 2.08                         | 41.05                           |
| 34233     | 34233               | 0.00                         | 27.11                           |
| 34329     | 34329               | 0.00                         | 42.08                           |
| 34477     | 34477               | 0.00                         | 39.64                           |
| 34526     | 31877               | 2.20                         | 43.23                           |
| 34600     | 34600               | 0.00                         | 40.60                           |
| 34664     | 34664               | 0.00                         | 38.79                           |
| 34734     | 34734               | 0.00                         | 26.90                           |
| 34831     | 34831               | 0.00                         | 33.70                           |
| 35138     | 35138               | 0.00                         | 45.29                           |
| 35164     | 35164               | 0.00                         | 40.38                           |
| 35290     | 31181               | 11.06                        | 39.76                           |
| 35552     | 35552               | 0.00                         | 27.21                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Tea tree oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31023-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Tea tree oil; Oleum melaleuca alternifolia

### Special notes

When selecting the *Tea tree oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Tea tree oil              | 5      | 2      | 76     |



## Second-stage model

For differentiation of the substance/substance group *Tea tree oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Tea tree oil*:

| Supplier | Substance    | Batch    | Sample ID | Spectra | Certificate |
|----------|--------------|----------|-----------|---------|-------------|
| Caelo    | Tea tree oil | 12201303 | 31023     | 40      | 1404597     |
| Caelo    | Tea tree oil | 13288914 | 31401     | 40      | 20130828    |
| Caelo    | Tea tree oil | 14203203 | 31960     | 60      | 20140703    |
| Caelo    | Tea tree oil | 15337105 | 33478     | 40      | 20151007    |
| Caelo    | Tea tree oil | 192425   | 34712     | 40      | 20191002*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Tea tree oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Tea tree oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance    | Batch  | Sample ID | Spectra |
|----------|--------------|--------|-----------|---------|
| Caelo    | Tea tree oil | 173227 | 34058     | 40      |
| Caelo    | Tea tree oil | 170677 | 34059     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 170 spectra from 61 *Apo-Ident* customers from 79 batches from the substance/substance group *Tea tree oil*.
- Among them are spectra of independent samples from 73 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                  | Substance    | Batch                 | Spectra |
|---------------------------|--------------|-----------------------|---------|
| Apoth.Bauer&Co,Münch      | Tea tree oil | 692624                | 1       |
| apotheker bauer& cie oHgG | Tea tree oil | 6548331306            | 1       |
| Apotheker Bauer&Cie OHG   | Tea tree oil | 68647-73-4-85085-48-9 | 1       |
| Bergland / Noweda         | Tea tree oil | P102633               | 1       |
| Bergland /Noweda          | Tea tree oil | K302332               | 1       |
| Bergland-Pharma/Anzag     | Tea tree oil | C101782               | 1       |
| Bergland-Pharma/Anzag     | Tea tree oil | C002685               | 1       |
| Bombastus                 | Tea tree oil | 302427                | 1       |
| Bombastus                 | Tea tree oil | 305629                | 3       |
| Bombastus                 | Tea tree oil | 304033                | 1       |
| Bombastus                 | Tea tree oil | 19001331              | 2       |
| Caelo                     | Tea tree oil | 11333516              | 1       |
| Caelo                     | Tea tree oil | 14111201              | 1       |
| Caelo                     | Tea tree oil | 12201304              | 3       |
| Caelo                     | Tea tree oil | 12201313              | 1       |
| Caelo                     | Tea tree oil | 11333514              | 1       |
| Caelo                     | Tea tree oil | 11358910              | 1       |
| Caelo                     | Tea tree oil | 13099510              | 4       |
| Caelo                     | Tea tree oil | 14203202              | 1       |
| Caelo                     | Tea tree oil | 14302302              | 1       |
| Caelo                     | Tea tree oil | 15051806              | 2       |
| Caelo                     | Tea tree oil | 16007509              | 4       |
| Caelo                     | Tea tree oil | 17067706              | 7       |
| Caelo                     | Tea tree oil | 18047603              | 2       |
| Caelo                     | Tea tree oil | 17322711              | 3       |
| Caelo                     | Tea tree oil | 192425018             | 1       |
| Caelo                     | Tea tree oil | 18047602              | 2       |
| Caelo                     | Tea tree oil | 18047610              | 2       |
| Caelo                     | Tea tree oil | 300469                | 1       |
| Caelo                     | Tea tree oil | 15337111              | 2       |
| Caelo                     | Tea tree oil | 13099506              | 6       |
| Caelo                     | Tea tree oil | 14071604              | 2       |
| Caelo                     | Tea tree oil | 14302301              | 8       |
| Caelo                     | Tea tree oil | 14203201              | 1       |
| Caelo                     | Tea tree oil | 15051807              | 2       |
| Caelo                     | Tea tree oil | 15337112              | 5       |

*continued on the next page*

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| Supplier              | Substance    | Batch           | Spectra |
|-----------------------|--------------|-----------------|---------|
| Caelo                 | Tea tree oil | 17322716        | 4       |
| Caelo                 | Tea tree oil | 16007506        | 7       |
| Caelo                 | Tea tree oil | 12201311        | 4       |
| Caelo                 | Tea tree oil | 13288902        | 1       |
| Caelo                 | Tea tree oil | 170667706       | 3       |
| Caelo                 | Tea tree oil | 18047611        | 4       |
| Caelo                 | Tea tree oil | 17322707        | 1       |
| Caelo                 | Tea tree oil | 192425001       | 2       |
| Caelo                 | Tea tree oil | 192425007       | 2       |
| Caelo                 | Tea tree oil | 19245018        | 1       |
| Caelo                 | Tea tree oil | 15337106        | 3       |
| Caelo                 | Tea tree oil | 15337120        | 4       |
| Caelo                 | Tea tree oil | 18001809        | 2       |
| Caesar & Loretz       | Tea tree oil | 15337119        | 1       |
| Caesar & Loretz GmbH  | Tea tree oil | 17322710        | 3       |
| Caesar & Loretz GmbH  | Tea tree oil | 192425004       | 1       |
| Cealo                 | Tea tree oil | 12201303        | 1       |
| Devesa                | Tea tree oil | 18047602        | 1       |
| Ebert 01.09.2016      | Tea tree oil | 15337105        | 1       |
| Gehe                  | Tea tree oil | K203705         | 3       |
| L12                   | Tea tree oil | 15337119        | 1       |
| L12                   | Tea tree oil | 18047602        | 1       |
| Caelo                 | Tea tree oil | 17067705        | 6       |
| Melaleuka GmbH        | Tea tree oil | MCZWH14         | 1       |
| Minck                 | Tea tree oil | 1511E-03093     | 1       |
| Noweda                | Tea tree oil | 18047603        | 1       |
| Noweda                | Tea tree oil | 17322711        | 1       |
| Caelo                 | Tea tree oil | 17322706        | 3       |
| Noweda/Taoasis        | Tea tree oil | 122038-8756     | 1       |
| Phönix                | Tea tree oil | 17067705        | 1       |
| primavera             | Tea tree oil | 5604136         | 1       |
| Sanacorp/Taoasis      | Tea tree oil | 76283-777       | 1       |
| Sensient              | Tea tree oil | C9663           | 1       |
| Taoasis               | Tea tree oil | 516495-108562   | 1       |
| Taoasis               | Tea tree oil | 535627-110746   | 2       |
| Taoasis               | Tea tree oil | 41015006139     | 1       |
| Taoasis               | Tea tree oil | 556031-114257   | 2       |
| Taoasis               | Tea tree oil | 33152-112369    | 1       |
| Taoasis               | Tea tree oil | 76283-778       | 1       |
| Taoasis               | Tea tree oil | 92962-3626      | 1       |
| Taoasis               | Tea tree oil | 122038-8343     | 1       |
| Taoasis               | Tea tree oil | 122038-9077     | 1       |
| Taoasis GmbH          | Tea tree oil | 98546           | 1       |
| Taoasis/Noweda        | Tea tree oil | 20644-5389      | 1       |
| Taoasis/Taoasis       | Tea tree oil | 20269-117745G09 | 1       |
| Apoth.Bauer&Co,Münch  | Tea tree oil |                 | 1       |
| Apotheker bauer       | Tea tree oil |                 | 1       |
| bauer und cie münchen | Tea tree oil |                 | 2       |
| Caelo                 | Tea tree oil | 12201303        | 3       |
| Caelo                 | Tea tree oil | 14203203        | 2       |

- 241 193 spectra from 1121 *Apo-Ident* customers from a total of 46 928 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Tea tree oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Tea tree oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 169           | 1              | 241 193       |

The substance/substance group *Tea tree oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.4118 % (> 97.6471 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Tea tree oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Citronella oil                | 38.05                  | —                              |
| Verbena oil, nature-identical | 57.69                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Tea tree oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

## Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 31023     | 31023               | 0.00                         | 56.01                           |
| 31401     | 34712               | 15.09                        | 51.82                           |
| 31960     | 31023               | 8.16                         | 57.58                           |
| 33478     | 34712               | 9.14                         | 73.15                           |
| 34712     | 34712               | 0.00                         | 64.84                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Thyme oil, thymol type**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30206-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Thyme oil, thymol type; Thymi typo thymolo aetheroleum

### Special notes

When selecting the *Thyme oil, thymol type* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Thyme oil, thymol type    | 6      | 3      | 105    |

## Second-stage model

For differentiation of the substance/substance group *Thyme oil, thymol type* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Thyme oil, thymol type*:

| Supplier  | Substance           | Batch    | Sample ID | Spectra | Certificate |
|-----------|---------------------|----------|-----------|---------|-------------|
| Bombastus | Thyme oil, thymo... | 17001282 | 33878     | 40      | 20171108    |
| Bombastus | Thyme oil, thymo... | 18003401 | 34519     | 40      | 124170      |
| Bombastus | Thyme oil, thymo... | 19001870 | 35066     | 40      | 20190322    |
| Caelo     | Thyme oil, thymo... | 12020518 | 31018     | 40      | 1407220     |
| Caelo     | Thyme oil, thymo... | 14225405 | 31566     | 60      | 20140822    |
| Caelo     | Thyme oil, thymo... | 15230104 | 32265     | 40      | 20150702    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 260 spectra of 6 reference samples from the substance/substance group *Thyme oil, thymol type*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 6 different batches.
- 63 679 spectra from a total of 1301 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Thyme oil, thymol type*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.



| Supplier  | Substance              | Batch    | Sample ID | Spectra |
|-----------|------------------------|----------|-----------|---------|
| Bombastus | Thyme oil, thymol type | 305865   | 33877     | 40      |
| Caelo     | Thyme oil, thymol type | 163279   | 33083     | 40      |
| Caelo     | Thyme oil, thymol type | 16327902 | 33477     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 332 spectra from 149 *Apo-Ident* customers from 110 batches from the substance/substance group *Thyme oil, thymol type*.
- Among them are spectra of independent samples from 104 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier               | Substance              | Batch       | Spectra |
|------------------------|------------------------|-------------|---------|
| Caelo                  | Thyme oil, thymol type | 18087320    | 1       |
| Anzag 27.12.12 ek:8,71 | Thyme oil, thymol type | 12020510    | 2       |
| Bombastus              | Thyme oil, thymol type | 268010      | 1       |
| Bombastus              | Thyme oil, thymol type | 271263      | 1       |
| Bombastus              | Thyme oil, thymol type | 283494      | 1       |
| Bombastus              | Thyme oil, thymol type | 305865      | 1       |
| Bombastus              | Thyme oil, thymol type | 19006602    | 1       |
| Bombastus              | Thyme oil, thymol type | 298188      | 1       |
| Bombastus              | Thyme oil, thymol type | 18002293    | 1       |
| Caelo                  | Thyme oil, thymol type | 14225406    | 5       |
| Caelo                  | Thyme oil, thymol type | 14071202    | 1       |
| Caelo                  | Thyme oil, thymol type | 3211I-02023 | 1       |
| Caelo                  | Thyme oil, thymol type | 11275801    | 1       |
| Caelo                  | Thyme oil, thymol type | 11275811    | 2       |
| Caelo                  | Thyme oil, thymol type | 12020510    | 6       |
| Caelo                  | Thyme oil, thymol type | 13021303    | 1       |
| Caelo                  | Thyme oil, thymol type | 1202510     | 1       |
| Caelo                  | Thyme oil, thymol type | 13044716    | 3       |
| Caelo                  | Thyme oil, thymol type | 6081401     | 1       |
| Caelo                  | Thyme oil, thymol type | 13044715    | 2       |
| Caelo                  | Thyme oil, thymol type | 14225412    | 3       |
| Caelo                  | Thyme oil, thymol type | 14225408    | 3       |
| Caelo                  | Thyme oil, thymol type | 14225417    | 4       |
| Caelo                  | Thyme oil, thymol type | 14381301    | 1       |
| Caelo                  | Thyme oil, thymol type | 15402204    | 1       |
| Caelo                  | Thyme oil, thymol type | 15402203    | 1       |
| Caelo                  | Thyme oil, thymol type | 154022002   | 1       |
| Caelo                  | Thyme oil, thymol type | 1540220     | 1       |
| Caelo                  | Thyme oil, thymol type | 163279902   | 1       |
| Caelo                  | Thyme oil, thymol type | 16327902    | 9       |
| Caelo                  | Thyme oil, thymol type | 24061701    | 1       |
| Caelo                  | Thyme oil, thymol type | 15402219    | 1       |
| Caelo                  | Thyme oil, thymol type | 16327906    | 1       |
| Caelo                  | Thyme oil, thymol type | 16327911    | 1       |
| Caelo                  | Thyme oil, thymol type | 18087305    | 1       |

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| Supplier                   | Substance              | Batch           | Spectra |
|----------------------------|------------------------|-----------------|---------|
| Caelo                      | Thyme oil, thymol type | 18097309        | 1       |
| Caelo                      | Thyme oil, thymol type | 5121816         | 1       |
| Caelo                      | Thyme oil, thymol type | 18087312        | 7       |
| Caelo                      | Thyme oil, thymol type | 18087308        | 1       |
| Caelo                      | Thyme oil, thymol type | 18087313        | 2       |
| Caelo                      | Thyme oil, thymol type | 18252007        | 1       |
| Caelo                      | Thyme oil, thymol type | 18087321        | 1       |
| Caelo                      | Thyme oil, thymol type | 19242303        | 3       |
| Caelo                      | Thyme oil, thymol type | 1017Q-02023     | 1       |
| Caelo                      | Thyme oil, thymol type | 18087319        | 3       |
| Caelo                      | Thyme oil, thymol type | 14225418        | 1       |
| Caelo                      | Thyme oil, thymol type | 12020515        | 1       |
| Caelo                      | Thyme oil, thymol type | 13044705        | 1       |
| Caelo                      | Thyme oil, thymol type | 13044710        | 1       |
| Caelo                      | Thyme oil, thymol type | 14225403        | 1       |
| Caelo                      | Thyme oil, thymol type | 14225414        | 1       |
| Caelo                      | Thyme oil, thymol type | 15042208        | 1       |
| Caelo                      | Thyme oil, thymol type | 16327909        | 7       |
| Caelo                      | Thyme oil, thymol type | 12020503        | 3       |
| Caelo                      | Thyme oil, thymol type | 15402202        | 29      |
| Caelo                      | Thyme oil, thymol type | 13044702        | 3       |
| Caelo                      | Thyme oil, thymol type | 14225413        | 9       |
| Caelo                      | Thyme oil, thymol type | 13044707        | 7       |
| Caelo                      | Thyme oil, thymol type | Bittenachtragen | 1       |
| Caelo                      | Thyme oil, thymol type | 12020514        | 5       |
| Caelo                      | Thyme oil, thymol type | 18087309        | 14      |
| Caelo                      | Thyme oil, thymol type | 18025201        | 10      |
| Caelo                      | Thyme oil, thymol type | 12020511        | 1       |
| Caelo                      | Thyme oil, thymol type | 3313U-02023     | 1       |
| Caelo                      | Thyme oil, thymol type | 2615A-02023     | 1       |
| Caelo                      | Thyme oil, thymol type | 2016E-02023     | 1       |
| Caelo                      | Thyme oil, thymol type | 18087301        | 6       |
| Caelo                      | Thyme oil, thymol type | 3018E-02023     | 1       |
| Caelo                      | Thyme oil, thymol type | 13044709        | 1       |
| Caelo                      | Thyme oil, thymol type | 16327904        | 2       |
| Caelo                      | Thyme oil, thymol type | 16327915        | 1       |
| Caelo                      | Thyme oil, thymol type | 15402207        | 6       |
| Caelo                      | Thyme oil, thymol type | 180887320       | 1       |
| Caelo                      | Thyme oil, thymol type | 18087314        | 2       |
| Caelo                      | Thyme oil, thymol type | 142225412       | 1       |
| Caelo                      | Thyme oil, thymol type | 315A-02023      | 1       |
| Caelo                      | Thyme oil, thymol type | 1632910         | 1       |
| Caelo                      | Thyme oil, thymol type | 10118603        | 1       |
| Caelo                      | Thyme oil, thymol type | 18087307        | 2       |
| Caelo                      | Thyme oil, thymol type | 14225410        | 2       |
| Caelo                      | Thyme oil, thymol type | 12201104        | 5       |
| Caelo                      | Thyme oil, thymol type | 14225401        | 3       |
| Caelo                      | Thyme oil, thymol type | 11275806        | 1       |
| Caelo                      | Thyme oil, thymol type | 12165401        | 1       |
| Caelo                      | Thyme oil, thymol type | 1221104         | 1       |
| Caelo                      | Thyme oil, thymol type | 16327903        | 9       |
| Caelo                      | Thyme oil, thymol type | 192423004       | 4       |
| Caelo                      | Thyme oil, thymol type | 13044708        | 6       |
| Caesar & Loretz GmbH       | Thyme oil, thymol type | 18087312        | 1       |
| Caesar & Loretz GmbH       | Thyme oil, thymol type | 18087319        | 2       |
| Caesar & Loretz GmbH       | Thyme oil, thymol type | 192423004       | 1       |
| Caesar & Loretz GmbH       | Thyme oil, thymol type | 192423013       | 1       |
| Caesar & Loretz GmbH       | Thyme oil, thymol type | 192423006       | 1       |
| Caesar & Loretz GmbH / ... | Thyme oil, thymol type | 18087320        | 1       |
| Caesar & Loretz/Noweda     | Thyme oil, thymol type | 15402202        | 1       |

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| Supplier               | Substance              | Batch            | Spectra |
|------------------------|------------------------|------------------|---------|
| Euro OTC               | Thyme oil, thymol type | 18087307         | 8       |
| Fagron                 | Thyme oil, thymol type | 10L20-N09        | 1       |
| Fagron                 | Thyme oil, thymol type | 12020518         | 1       |
| Fagron                 | Thyme oil, thymol type | 18087309         | 3       |
| Fiebi 07.11.12 ek:8,48 | Thyme oil, thymol type | 12020503         | 1       |
| Gehe                   | Thyme oil, thymol type | 15402202         | 1       |
| GEHE 02.07.2014        | Thyme oil, thymol type | 13044715         | 3       |
| Caelo                  | Thyme oil, thymol type | 301115           | 1       |
| Caelo                  | Thyme oil, thymol type | 15230104/1100516 | 1       |
| Caelo                  | Thyme oil, thymol type | 1120917          | 1       |
| Caelo                  | Thyme oil, thymol type | 16327910         | 17      |
| Kögl                   | Thyme oil, thymol type | 14602170617      | 1       |
| Caelo                  | Thyme oil, thymol type | 15402208         | 4       |
| L12                    | Thyme oil, thymol type | 18087309         | 1       |
| Noweda                 | Thyme oil, thymol type | 18087307         | 1       |
| Noweda                 | Thyme oil, thymol type | 18087319         | 2       |
| Phoenix                | Thyme oil, thymol type | 15402202         | 1       |
| Phönix                 | Thyme oil, thymol type | 18087309         | 1       |
| PVL                    | Thyme oil, thymol type | 271112           | 1       |
| Sanacorp               | Thyme oil, thymol type | 16327910         | 1       |
| Sanacorp               | Thyme oil, thymol type | 18087307         | 1       |
| Caelo                  | Thyme oil, thymol type | 14225409         | 2       |
| Taoasis                | Thyme oil, thymol type | 28739-106640     | 1       |
| Taoasis                | Thyme oil, thymol type | 31911-109378     | 1       |
| Taoasis                | Thyme oil, thymol type | 109378           | 1       |
| Taoasis                | Thyme oil, thymol type | 31911-110649     | 1       |
| Taoasis                | Thyme oil, thymol type | 28739-104426     | 1       |
| TAOASIS                | Thyme oil, thymol type | 16327908         | 1       |
| VDL                    | Thyme oil, thymol type | 14225413         | 1       |
|                        | Thyme oil, thymol type | 13044708         | 1       |
| Caelo                  | Thyme oil, thymol type | 15230104         | 11      |
| Caelo                  | Thyme oil, thymol type | 12020518         | 5       |
| Caelo                  | Thyme oil, thymol type | 14225405         | 1       |
| Euro OTC               | Thyme oil, thymol type |                  | 1       |
| Bombastus              | Thyme oil, thymol type | 19001870         | 1       |
| Fagron                 | Thyme oil, thymol type |                  | 1       |

- 241 031 spectra from 1121 *Apo-Ident* customers from a total of 46 899 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Thyme oil, thymol type* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Thyme oil, thymol type* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 260           | 0              | 63 679        |
| <b>Type B</b> | 0              | 120           | 0              | 91 371        |
| <b>Type C</b> | 0              | 326           | 6              | 241 031       |

The substance/substance group *Thyme oil, thymol type* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | <b>Specificity</b>       | <b>Recognition rate</b>  |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.6923 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 98.1928 % (> 97.2892 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Thyme oil, thymol type* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| <b>Substance</b> | <b>Distance in main model</b> | <b>Distance in second-stage model</b> |
|------------------|-------------------------------|---------------------------------------|
| Oregano oil      | 25.84                         | –                                     |
| Coriander oil    | 63.51                         | –                                     |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Thyme oil, thymol type* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31018            | 31018                      | 0.00                                | 47.03                                  |
| 31566            | 31018                      | 7.23                                | 48.49                                  |
| 32265            | 31018                      | 13.14                               | 40.33                                  |
| 33878            | 31018                      | 13.23                               | 43.26                                  |
| 34519            | 31018                      | 20.94                               | 37.99                                  |
| 35066            | 31018                      | 23.08                               | 35.05                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all

substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Triglycerides</b>                                             |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30647-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Triglycerides; Almond oil, refined; Apricot kernel oil, refined; Avocado oil, refined; Borage oil, refined, stabilised; Carthami oleum raffinatum; Codliver oil (type A); Corn oil, refined; Decyl oleate; Decylis oleas; Evening primrose oil, refined; Flaxseed oil, native; Grape seed oil, refined; Iecoris aselli oleum A; Jojoba oil, native; Laurel oil; Lecithinum e sojæ, liquidus; Oenotheræ oleum raffinatum; Oleum amygdalarum raffinatum; Oleum arachidis raffinatum; Oleum boraginis raffinatum; Oleum cucurbita semen; Oleum helianthi raffinatum; Oleum juglandis raffinatum; Oleum lauri expressum; Oleum lini; Oleum maydis raffinatum; Oleum omega-3 18/12; Oleum persea americana raffinatum; Oleum pruni armeniæ raffinat; Oleum rapæ raffinatum; Oleum sesami raffinatum; Oleum simmondsia chinensis; Oleum sojæ raffinatum; Oleum vitis viniferae raffinatum; Oleyl oleate (stabilised); Oleylis oleas; Olivæ oleum virginale; Olive oil, native; Omega-3-fish oil; Peanut oil, refined; Pumpkin seed oil, pressed; Rapeseed oil, refined; Safflower oil, refined type I; Sesame oil, refined; Shea butter, refined; Soy lecithin, liquid; Soy oil, refined; Sunflower oil, refined; Tritici aestivi oleum raffinatum; Walnut oil, refined; Wheatgerm oil, refined

### Special notes

When selecting the *Triglycerides* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.



## Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Triglycerides             | 126    | 110    | 3634   |

## Second-stage model

For differentiation of the substance/substance group *Triglycerides* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Triglycerides*:

| Supplier      | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|---------------|---------------------|------------------|-----------|---------|--------------------|
| Caelo         | Almond oil, refi... | 13350007         | 31250     | 40      | 1407348            |
| Caelo         | Almond oil, refi... | 14042704         | 31337     | 40      | 20140211           |
| Caelo         | Almond oil, refi... | 191871           | 34617     | 40      | 20190709*          |
| Euro OTC      | Almond oil, refi... | 1510014          | 31770     | 60      | 20151022*          |
| Euro OTC      | Almond oil, refi... | 1603025          | 32188     | 40      | 20160428*          |
| Euro OTC      | Almond oil, refi... | 1909015          | 34751     | 40      | 20191015*          |
| Caelo         | Apricot kernel o... | 11346402         | 30840     | 40      | 20111214           |
| Caelo         | Apricot kernel o... | 13357604         | 31375     | 40      | 1412121            |
| Caelo         | Apricot kernel o... | 162361           | 32683     | 40      | 20160818*          |
| Caelo         | Apricot kernel o... | 16236106         | 32931     | 40      | 20160818           |
| Caelo         | Apricot kernel o... | 170555           | 33060     | 30      | 20170308*          |
| Caelo         | Apricot kernel o... | 190665           | 34666     | 40      | 20190318*          |
| Caelo         | Apricot kernel o... | 20002355         | 35038     | 40      | 20200729*          |
| Caelo         | Avocado oil, ref... | 13361406         | 31336     | 40      | AR-15-FG-002721-01 |
| Caelo         | Avocado oil, ref... | 14363703         | 31662     | 60      | 20150114           |
| Caelo         | Avocado oil, ref... | 170388           | 33067     | 40      | 20170209*          |
| Euro OTC      | Avocado oil, ref... | 1501015          | 31801     | 60      | 20150121*          |
| Euro OTC      | Avocado oil, ref... | 1605034          | 32457     | 40      | 20160607*          |
| Caelo         | Borage oil, refi... | 13170606         | 31161     | 40      | 1407319            |
| Caelo         | Borage oil, refi... | 14161904         | 31384     | 40      | 20140522           |
| Caelo         | Borage oil, refi... | 16266007         | 33510     | 40      | 20161027           |
| Caelo         | Borage oil, refi... | 182958           | 34643     | 40      | 20181212*          |
| Caelo         | Borage oil, refi... | 192492           | 34721     | 40      | 20190920*          |
| Caelo         | Borage oil, refi... | 20000791         | 35057     | 40      | 20200326*          |
| Caelo         | Codliver oil (ty... | 12062501         | 30878     | 40      | 20120411           |
| Caelo         | Codliver oil (ty... | 13396403         | 31361     | 60      | AR-14-FG-012167-01 |
| Fagron        | Codliver oil (ty... | 14D16-B08-304341 | 31677     | 60      | 20140520           |
| Fagron        | Codliver oil (ty... | 15A07-B05-304428 | 31825     | 60      | 20150116           |
| Henry Lamotte | Codliver oil (ty... | 8006235003       | 35286     | 40      | 20200701           |
| Caelo         | Corn oil, refined   | 12141511         | 31016     | 40      | 1407320            |
| Caelo         | Corn oil, refined   | 13249005         | 31274     | 40      | 1407347            |
| Caelo         | Corn oil, refined   | 13249005         | 31344     | 40      | 20130819           |
| Caelo         | Corn oil, refined   | 191129           | 34437     | 40      | 20190424*          |
| Caelo         | Decyl oleate        | 13378403         | 31382     | 40      | AR-15-FG-000232-01 |
| Caelo         | Decyl oleate        | 170595           | 33070     | 40      | 20170308*          |
| Caelo         | Decyl oleate        | 20002016         | 35018     | 40      | 20200710*          |

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| Supplier      | Substance           | Batch      | Sample ID | Spectra | Certificate        |
|---------------|---------------------|------------|-----------|---------|--------------------|
| Euro OTC      | Decyl oleate        | 1309018-01 | 31584     | 60      | 20131007           |
| Caelo         | Evening primrose... | 12325103   | 30855     | 40      | 20121107           |
| Caelo         | Evening primrose... | 14010915   | 31460     | 60      | AR-14-FG-012898-01 |
| Caelo         | Evening primrose... | 14258610   | 31572     | 60      | AR-15-FG-002720-01 |
| Caelo         | Evening primrose... | 20001052   | 35056     | 40      | 20200505*          |
| Euro OTC      | Evening primrose... | 1407002-02 | 31589     | 60      | 20140718           |
| Euro OTC      | Evening primrose... | 1509005    | 31775     | 60      | 20150921*          |
| Euro OTC      | Evening primrose... | 2105001    | 35579     | 50      | 20210701*          |
| Bombastus     | Flaxseed oil, na... | 281489     | 31172     | 40      | 1407202            |
| Bombastus     | Flaxseed oil, na... | 309176     | 33880     | 40      | 114126             |
| Bombastus     | Flaxseed oil, na... | 19001510   | 34522     | 40      | 130458             |
| Bombastus     | Flaxseed oil, na... | 20004426   | 35288     | 40      | 20201113           |
| Caelo         | Flaxseed oil, na... | 14087903   | 31326     | 40      | 20140401           |
| Caelo         | Flaxseed oil, na... | 170467     | 33064     | 40      | 20170222*          |
| Caelo         | Grape seed oil, ... | 13065302   | 31121     | 40      | 1407373            |
| Caelo         | Grape seed oil, ... | 16092401   | 32746     | 40      | 20160407           |
| Caelo         | Grape seed oil, ... | 192412     | 34713     | 40      | 20191002*          |
| Caelo         | Grape seed oil, ... | 20000789   | 35046     | 40      | 20200326*          |
| Caelo         | Jojoba oil, native  | 13287709   | 31322     | 40      | AR-14-FG-012487-01 |
| Caelo         | Jojoba oil, native  | 13287709   | 31482     | 60      | 20130920           |
| Caelo         | Jojoba oil, native  | 13287709   | 31519     | 60      | 20130920           |
| Caelo         | Jojoba oil, native  | 16070602   | 33254     | 40      | 20160316           |
| Euro OTC      | Jojoba oil, native  | 1808038    | 34300     | 40      | 20180917*          |
| Euro OTC      | Jojoba oil, native  | 2001009    | 34807     | 40      | 20200131*          |
| Henry Lamotte | Jojoba oil, native  | 8002391001 | 33876     | 40      | 20161124           |
| Henry Lamotte | Jojoba oil, native  | 8004998001 | 34691     | 40      | 20190221           |
| Caelo         | Laurel oil          | 13024511   | 31122     | 40      | 1403397            |
| Caelo         | Laurel oil          | 15216401   | 31833     | 60      | 1606485            |
| Caelo         | Laurel oil          | 16275701   | 33255     | 40      | 20161005           |
| Caelo         | Laurel oil          | 190919     | 34441     | 40      | 20190509*          |
| Caelo         | Laurel oil          | 192363     | 34711     | 40      | 20190913*          |
| Caelo         | Oleyl oleate (st... | 12220205   | 30754     | 40      | 20120803           |
| Caelo         | Oleyl oleate (st... | 12220207   | 30863     | 40      | 20120803           |
| Caelo         | Oleyl oleate (st... | 14005001   | 31496     | 60      | AR-15-FG-001552-01 |
| Caelo         | Oleyl oleate (st... | 21000767   | 35299     | 40      | 20210401*          |
| Bombastus     | Olive oil, native   | 306949     | 32990     | 40      | 20170116           |
| Bombastus     | Olive oil, native   | 306949     | 32991     | 40      | 20170116           |
| Bombastus     | Olive oil, native   | 19001848   | 34521     | 40      | 130315             |
| Caelo         | Olive oil, native   | 14024409   | 31356     | 60      | 20140130           |
| Caelo         | Olive oil, native   | 161446     | 32195     | 40      | 20160524*          |
| Caelo         | Olive oil, native   | 163274     | 33063     | 30      | 20160112*          |
| Caelo         | Olive oil, native   | 20001410   | 35053     | 40      | 20200507*          |
| Euro OTC      | Olive oil, native   | 1407052-02 | 31585     | 60      | 20140812           |
| Euro OTC      | Olive oil, native   | 1602022    | 32186     | 40      | 20160309*          |
| Henry Lamotte | Omega-3-fish oil    | 0123108    | 30679     | 40      | 20120613           |
| Henry Lamotte | Omega-3-fish oil    | 0123780    | 31178     | 40      | 20130403           |
| Henry Lamotte | Omega-3-fish oil    | 0124495    | 31540     | 60      | 20140325           |
| Henry Lamotte | Omega-3-fish oil    | 1000000642 | 31729     | 60      | 1601423            |
| Henry Lamotte | Omega-3-fish oil    | 1000000642 | 31792     | 60      | 20150414           |
| Henry Lamotte | Omega-3-fish oil    | 1000001175 | 31875     | 60      | 20150626           |
| Caelo         | Peanut oil, refi... | 13306106   | 31246     | 40      | 1406534            |
| Caelo         | Peanut oil, refi... | 14115404   | 31346     | 60      | 20140415           |
| Caelo         | Peanut oil, refi... | 162495     | 32680     | 40      | 20160831*          |
| Caelo         | Peanut oil, refi... | 170428     | 33059     | 40      | 20170215*          |
| Caelo         | Peanut oil, refi... | 163553     | 33085     | 40      | 20170106*          |
| Caelo         | Peanut oil, refi... | 20001473   | 35045     | 40      | 20200512*          |
| Caelo         | Pumpkin seed oil... | 13358504   | 31332     | 40      | AR-14-FG-012336-02 |
| Caelo         | Pumpkin seed oil... | 14199402   | 31609     | 60      | 1507428            |
| Caelo         | Pumpkin seed oil... | 171379     | 33917     | 40      | 20170606*          |
| Caelo         | Pumpkin seed oil... | 191450     | 34663     | 40      | 20190605*          |

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| Supplier      | Substance              | Batch      | Sample ID | Spectra | Certificate        |
|---------------|------------------------|------------|-----------|---------|--------------------|
| Caelo         | Pumpkin seed oil, r... | 192743     | 34718     | 40      | 20191008*          |
| Caelo         | Rapeseed oil, re...    | 12054402   | 30647     | 40      | 20120321           |
| Caelo         | Rapeseed oil, re...    | 13011008   | 31215     | 40      | 1406536            |
| Caelo         | Rapeseed oil, re...    | 13236506   | 31376     | 40      | 20130806           |
| Caelo         | Safflower oil, r...    | 13011302   | 30981     | 80      | 1407318            |
| Caelo         | Safflower oil, r...    | 13358705   | 31362     | 60      | 20131122           |
| Caelo         | Safflower oil, r...    | 161849     | 32334     | 40      | 20160623*          |
| Caelo         | Sesame oil, refi...    | 12054508   | 30873     | 40      | 20120323           |
| Caelo         | Sesame oil, refi...    | 13397402   | 31350     | 60      | AR-14-FG-012338-01 |
| Caelo         | Sesame oil, refi...    | 192560     | 34716     | 40      | 20190924*          |
| Caelo         | Sesame oil, refi...    | 20000741   | 35055     | 40      | 20200327*          |
| Caelo         | Shea butter, ref...    | 13143819   | 31513     | 60      | 1412122            |
| Caelo         | Shea butter, ref...    | 14261107   | 31582     | 60      | 20140923           |
| Caelo         | Shea butter, ref...    | 15303004   | 31826     | 60      | 20151112           |
| Caelo         | Shea butter, ref...    | 15144903   | 32300     | 40      | 20150703           |
| Caelo         | Shea butter, ref...    | 15144903   | 32301     | 40      | 20150703           |
| Euro OTC      | Soy lecithin, li...    | 1305019-01 | 31034     | 40      | 20130603           |
| Euro OTC      | Soy lecithin, li...    | 1404022-01 | 31523     | 60      | 8779               |
| Euro OTC      | Soy lecithin, li...    | 1907035    | 34753     | 40      | 20190911*          |
| Caelo         | Soy oil, refined       | 13361305   | 31378     | 40      | 20131122           |
| Caelo         | Soy oil, refined       | 15239302   | 31834     | 60      | 20150817           |
| Caelo         | Soy oil, refined       | 15239302   | 32729     | 40      | 20150817           |
| Caelo         | Soy oil, refined       | 171217     | 33309     | 40      | 20170509*          |
| Caelo         | Sunflower oil, r...    | 13011411   | 31217     | 40      | 1406538            |
| Caelo         | Sunflower oil, r...    | 13225110   | 31374     | 40      | 20130813           |
| Caelo         | Sunflower oil, r...    | 15422804   | 32745     | 40      | 20151218           |
| Henry Lamotte | Sunflower oil, r...    | 8002491005 | 33472     | 40      | 20170210           |
| Henry Lamotte | Sunflower oil, r...    | 1000010859 | 34701     | 40      | 20190503           |
| Henry Lamotte | Sunflower oil, r...    | 1000015924 | 35467     | 40      | 20210218           |
| Caelo         | Walnut oil, refi...    | 13202401   | 31216     | 40      | 1406537            |
| Caelo         | Walnut oil, refi...    | 13364501   | 31380     | 40      | 20131122           |
| Caelo         | Walnut oil, refi...    | 173248     | 33916     | 40      | 20170512*          |
| Caelo         | Wheatgerm oil, r...    | 13261604   | 31491     | 40      | 1412119            |
| Caelo         | Wheatgerm oil, r...    | 16137403   | 32730     | 40      | 20160708           |
| Caelo         | Wheatgerm oil, r...    | 191432     | 34602     | 40      | 20190605*          |
| Caelo         | Wheatgerm oil, r...    | 20001556   | 35043     | 40      | 20200515*          |
| Caelo         | Wheatgerm oil, r...    | 20004490   | 35271     | 40      | 20210211*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 5950 spectra of 133 reference samples from the substance/substance group *Triglycerides*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 126 different batches.
- 57 989 spectra from a total of 1181 batches from further 198 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 4465 spectra of 111 reference samples from the substance/substance group *Triglycerides*.
- Among them are spectra of independent samples from 110 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Almond oil, refined             | 161444   | 32198     | 40      |
| Caelo    | Almond oil, refined             | 170422   | 33066     | 40      |
| Caelo    | Almond oil, refined             | 171765   | 33314     | 40      |
| Caelo    | Almond oil, refined             | 20000746 | 35030     | 40      |
| Caelo    | Almond oil, refined             | 20001624 | 35031     | 40      |
| Caelo    | Almond oil, refined             | 21001240 | 35466     | 40      |
| Euro OTC | Almond oil, refined             | 1701036  | 33231     | 40      |
| Euro OTC | Almond oil, refined             | 1801030  | 33924     | 40      |
| Euro OTC | Almond oil, refined             | 1807007  | 34195     | 40      |
| Euro OTC | Almond oil, refined             | 1904007  | 34493     | 40      |
| Euro OTC | Almond oil, refined             | 2004032  | 35060     | 40      |
| Euro OTC | Almond oil, refined             | 2009004  | 35079     | 40      |
| Euro OTC | Almond oil, refined             | 2101033  | 35246     | 40      |
| Euro OTC | Almond oil, refined             | 2107007  | 35625     | 50      |
| Caelo    | Apricot kernel oil, refined     | 16236109 | 33512     | 40      |
| Caelo    | Apricot kernel oil, refined     | 172518   | 33700     | 40      |
| Caelo    | Apricot kernel oil, refined     | 20001746 | 35039     | 40      |
| Caelo    | Avocado oil, refined            | 161047   | 32197     | 40      |
| Caelo    | Avocado oil, refined            | 161859   | 32315     | 40      |
| Caelo    | Borage oil, refined, stabili... | 162660   | 32685     | 40      |
| Caelo    | Borage oil, refined, stabili... | 17055407 | 33853     | 40      |
| Caelo    | Codliver oil (type A)           | 162739   | 32690     | 40      |
| Caelo    | Codliver oil (type A)           | 171378   | 33308     | 40      |
| Caelo    | Codliver oil (type A)           | 20000831 | 35048     | 40      |
| Caelo    | Corn oil, refined               | 162603   | 32689     | 40      |
| Caelo    | Corn oil, refined               | 170550   | 33069     | 40      |
| Caelo    | Corn oil, refined               | 20000641 | 35058     | 40      |
| Caelo    | Decyl oleate                    | 161071   | 32194     | 40      |
| Caelo    | Decyl oleate                    | 172156   | 33671     | 40      |
| Caelo    | Decyl oleate                    | 190883   | 34472     | 40      |
| Caelo    | Evening primrose oil, refined   | 162813   | 32682     | 40      |
| Caelo    | Evening primrose oil, refined   | 191644   | 34604     | 40      |
| Caelo    | Evening primrose oil, refined   | 191754   | 34605     | 40      |
| Caelo    | Evening primrose oil, refined   | 21000915 | 35270     | 40      |
| Caelo    | Evening primrose oil, refined   | 20004047 | 35274     | 40      |
| Euro OTC | Evening primrose oil, refined   | 1605027  | 32463     | 40      |
| Euro OTC | Evening primrose oil, refined   | 1703020  | 33227     | 40      |
| Euro OTC | Evening primrose oil, refined   | 1710011  | 33849     | 40      |
| Euro OTC | Evening primrose oil, refined   | 1803006  | 34095     | 40      |

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| Supplier      | Substance                     | Batch      | Sample ID | Spectra |
|---------------|-------------------------------|------------|-----------|---------|
| Euro OTC      | Evening primrose oil, refined | 1901046    | 34423     | 40      |
| Euro OTC      | Evening primrose oil, refined | 1911009    | 34809     | 40      |
| Euro OTC      | Evening primrose oil, refined | 2003029    | 34832     | 40      |
| Euro OTC      | Evening primrose oil, refined | 2008037    | 35127     | 40      |
| Caelo         | Flaxseed oil, native          | 172364     | 33677     | 40      |
| Caelo         | Flaxseed oil, native          | 190994     | 34439     | 40      |
| Caelo         | Flaxseed oil, native          | 191645     | 34610     | 40      |
| Caelo         | Flaxseed oil, native          | 192554     | 34719     | 40      |
| Caelo         | Flaxseed oil, native          | 20002039   | 35052     | 40      |
| Caelo         | Flaxseed oil, native          | 21001170   | 35465     | 40      |
| Caelo         | Grape seed oil, refined       | 16092402   | 32989     | 40      |
| Caelo         | Grape seed oil, refined       | 16339703   | 33475     | 40      |
| Caelo         | Grape seed oil, refined       | 20001744   | 35047     | 40      |
| Caelo         | Jojoba oil, native            | 170733     | 33892     | 40      |
| Caelo         | Jojoba oil, native            | 191529     | 34611     | 40      |
| Caelo         | Jojoba oil, native            | 20000722   | 35040     | 40      |
| Caelo         | Laurel oil                    | 14176301   | 31657     | 15      |
| Caelo         | Laurel oil                    | 15216402   | 31745     | 60      |
| Caelo         | Laurel oil                    | 18028202   | 33948     | 40      |
| Caelo         | Oleyl oleate (stabilised)     | 161049     | 32202     | 40      |
| Caelo         | Oleyl oleate (stabilised)     | 173581     | 33920     | 40      |
| Caelo         | Olive oil, native             | 170387     | 33068     | 40      |
| Caelo         | Olive oil, native             | 171216     | 33306     | 40      |
| Caelo         | Olive oil, native             | 172365     | 33674     | 40      |
| Caelo         | Olive oil, native             | 21000836   | 35303     | 40      |
| Euro OTC      | Olive oil, native             | 1608006    | 32709     | 40      |
| Euro OTC      | Olive oil, native             | 1802011    | 34005     | 40      |
| Euro OTC      | Olive oil, native             | 1805023    | 34183     | 40      |
| Euro OTC      | Olive oil, native             | 1808026    | 34215     | 40      |
| Euro OTC      | Olive oil, native             | 1903013    | 34495     | 40      |
| Euro OTC      | Olive oil, native             | 1905018    | 34653     | 40      |
| Euro OTC      | Olive oil, native             | 1910015    | 34752     | 40      |
| Euro OTC      | Olive oil, native             | 2001005    | 34806     | 40      |
| Euro OTC      | Olive oil, native             | 2003050    | 34830     | 40      |
| Euro OTC      | Olive oil, native             | 2006034    | 35064     | 40      |
| Euro OTC      | Olive oil, native             | 2012004    | 35244     | 40      |
| Euro OTC      | Olive oil, native             | 2104011    | 35492     | 40      |
| Euro OTC      | Olive oil, native             | 2107030    | 35628     | 50      |
| Henry Lamotte | Omega-3-fish oil              | 1000002824 | 32734     | 40      |
| Henry Lamotte | Omega-3-fish oil              | 1000007067 | 34124     | 40      |
| Henry Lamotte | Omega-3-fish oil              | 1000016012 | 35475     | 40      |
| Bombastus     | Peanut oil, refined           | 19005220   | 35089     | 40      |
| Caelo         | Peanut oil, refined           | 161195     | 32206     | 40      |
| Caelo         | Peanut oil, refined           | 171690     | 33315     | 40      |
| Caelo         | Peanut oil, refined           | 21001091   | 35281     | 40      |
| Henry Lamotte | Peanut oil, refined           | 1000013880 | 35088     | 40      |
| Caelo         | Pumpkin seed oil, pressed     | 15410004   | 32783     | 40      |
| Caelo         | Pumpkin seed oil, pressed     | 180837     | 34061     | 40      |
| Caelo         | Pumpkin seed oil, pressed     | 20003109   | 35732     | 50      |
| Caelo         | Rapeseed oil, refined         | 161850     | 32316     | 40      |
| Caelo         | Rapeseed oil, refined         | 172139     | 33673     | 40      |
| Caelo         | Rapeseed oil, refined         | 20000308   | 35050     | 40      |
| Caelo         | Safflower oil, refined type I | 17092201   | 33653     | 40      |
| Caelo         | Safflower oil, refined type I | 180999     | 34062     | 40      |
| Caelo         | Sesame oil, refined           | 163125     | 33075     | 40      |
| Caelo         | Sesame oil, refined           | 171777     | 33313     | 40      |
| Caelo         | Sesame oil, refined           | 16312505   | 33618     | 40      |
| Caelo         | Shea butter, refined          | 17085805   | 33470     | 40      |
| Euro OTC      | Soy lecithin, liquid          | 1703001-01 | 33838     | 40      |
| Euro OTC      | Soy lecithin, liquid          | 1803030    | 34094     | 40      |

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| Supplier | Substance               | Batch    | Sample ID | Spectra |
|----------|-------------------------|----------|-----------|---------|
| Caelo    | Soy oil, refined        | 16347104 | 33462     | 40      |
| Caelo    | Soy oil, refined        | 20001575 | 35054     | 40      |
| Caelo    | Soy oil, refined        | 21001264 | 35282     | 40      |
| Caelo    | Sunflower oil, refined  | 162758   | 32691     | 40      |
| Caelo    | Sunflower oil, refined  | 191755   | 34613     | 40      |
| Caelo    | Sunflower oil, refined  | 20000985 | 35051     | 40      |
| Caelo    | Walnut oil, refined     | 161007   | 32199     | 40      |
| Caelo    | Walnut oil, refined     | 16100703 | 33488     | 40      |
| Caelo    | Wheatgerm oil, refined  | 16321301 | 33489     | 40      |
| Caelo    | Wheatgerm oil, refined  | 172903   | 33915     | 40      |
| Caelo    | Wheatgerm oil, refined  | 20000829 | 35042     | 40      |
| Caelo    | Grape seed oil, refined | 16339703 | 33476     | 40      |

- 87 026 spectra from a total of 1906 batches from further 320 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 21 991 spectra from 1048 *Apo-Ident* customers from 3689 batches from the substance/substance group *Triglycerides*.
- Among them are spectra of independent samples from 3593 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| 06/20                      | Almond oil, refined | 1000010685  | 1       |
| 14215814                   | Almond oil, refined | 14215814    | 1       |
| 18,01,2021Caesar & Lore... | Almond oil, refined | 20001624007 | 1       |
| ACM                        | Almond oil, refined | KNC1100J15  | 1       |
| ACM                        | Almond oil, refined | KNC0766J15  | 1       |
| ACM                        | Almond oil, refined | KNC1364J15  | 1       |
| ACM                        | Almond oil, refined | KNC1560J16  | 1       |
| AEP                        | Almond oil, refined | 19187101    | 1       |
| AHC03.08.13 EK2,36 100ml   | Almond oil, refined | 5438302     | 1       |
| AHD                        | Almond oil, refined | 130145      | 1       |
| AHD                        | Almond oil, refined | 14139305    | 1       |
| AHD                        | Almond oil, refined | 18015002    | 1       |
| AHD                        | Almond oil, refined | 18184101    | 1       |
| AHD / H.Lamotte            | Almond oil, refined | 8000712001  | 1       |
| Caelo                      | Almond oil, refined | 14215817    | 8       |
| AHD 18.04.18 Henry Lamo... | Almond oil, refined | 8003167001  | 1       |
| AHD/ Henry Lamotte         | Almond oil, refined | 8000915002  | 1       |
| AHD/ Lamotte               | Almond oil, refined | 1000013112  | 1       |
| AHD/ Lamotte               | Almond oil, refined | 1000013565  | 1       |
| Caelo                      | Almond oil, refined | 15197409    | 4       |
| AHD/Lamotte                | Almond oil, refined | 1000010685  | 1       |
| AHD/Lamotte                | Almond oil, refined | 1000012126  | 1       |
| AHD/Lamotte                | Almond oil, refined | 8005936002  | 1       |
| AHL                        | Almond oil, refined | 8003167001  | 1       |
| ALH                        | Almond oil, refined | 8001497001  | 1       |
| Aliance Hearthcave 11.0... | Almond oil, refined | 13236402    | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Alliance H.                | Almond oil, refined | 15409704    | 1       |
| Alliance Healthcare        | Almond oil, refined | 8004039003  | 1       |
| Alliance Healthcare/Lam... | Almond oil, refined | 8001497001  | 1       |
| Alte Apotheke              | Almond oil, refined | 16071007    | 1       |
| Anzag                      | Almond oil, refined | 5214206     | 1       |
| Anzag                      | Almond oil, refined | 219101221   | 1       |
| Anzag                      | Almond oil, refined | 8005936002  | 1       |
| ANZAG                      | Almond oil, refined | 5214206     | 1       |
| Bombastus                  | Almond oil, refined | 1905860     | 1       |
| Anzag 09.02.2013           | Almond oil, refined | 12357101    | 1       |
| Anzag, 03.01.2019          | Almond oil, refined | 18000342    | 1       |
| Anzag, Henry Lamotte       | Almond oil, refined | 8001497001  | 1       |
| Caelo                      | Almond oil, refined | 20001624002 | 1       |
| Anzag/ Henry Lamotte       | Almond oil, refined | 8004039003  | 2       |
| Caelo                      | Almond oil, refined | 14215814    | 4       |
| Caelo                      | Almond oil, refined | 1633327302  | 1       |
| Anzag/Henry Lamotte        | Almond oil, refined | 8003885002  | 1       |
| Anzag/Leyh Pharma am       | Almond oil, refined | 13236404    | 1       |
| Apolda/ Sanacorp           | Almond oil, refined | 14215807    | 1       |
| Apolda/ Sanacorp           | Almond oil, refined | 14139309    | 1       |
| Apomix                     | Almond oil, refined | 8003885002  | 1       |
| Audor Pharma               | Almond oil, refined | 304023      | 1       |
| Bahnhof-Apotheke           | Almond oil, refined | -30-160809  | 1       |
| Beiersdorf                 | Almond oil, refined | 17207905    | 1       |
| Bionorica/Phönix           | Almond oil, refined | 18070602    | 1       |
| biopräp                    | Almond oil, refined | E1810144    | 1       |
| BioPräp                    | Almond oil, refined | E1510042    | 1       |
| BioPräp                    | Almond oil, refined | E1610090    | 1       |
| BioPräp                    | Almond oil, refined | E1902011    | 1       |
| Biopräp / GEHE             | Almond oil, refined | E1403027    | 1       |
| Biopräp / GEHE             | Almond oil, refined | E1410088    | 1       |
| Biopräp/Phönix             | Almond oil, refined | E1805161    | 1       |
| Bombast/Phönix             | Almond oil, refined | 18000342    | 1       |
| Bombastu/Phönix            | Almond oil, refined | 18006808    | 1       |
| Bombastus                  | Almond oil, refined | 267099      | 2       |
| Bombastus                  | Almond oil, refined | 270829      | 1       |
| Bombastus                  | Almond oil, refined | 273578      | 4       |
| Bombastus                  | Almond oil, refined | 274564      | 1       |
| Bombastus                  | Almond oil, refined | 277971      | 4       |
| Bombastus                  | Almond oil, refined | 279230      | 1       |
| Bombastus                  | Almond oil, refined | 281040      | 5       |
| Bombastus                  | Almond oil, refined | 282171      | 1       |
| Bombastus                  | Almond oil, refined | 284968      | 1       |
| Bombastus                  | Almond oil, refined | 283801      | 2       |
| Bombastus                  | Almond oil, refined | 14139305    | 1       |
| Bombastus                  | Almond oil, refined | 288428      | 3       |
| Bombastus                  | Almond oil, refined | 288471      | 3       |
| Bombastus                  | Almond oil, refined | 1233test    | 1       |
| Bombastus                  | Almond oil, refined | 295615      | 3       |
| Bombastus                  | Almond oil, refined | 297872      | 3       |
| Bombastus                  | Almond oil, refined | 300840      | 1       |
| Bombastus                  | Almond oil, refined | 299598      | 1       |
| Bombastus                  | Almond oil, refined | 1509710     | 1       |
| Bombastus                  | Almond oil, refined | 302210      | 5       |
| Bombastus                  | Almond oil, refined | 302209      | 1       |
| Bombastus                  | Almond oil, refined | 304023      | 4       |
| Bombastus                  | Almond oil, refined | 16327302    | 4       |
| Bombastus                  | Almond oil, refined | 306291      | 3       |
| Bombastus                  | Almond oil, refined | 308918      | 4       |
| Bombastus                  | Almond oil, refined | 16327311    | 1       |

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| Supplier  | Substance           | Batch        | Spectra |
|-----------|---------------------|--------------|---------|
| Bombastus | Almond oil, refined | 3089195381   | 1       |
| Bombastus | Almond oil, refined | 308920       | 3       |
| Bombastus | Almond oil, refined | 310859       | 2       |
| Bombastus | Almond oil, refined | 17000424     | 1       |
| Bombastus | Almond oil, refined | 18000341     | 4       |
| Bombastus | Almond oil, refined | 19003906     | 2       |
| Bombastus | Almond oil, refined | 20000844     | 2       |
| Bombastus | Almond oil, refined | 20003200     | 2       |
| Bombastus | Almond oil, refined | 1800342      | 1       |
| Bombastus | Almond oil, refined | 180003415618 | 1       |
| Bombastus | Almond oil, refined | 307298       | 6       |
| Bombastus | Almond oil, refined | 294784       | 4       |
| Bombastus | Almond oil, refined | 8004039003   | 1       |
| Bombastus | Almond oil, refined | 19006436     | 1       |
| Bombastus | Almond oil, refined | 18004502     | 7       |
| Bombastus | Almond oil, refined | 281039       | 1       |
| Bombastus | Almond oil, refined | 15197409     | 1       |
| Bombastus | Almond oil, refined | 307299       | 9       |
| Bombastus | Almond oil, refined | 282093       | 3       |
| Bombastus | Almond oil, refined | 284967       | 2       |
| Bombastus | Almond oil, refined | 286253       | 2       |
| Bombastus | Almond oil, refined | 287416       | 1       |
| Bombastus | Almond oil, refined | 60083010     | 1       |
| Bombastus | Almond oil, refined | 18004503     | 8       |
| Bombastus | Almond oil, refined | 15197412     | 1       |
| Bombastus | Almond oil, refined | 19003889     | 9       |
| Bombastus | Almond oil, refined | 19005859     | 11      |
| Bombastus | Almond oil, refined | 19005860     | 7       |
| Bombastus | Almond oil, refined | 296518       | 3       |
| Bombastus | Almond oil, refined | 298745       | 10      |
| Bombastus | Almond oil, refined | 300841       | 3       |
| Bombastus | Almond oil, refined | 304024       | 3       |
| Bombastus | Almond oil, refined | 17176507     | 1       |
| Bombastus | Almond oil, refined | 108000342    | 1       |
| Bombastus | Almond oil, refined | 47/2014      | 1       |
| Bombastus | Almond oil, refined | 308919       | 5       |
| Bombastus | Almond oil, refined | 20003201     | 7       |
| Bombastus | Almond oil, refined | 296519       | 2       |
| Bombastus | Almond oil, refined | 18000342     | 10      |
| Bombastus | Almond oil, refined | 6862010      | 2       |
| Bombastus | Almond oil, refined | 307297       | 2       |
| Bombastus | Almond oil, refined | 18001780     | 6       |
| Bombastus | Almond oil, refined | 18000340     | 1       |
| Bombastus | Almond oil, refined | 18004501     | 2       |
| Bombastus | Almond oil, refined | 18006806     | 1       |
| Bombastus | Almond oil, refined | 283800       | 2       |
| Bombastus | Almond oil, refined | 292591       | 4       |
| Bombastus | Almond oil, refined | 18006807     | 7       |
| Bombastus | Almond oil, refined | 277912       | 2       |
| Bombastus | Almond oil, refined | 18006808     | 7       |
| Bombastus | Almond oil, refined | 19001703     | 1       |
| Bombastus | Almond oil, refined | 295616       | 5       |
| Bombastus | Almond oil, refined | 306292       | 5       |
| Bombastus | Almond oil, refined | 8002653001   | 2       |
| Bombastus | Almond oil, refined | 19005416     | 1       |
| Bombastus | Almond oil, refined | 20000845     | 10      |
| Bombastus | Almond oil, refined | 292592       | 6       |
| Bombastus | Almond oil, refined | 289709       | 1       |
| Bombastus | Almond oil, refined | 298744       | 2       |
| Bombastus | Almond oil, refined | 302211       | 7       |

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| <b>Supplier</b> | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------|--------------|----------------|
| Bombastus       | Almond oil, refined | 306290       | 1              |
| Bombastus       | Almond oil, refined | 291509       | 5              |
| Bombastus       | Almond oil, refined | 290136       | 1              |
| Bombastus       | Almond oil, refined | 18001782     | 10             |
| Bombastus       | Almond oil, refined | 264164       | 1              |
| Bombastus       | Almond oil, refined | 286254       | 5              |
| Bombastus       | Almond oil, refined | 16115303     | 1              |
| Bombastus       | Almond oil, refined | 19003890     | 6              |
| Bombastus       | Almond oil, refined | 20005068     | 1              |
| Bombastus       | Almond oil, refined | 19001702     | 9              |
| Bombastus       | Almond oil, refined | 15197407     | 1              |
| Bombastus       | Almond oil, refined | 18001781     | 11             |
| Bombastus       | Almond oil, refined | 290135       | 1              |
| Caelo           | Almond oil, refined | 4061202      | 1              |
| Caelo           | Almond oil, refined | 5438302      | 3              |
| Caelo           | Almond oil, refined | 15127304     | 7              |
| Caelo           | Almond oil, refined | 11227406     | 1              |
| Caelo           | Almond oil, refined | 1602211950   | 1              |
| Caelo           | Almond oil, refined | 11314201     | 1              |
| Caelo           | Almond oil, refined | 2405211950   | 1              |
| Caelo           | Almond oil, refined | 12041802     | 1              |
| Caelo           | Almond oil, refined | 6081202      | 1              |
| Caelo           | Almond oil, refined | 12080801     | 3              |
| Caelo           | Almond oil, refined | 22081205     | 1              |
| Caelo           | Almond oil, refined | 7091206      | 1              |
| Caelo           | Almond oil, refined | 12080803     | 7              |
| Caelo           | Almond oil, refined | 11314208     | 1              |
| Caelo           | Almond oil, refined | 13101203     | 1              |
| Caelo           | Almond oil, refined | 12080806     | 6              |
| Caelo           | Almond oil, refined | 5111208      | 1              |
| Caelo           | Almond oil, refined | 1312Q-01950  | 1              |
| Caelo           | Almond oil, refined | 5214206      | 3              |
| Caelo           | Almond oil, refined | 12153501     | 5              |
| Caelo           | Almond oil, refined | 31121205     | 1              |
| Caelo           | Almond oil, refined | 20150612-2   | 1              |
| Caelo           | Almond oil, refined | 21011304     | 1              |
| Caelo           | Almond oil, refined | 12357103     | 7              |
| Caelo           | Almond oil, refined | 2021303      | 1              |
| Caelo           | Almond oil, refined | 1601311950   | 1              |
| Caelo           | Almond oil, refined | 2002311950   | 1              |
| Caelo           | Almond oil, refined | 12357101     | 12             |
| Caelo           | Almond oil, refined | 21021303     | 1              |
| Caelo           | Almond oil, refined | 12357111     | 12             |
| Caelo           | Almond oil, refined | 12153504     | 1              |
| Caelo           | Almond oil, refined | 1131303      | 1              |
| Caelo           | Almond oil, refined | 1113E-01950  | 1              |
| Caelo           | Almond oil, refined | 11358910     | 1              |
| Caelo           | Almond oil, refined | 25041303     | 1              |
| Caelo           | Almond oil, refined | 2204130      | 1              |
| Caelo           | Almond oil, refined | 11314210     | 1              |
| Caelo           | Almond oil, refined | 2013U01950   | 1              |
| Caelo           | Almond oil, refined | 0-240513-1   | 1              |
| Caelo           | Almond oil, refined | 13178002     | 12             |
| Caelo           | Almond oil, refined | 13178004     | 15             |
| Caelo           | Almond oil, refined | 2713U1950    | 1              |
| Caelo           | Almond oil, refined | 22071303     | 1              |
| Caelo           | Almond oil, refined | 20081301     | 1              |
| Caelo           | Almond oil, refined | 13091308     | 1              |
| Caelo           | Almond oil, refined | 13236401     | 15             |
| Caelo           | Almond oil, refined | 22111301     | 1              |

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| Supplier | Substance           | Batch            | Spectra |
|----------|---------------------|------------------|---------|
| Caelo    | Almond oil, refined | 5415901          | 6       |
| Caelo    | Almond oil, refined | 13236402         | 13      |
| Caelo    | Almond oil, refined | 13236404         | 4       |
| Caelo    | Almond oil, refined | 17121303         | 1       |
| Caelo    | Almond oil, refined | 17021405         | 1       |
| Caelo    | Almond oil, refined | 13350003         | 13      |
| Caelo    | Almond oil, refined | 1350003          | 1       |
| Caelo    | Almond oil, refined | 31031403         | 1       |
| Caelo    | Almond oil, refined | 14042702         | 2       |
| Caelo    | Almond oil, refined | 14042710         | 1       |
| Caelo    | Almond oil, refined | 14042703         | 7       |
| Caelo    | Almond oil, refined | 14042714         | 1       |
| Caelo    | Almond oil, refined | 14042705         | 6       |
| Caelo    | Almond oil, refined | 14042707         | 5       |
| Caelo    | Almond oil, refined | 17061403         | 1       |
| Caelo    | Almond oil, refined | 15071406         | 1       |
| Caelo    | Almond oil, refined | 14139034         | 1       |
| Caelo    | Almond oil, refined | 14139304         | 2       |
| Caelo    | Almond oil, refined | 14042706         | 8       |
| Caelo    | Almond oil, refined | 1404206          | 1       |
| Caelo    | Almond oil, refined | 18081402         | 1       |
| Caelo    | Almond oil, refined | 14139305         | 2       |
| Caelo    | Almond oil, refined | 29081404         | 1       |
| Caelo    | Almond oil, refined | 2101405          | 1       |
| Caelo    | Almond oil, refined | 14042717         | 3       |
| Caelo    | Almond oil, refined | 17111402         | 1       |
| Caelo    | Almond oil, refined | 14139309         | 3       |
| Caelo    | Almond oil, refined | 14139306         | 2       |
| Caelo    | Almond oil, refined | 30121416         | 1       |
| Caelo    | Almond oil, refined | 15078401         | 2       |
| Caelo    | Almond oil, refined | 15078406         | 3       |
| Caelo    | Almond oil, refined | 15409703         | 9       |
| Caelo    | Almond oil, refined | 6101708          | 1       |
| Caelo    | Almond oil, refined | 14215806         | 8       |
| Caelo    | Almond oil, refined | 6031506          | 1       |
| Caelo    | Almond oil, refined | 16021510         | 1       |
| Caelo    | Almond oil, refined | 14215815         | 4       |
| Caelo    | Almond oil, refined | 14215816         | 1       |
| Caelo    | Almond oil, refined | 8041501          | 1       |
| Caelo    | Almond oil, refined | 15078405         | 11      |
| Caelo    | Almond oil, refined | 15078402         | 5       |
| Caelo    | Almond oil, refined | 10061502         | 1       |
| Caelo    | Almond oil, refined | 3714U-01950      | 1       |
| Caelo    | Almond oil, refined | 15127305         | 6       |
| Caelo    | Almond oil, refined | 15806001         | 1       |
| Caelo    | Almond oil, refined | 15080602         | 1       |
| Caelo    | Almond oil, refined | 15127306         | 12      |
| Caelo    | Almond oil, refined | 15197405         | 4       |
| Caelo    | Almond oil, refined | 14D24-b07-302332 | 1       |
| Caelo    | Almond oil, refined | 15197412         | 6       |
| Caelo    | Almond oil, refined | 15197403         | 14      |
| Caelo    | Almond oil, refined | 15409706         | 1       |
| Caelo    | Almond oil, refined | 15409702         | 7       |
| Caelo    | Almond oil, refined | 15409710         | 18      |
| Caelo    | Almond oil, refined | 15409704         | 19      |
| Caelo    | Almond oil, refined | 80000915001      | 1       |
| Caelo    | Almond oil, refined | 15409707         | 6       |
| Caelo    | Almond oil, refined | 16071008         | 1       |
| Caelo    | Almond oil, refined | 15409105         | 1       |
| Caelo    | Almond oil, refined | 16071002         | 17      |

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| Supplier | Substance           | Batch        | Spectra |
|----------|---------------------|--------------|---------|
| Caelo    | Almond oil, refined | 15409713     | 12      |
| Caelo    | Almond oil, refined | 15331611     | 1       |
| Caelo    | Almond oil, refined | 16071005     | 8       |
| Caelo    | Almond oil, refined | 16071001     | 7       |
| Caelo    | Almond oil, refined | 16149802     | 1       |
| Caelo    | Almond oil, refined | 16327302     | 53      |
| Caelo    | Almond oil, refined | 16144404     | 1       |
| Caelo    | Almond oil, refined | 25021707     | 1       |
| Caelo    | Almond oil, refined | 74176327302  | 1       |
| Caelo    | Almond oil, refined | 16327308     | 16      |
| Caelo    | Almond oil, refined | 16327305     | 6       |
| Caelo    | Almond oil, refined | 16327309     | 4       |
| Caelo    | Almond oil, refined | 800149001    | 1       |
| Caelo    | Almond oil, refined | 1041703      | 1       |
| Caelo    | Almond oil, refined | 21041713     | 1       |
| Caelo    | Almond oil, refined | 28041732     | 1       |
| Caelo    | Almond oil, refined | 1527304      | 1       |
| Caelo    | Almond oil, refined | 17176501     | 26      |
| Caelo    | Almond oil, refined | 2091708      | 1       |
| Caelo    | Almond oil, refined | 17176502     | 21      |
| Caelo    | Almond oil, refined | 1176501      | 1       |
| Caelo    | Almond oil, refined | 17176507     | 12      |
| Caelo    | Almond oil, refined | 28111705     | 1       |
| Caelo    | Almond oil, refined | 17176514     | 1       |
| Caelo    | Almond oil, refined | 14121703     | 1       |
| Caelo    | Almond oil, refined | 17207908     | 1       |
| Caelo    | Almond oil, refined | 17176512     | 10      |
| Caelo    | Almond oil, refined | 17176511     | 14      |
| Caelo    | Almond oil, refined | 17176503     | 8       |
| Caelo    | Almond oil, refined | 171176512    | 1       |
| Caelo    | Almond oil, refined | 17207907     | 12      |
| Caelo    | Almond oil, refined | 177906       | 1       |
| Caelo    | Almond oil, refined | 18070604     | 1       |
| Caelo    | Almond oil, refined | 9061813      | 1       |
| Caelo    | Almond oil, refined | 18184101     | 36      |
| Caelo    | Almond oil, refined | 30111803     | 1       |
| Caelo    | Almond oil, refined | 18184113     | 36      |
| Caelo    | Almond oil, refined | 18184413     | 1       |
| Caelo    | Almond oil, refined | 18295901     | 22      |
| Caelo    | Almond oil, refined | 18295903     | 16      |
| Caelo    | Almond oil, refined | 18006807     | 1       |
| Caelo    | Almond oil, refined | 181844114    | 1       |
| Caelo    | Almond oil, refined | 1829503      | 1       |
| Caelo    | Almond oil, refined | 18295910     | 3       |
| Caelo    | Almond oil, refined | 18295915     | 13      |
| Caelo    | Almond oil, refined | 18295914     | 1       |
| Caelo    | Almond oil, refined | 18295905     | 1       |
| Caelo    | Almond oil, refined | 18295909     | 19      |
| Caelo    | Almond oil, refined | 19084503     | 7       |
| Caelo    | Almond oil, refined | 19084510     | 23      |
| Caelo    | Almond oil, refined | 19084511     | 11      |
| Caelo    | Almond oil, refined | 19187107     | 9       |
| Caelo    | Almond oil, refined | 19187106     | 3       |
| Caelo    | Almond oil, refined | 19000779007  | 6       |
| Caelo    | Almond oil, refined | 1900779007   | 1       |
| Caelo    | Almond oil, refined | 109000779004 | 1       |
| Caelo    | Almond oil, refined | 19000779066  | 1       |
| Caelo    | Almond oil, refined | 19000779006  | 5       |
| Caelo    | Almond oil, refined | 20001624003  | 11      |
| Caelo    | Almond oil, refined | 2001624003   | 1       |

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| Supplier | Substance           | Batch         | Spectra |
|----------|---------------------|---------------|---------|
| Caelo    | Almond oil, refined | 20001624006   | 5       |
| Caelo    | Almond oil, refined | 2001624012    | 1       |
| Caelo    | Almond oil, refined | 21001240007   | 1       |
| Caelo    | Almond oil, refined | 18015007      | 65      |
| Caelo    | Almond oil, refined | 19084502      | 6       |
| Caelo    | Almond oil, refined | 19064510      | 1       |
| Caelo    | Almond oil, refined | 19007790040   | 1       |
| Caelo    | Almond oil, refined | 1716506       | 2       |
| Caelo    | Almond oil, refined | CH-B18015002  | 1       |
| Caelo    | Almond oil, refined | 11314206      | 2       |
| Caelo    | Almond oil, refined | 8004548011    | 3       |
| Caelo    | Almond oil, refined | 1421508       | 1       |
| Caelo    | Almond oil, refined | 16144403      | 4       |
| Caelo    | Almond oil, refined | 13178009      | 2       |
| Caelo    | Almond oil, refined | 3236406       | 1       |
| Caelo    | Almond oil, refined | 5615001       | 6       |
| Caelo    | Almond oil, refined | 15197408      | 12      |
| Caelo    | Almond oil, refined | 8004390001    | 5       |
| Caelo    | Almond oil, refined | 19084506      | 3       |
| Caelo    | Almond oil, refined | 13326411      | 1       |
| Caelo    | Almond oil, refined | 8001497001    | 3       |
| Caelo    | Almond oil, refined | 1716512       | 1       |
| Caelo    | Almond oil, refined | 14215807      | 3       |
| Caelo    | Almond oil, refined | 16071009      | 1       |
| Caelo    | Almond oil, refined | 11227407      | 1       |
| Caelo    | Almond oil, refined | 19000779004   | 19      |
| Caelo    | Almond oil, refined | 17042203      | 37      |
| Caelo    | Almond oil, refined | 130145        | 4       |
| Caelo    | Almond oil, refined | 12357102      | 5       |
| Caelo    | Almond oil, refined | 13178003      | 16      |
| Caelo    | Almond oil, refined | 16071006      | 12      |
| Caelo    | Almond oil, refined | 8002653001    | 11      |
| Caelo    | Almond oil, refined | 5748601       | 7       |
| Caelo    | Almond oil, refined | 8000712001    | 2       |
| Caelo    | Almond oil, refined | 18000341      | 1       |
| Caelo    | Almond oil, refined | 19084507      | 6       |
| Caelo    | Almond oil, refined | 1900077901    | 1       |
| Caelo    | Almond oil, refined | 16071003      | 22      |
| Caelo    | Almond oil, refined | 17176506      | 24      |
| Caelo    | Almond oil, refined | 18015003      | 21      |
| Caelo    | Almond oil, refined | 18184114      | 29      |
| Caelo    | Almond oil, refined | 20001624011   | 1       |
| Caelo    | Almond oil, refined | 17000426      | 1       |
| Caelo    | Almond oil, refined | 1807608       | 1       |
| Caelo    | Almond oil, refined | 18184109      | 11      |
| Caelo    | Almond oil, refined | 3278          | 1       |
| Caelo    | Almond oil, refined | 1900000779004 | 1       |
| Caelo    | Almond oil, refined | 20001624004   | 13      |
| Caelo    | Almond oil, refined | 1439310       | 1       |
| Caelo    | Almond oil, refined | 4017A-01950   | 1       |
| Caelo    | Almond oil, refined | 5669601       | 3       |
| Caelo    | Almond oil, refined | 5703001       | 4       |
| Caelo    | Almond oil, refined | 13350001      | 17      |
| Caelo    | Almond oil, refined | 15078404      | 11      |
| Caelo    | Almond oil, refined | 16071004      | 8       |
| Caelo    | Almond oil, refined | 802675001     | 1       |
| Caelo    | Almond oil, refined | 19000779001   | 49      |
| Caelo    | Almond oil, refined | 12153502      | 7       |
| Caelo    | Almond oil, refined | 14139310      | 14      |
| Caelo    | Almond oil, refined | 15127307      | 9       |

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| Supplier | Substance           | Batch                | Spectra |
|----------|---------------------|----------------------|---------|
| Caelo    | Almond oil, refined | 14139301             | 1       |
| Caelo    | Almond oil, refined | 13236406             | 8       |
| Caelo    | Almond oil, refined | 1335006              | 1       |
| Caelo    | Almond oil, refined | 13350006             | 4       |
| Caelo    | Almond oil, refined | 13178011             | 12      |
| Caelo    | Almond oil, refined | 14042708             | 8       |
| Caelo    | Almond oil, refined | 15127303             | 2       |
| Caelo    | Almond oil, refined | 15197407             | 10      |
| Caelo    | Almond oil, refined | 15409705             | 12      |
| Caelo    | Almond oil, refined | 465957               | 1       |
| Caelo    | Almond oil, refined | 1080517/16327302     | 1       |
| Caelo    | Almond oil, refined | 8003503002           | 4       |
| Caelo    | Almond oil, refined | 18070602             | 41      |
| Caelo    | Almond oil, refined | 18070605             | 28      |
| Caelo    | Almond oil, refined | 180154004            | 1       |
| Caelo    | Almond oil, refined | 1918710              | 1       |
| Caelo    | Almond oil, refined | 200001624003         | 1       |
| Caelo    | Almond oil, refined | 4313E1950            | 1       |
| Caelo    | Almond oil, refined | 514Q1950             | 1       |
| Caelo    | Almond oil, refined | 914E1950             | 1       |
| Caelo    | Almond oil, refined | 18015008-20180619Ma7 | 1       |
| Caelo    | Almond oil, refined | 14215804             | 4       |
| Caelo    | Almond oil, refined | 11314209             | 2       |
| Caelo    | Almond oil, refined | 133500006            | 1       |
| Caelo    | Almond oil, refined | 40315PML01           | 1       |
| Caelo    | Almond oil, refined | 230315HML01          | 1       |
| Caelo    | Almond oil, refined | 180706003            | 1       |
| Caelo    | Almond oil, refined | 18184115             | 10      |
| Caelo    | Almond oil, refined | 20001624007          | 6       |
| Caelo    | Almond oil, refined | 20002892001          | 3       |
| Caelo    | Almond oil, refined | 19084518             | 7       |
| Caelo    | Almond oil, refined | 13350002             | 17      |
| Caelo    | Almond oil, refined | 15187404             | 1       |
| Caelo    | Almond oil, refined | 13236411             | 7       |
| Caelo    | Almond oil, refined | 14139311             | 11      |
| Caelo    | Almond oil, refined | 141215804            | 1       |
| Caelo    | Almond oil, refined | 14215805             | 10      |
| Caelo    | Almond oil, refined | 15197404             | 5       |
| Caelo    | Almond oil, refined | 15409714             | 6       |
| Caelo    | Almond oil, refined | 15409712             | 14      |
| Caelo    | Almond oil, refined | 18015004             | 12      |
| Caelo    | Almond oil, refined | 1637302              | 2       |
| Caelo    | Almond oil, refined | 16327311             | 37      |
| Caelo    | Almond oil, refined | 1042204              | 1       |
| Caelo    | Almond oil, refined | 8002675001           | 7       |
| Caelo    | Almond oil, refined | 18015002             | 25      |
| Caelo    | Almond oil, refined | 17207306             | 1       |
| Caelo    | Almond oil, refined | 18015008             | 19      |
| Caelo    | Almond oil, refined | 8003503001           | 1       |
| Caelo    | Almond oil, refined | 8003885002           | 4       |
| Caelo    | Almond oil, refined | 18070608             | 19      |
| Caelo    | Almond oil, refined | 8004039003           | 6       |
| Caelo    | Almond oil, refined | 800439001            | 1       |
| Caelo    | Almond oil, refined | 19084512             | 12      |
| Caelo    | Almond oil, refined | 1904518              | 1       |
| Caelo    | Almond oil, refined | 20003418004          | 11      |
| Caelo    | Almond oil, refined | 21001240006          | 2       |
| Caelo    | Almond oil, refined | 19001701             | 1       |
| Fagron   | Almond oil, refined | 18184109             | 1       |
| Caelo    | Almond oil, refined | 132363403            | 1       |

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| Supplier             | Substance           | Batch       | Spectra |
|----------------------|---------------------|-------------|---------|
| Caelo                | Almond oil, refined | 15078403    | 9       |
| Caelo                | Almond oil, refined | 15197401    | 12      |
| Caelo                | Almond oil, refined | 15127302    | 2       |
| Caelo                | Almond oil, refined | 4916A-01950 | 1       |
| Caelo                | Almond oil, refined | 1632303     | 1       |
| Caelo                | Almond oil, refined | 1637308     | 1       |
| Caelo                | Almond oil, refined | 7176502     | 1       |
| Caelo                | Almond oil, refined | 18070603    | 16      |
| Caelo                | Almond oil, refined | 18295902    | 28      |
| Caelo                | Almond oil, refined | 19187102    | 19      |
| Caelo                | Almond oil, refined | 8005936002  | 4       |
| Caelo                | Almond oil, refined | 20003418007 | 1       |
| Caelo                | Almond oil, refined | 20003418001 | 1       |
| Caelo                | Almond oil, refined | 14215809    | 10      |
| Caelo                | Almond oil, refined | 16327303    | 49      |
| Caelo                | Almond oil, refined | 1637311     | 1       |
| Caelo                | Almond oil, refined | 284968      | 1       |
| Caelo                | Almond oil, refined | 15197402    | 13      |
| Caelo                | Almond oil, refined | 15197406    | 5       |
| Caelo                | Almond oil, refined | 15409701    | 10      |
| Caelo                | Almond oil, refined | 16071007    | 11      |
| Caelo                | Almond oil, refined | 15409716    | 3       |
| Caelo                | Almond oil, refined | 1000004431  | 7       |
| Caelo                | Almond oil, refined | 17042204    | 18      |
| Caelo                | Almond oil, refined | 8003167001  | 2       |
| Caelo                | Almond oil, refined | 17176508    | 4       |
| Caelo                | Almond oil, refined | 18295908    | 28      |
| Caelo                | Almond oil, refined | 20001624012 | 4       |
| Caelo                | Almond oil, refined | 20003418002 | 5       |
| Caelo                | Almond oil, refined | 5615003     | 1       |
| Caelo                | Almond oil, refined | 15078407    | 3       |
| Caelo                | Almond oil, refined | 15127308    | 2       |
| Caelo                | Almond oil, refined | 8000915002  | 10      |
| Caelo                | Almond oil, refined | 71/AKD15    | 1       |
| Caelo                | Almond oil, refined | 17042206    | 5       |
| Caelo                | Almond oil, refined | 72/AKD16    | 1       |
| Caelo                | Almond oil, refined | 17042209    | 9       |
| Caelo                | Almond oil, refined | 189015003   | 1       |
| Caelo                | Almond oil, refined | 18184102    | 39      |
| Caelo                | Almond oil, refined | 18184108    | 16      |
| Caelo                | Almond oil, refined | 8004548002  | 13      |
| Caelo                | Almond oil, refined | 1000010093  | 4       |
| Caelo                | Almond oil, refined | 1900779004  | 1       |
| Caelo                | Almond oil, refined | 17176513    | 1       |
| Caelo                | Almond oil, refined | 1807063     | 1       |
| Caelo                | Almond oil, refined | 1000003242  | 4       |
| Caelo                | Almond oil, refined | 10131-01950 | 1       |
| Caeolo/Gehe          | Almond oil, refined | 18006807    | 1       |
| Caeolo/Noweda        | Almond oil, refined | 15409703    | 1       |
| Caeolo/Phoenix       | Almond oil, refined | 8004548002  | 5       |
| Caesar & Lorenz GmbH | Almond oil, refined | 19187101    | 1       |
| Caesar & Loretz      | Almond oil, refined | 16071006    | 1       |
| Caesar & Loretz      | Almond oil, refined | 17176502    | 1       |
| Caesar & Loretz      | Almond oil, refined | 17207906    | 2       |
| Caesar & Loretz      | Almond oil, refined | 18070605    | 1       |
| Caesar & Loretz GmbH | Almond oil, refined | 13178002    | 1       |
| Caesar & Loretz GmbH | Almond oil, refined | 13236404    | 1       |
| Caesar & Loretz GmbH | Almond oil, refined | 13350007    | 1       |
| Caesar & Loretz GmbH | Almond oil, refined | 14215804    | 1       |
| Caesar & Loretz GmbH | Almond oil, refined | 16327302    | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Caesar & Loretz GmbH       | Almond oil, refined | 16327308    | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18070603    | 5       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18015007    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18070608    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18184114    | 4       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18184113    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295903    | 7       |
| Caesar & Loretz GmbH       | Almond oil, refined | 8004548002  | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295901    | 6       |
| Caesar & Loretz GmbH       | Almond oil, refined | 1000010093  | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295908    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295915    | 7       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084503    | 4       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295909    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084505    | 5       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084506    | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 18295902    | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084510    | 5       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084511    | 4       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084507    | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19084518    | 3       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19187101    | 12      |
| Caesar & Loretz GmbH       | Almond oil, refined | 19187102    | 4       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19187107    | 6       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19187106    | 3       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19000779001 | 13      |
| Caesar & Loretz GmbH       | Almond oil, refined | 19000779004 | 7       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19000779007 | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 19000779006 | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 2000845     | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20001624006 | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20002892001 | 3       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20001624007 | 8       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20001624003 | 2       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20003418004 | 6       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20001624012 | 3       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20003418007 | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 20003418002 | 7       |
| Caesar & Loretz GmbH       | Almond oil, refined | 21001240007 | 1       |
| Caesar & Loretz GmbH       | Almond oil, refined | 21001240006 | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 19084505    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 18184108    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 17207906    | 2       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 18184113    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 18295903    | 4       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 18295915    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 18184107    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 19187101    | 1       |
| Caesar & Loretz GmbH / ... | Almond oil, refined | 19000779001 | 1       |
| Caesar & Loretz GmbH Hi... | Almond oil, refined | 510014-01   | 1       |
| Caesar & Loretz GmbH Sa... | Almond oil, refined | 20001624012 | 2       |
| Caesar & Loretz GmbH/ S... | Almond oil, refined | 19084510    | 2       |
| Caesar & Loretz GmbH/AEP   | Almond oil, refined | 20001624003 | 1       |
| Caesar & Loretz GmbH/AHD   | Almond oil, refined | 19084505    | 1       |
| Caesar & Loretz GmbH/G     | Almond oil, refined | 18184113    | 1       |
| Caesar & Loretz GmbH/Gehe  | Almond oil, refined | 19084505    | 1       |
| Caesar & Loretz GmbH/Gehe  | Almond oil, refined | 19000779001 | 4       |
| Caesar & Loretz GmbH/Gehe  | Almond oil, refined | 20001624003 | 1       |
| Caesar & Loretz GmbH/Ge... | Almond oil, refined | 19000779007 | 1       |
| Caesar & Loretz GmbH/Je... | Almond oil, refined | 19000779004 | 2       |

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| Supplier                   | Substance           | Batch        | Spectra |
|----------------------------|---------------------|--------------|---------|
| Caesar & Loretz GmbH/Je... | Almond oil, refined | 19000779006  | 1       |
| Caesar & Loretz GmbH/Je... | Almond oil, refined | 20001624007  | 2       |
| Caesar & Loretz GmbH/Je... | Almond oil, refined | 20003418002  | 1       |
| Caesar & Loretz GmbH/Kr... | Almond oil, refined | 18295902     | 1       |
| Caesar & Loretz GmbH/Kr... | Almond oil, refined | 19084507     | 1       |
| Caesar & Loretz GmbH/no... | Almond oil, refined | 20002892001  | 1       |
| Caesar & Loretz GmbH/No... | Almond oil, refined | 18184107     | 1       |
| Caesar & Loretz GmbH/No... | Almond oil, refined | 19084518     | 2       |
| Caesar & Loretz GmbH/No... | Almond oil, refined | 8004548011   | 1       |
| Caesar & Loretz GmbH/No... | Almond oil, refined | 19187102     | 1       |
| Caesar & Loretz GmbH/Ph... | Almond oil, refined | 20001624007  | 1       |
| Caesar & Loretz GmbH/Ph... | Almond oil, refined | 20001624004  | 1       |
| Caesar & Loretz GmbH/Ph... | Almond oil, refined | 200003418007 | 1       |
| Caesar & Loretz GmbH/Ph... | Almond oil, refined | 19187101     | 1       |
| Caesar & Loretz GmbH/Ph... | Almond oil, refined | 19187102     | 2       |
| Caesar & Loretz GmbH/Sa... | Almond oil, refined | 18295902     | 1       |
| Caesar & Loretz/ Noweda    | Almond oil, refined | 12357101     | 2       |
| Caesar & Loretz/ Noweda    | Almond oil, refined | 18015007     | 1       |
| Caesar & Loretz/AHD        | Almond oil, refined | 18184107     | 1       |
| Caesar & Loretz/Noweda     | Almond oil, refined | 15409704     | 1       |
| Caesar & Loretz/Noweda     | Almond oil, refined | 16071002     | 1       |
| Caesar & Loretz/Noweda     | Almond oil, refined | 16071003     | 1       |
| Caesar & Loretz/Noweda     | Almond oil, refined | 17176502     | 1       |
| Caesar&Loretz              | Almond oil, refined | 16327311     | 1       |
| caesar&lorenz,Phönix,11... | Almond oil, refined | 15127304     | 1       |
| Caesar/ Alliance Health... | Almond oil, refined | 18015008     | 1       |
| Caeser und Loretz GmbH     | Almond oil, refined | 19084511     | 1       |
| Caleo/ Noweda              | Almond oil, refined | 16071007     | 1       |
| Caleo/Fiebig               | Almond oil, refined | 1716508      | 1       |
| Caleo/Phönix               | Almond oil, refined | 15078405     | 2       |
| Caolo- Noweda              | Almond oil, refined | 15197404     | 1       |
| Cealo                      | Almond oil, refined | 16071007     | 3       |
| Cealo                      | Almond oil, refined | 19000779001  | 1       |
| Cealo/ Noweda              | Almond oil, refined | 14042704     | 1       |
| Cealo/Jenne                | Almond oil, refined | 19084505     | 1       |
| Cealo/Phoenix              | Almond oil, refined | 2003418007   | 1       |
| Cealo/Sanacorp             | Almond oil, refined | 19084505     | 1       |
| Chiesi/ Phoenix/ 03.02...  | Almond oil, refined | 19084518     | 1       |
| E Plus                     | Almond oil, refined | 1712-5901    | 1       |
| Ebert & Jacobi             | Almond oil, refined | 15409701     | 1       |
| Ebert & Jacobi             | Almond oil, refined | 17176501     | 1       |
| Eig                        | Almond oil, refined | 80515HML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 50612HML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 21112HML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 140113HML01  | 1       |
| Eigenherstellung           | Almond oil, refined | 80213HJK02   | 1       |
| Eigenherstellung           | Almond oil, refined | 210313HJK01  | 2       |
| Eigenherstellung           | Almond oil, refined | 240513HML01  | 1       |
| Eigenherstellung           | Almond oil, refined | 40613PML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 40613PML02   | 1       |
| Eigenherstellung           | Almond oil, refined | 40613HML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 60913HJK01   | 1       |
| Eigenherstellung           | Almond oil, refined | 61113HML01   | 1       |
| Eigenherstellung           | Almond oil, refined | 240214HJK01  | 1       |
| Eigenherstellung           | Almond oil, refined | 160414HML01  | 1       |
| Eigenherstellung           | Almond oil, refined | 290714HJK02  | 1       |
| Eigenherstellung           | Almond oil, refined | 290714HJK01  | 1       |
| Eigenherstellung           | Almond oil, refined | 120814HAS01  | 1       |
| Eigenherstellung           | Almond oil, refined | 120914HAS01  | 1       |
| Eigenherstellung           | Almond oil, refined | 181114HML01  | 1       |

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| Supplier         | Substance           | Batch            | Spectra |
|------------------|---------------------|------------------|---------|
| Eigenherstellung | Almond oil, refined | 50115PML02       | 1       |
| Eigenherstellung | Almond oil, refined | 270215HJK01      | 1       |
| Eigenherstellung | Almond oil, refined | 260515HML01      | 1       |
| Eigenherstellung | Almond oil, refined | 300615HML01      | 1       |
| Eigenherstellung | Almond oil, refined | 180815HJK01      | 1       |
| Eigenherstellung | Almond oil, refined | 20915HML01       | 1       |
| Eigenherstellung | Almond oil, refined | 180915HML01      | 1       |
| E-plus           | Almond oil, refined | 1709-5780        | 1       |
| E-Plus           | Almond oil, refined | 307299           | 2       |
| Bombastus        | Almond oil, refined | 17000426         | 6       |
| EuRho            | Almond oil, refined | 1904007-01       | 1       |
| EuRho/Noweda     | Almond oil, refined | 8003885002       | 1       |
| Euro             | Almond oil, refined | 1510014-01       | 1       |
| Euro OTC         | Almond oil, refined | 1310022-01       | 1       |
| Euro OTC         | Almond oil, refined | 1701036-01       | 3       |
| Euro OTC         | Almond oil, refined | 2004032-01       | 3       |
| Euro OTC         | Almond oil, refined | 1407050-02       | 2       |
| Euro OTC         | Almond oil, refined | 1904007-01       | 2       |
| Euro OTC         | Almond oil, refined | 1510014-01       | 4       |
| Euro OTC         | Almond oil, refined | 18070608         | 1       |
| Euro OTC         | Almond oil, refined | 18184107         | 1       |
| Euro OTC         | Almond oil, refined | 131002202        | 1       |
| Euro OTC         | Almond oil, refined | 16071006         | 1       |
| Euro OTC         | Almond oil, refined | 8004390001       | 1       |
| Euro OTC         | Almond oil, refined | 18295901         | 1       |
| Euro OTC         | Almond oil, refined | 1603025-01       | 5       |
| Euro OTC         | Almond oil, refined | 2009004-01       | 1       |
| Euro OTC         | Almond oil, refined | 1807007-01       | 2       |
| Euro OTC         | Almond oil, refined | 1207014-01       | 1       |
| Euro OTC         | Almond oil, refined | 1707007-01       | 1       |
| Euro OTC         | Almond oil, refined | 16071002         | 1       |
| Euro OTC         | Almond oil, refined | 1909015-01       | 4       |
| Euro OTC         | Almond oil, refined | 1407050-01       | 1       |
| Euro OTC         | Almond oil, refined | 17001036-01      | 1       |
| Euro OTC         | Almond oil, refined | 147533           | 1       |
| Euro OTC         | Almond oil, refined | 190400701        | 1       |
| Euro OTC         | Almond oil, refined | 190901501        | 1       |
| Euro OTC         | Almond oil, refined | 16071001         | 2       |
| Euro/Sanacorp    | Almond oil, refined | 1801030-01       | 1       |
| Euro OTC         | Almond oil, refined | 1000003242       | 3       |
| Euro OTC         | Almond oil, refined | 192314           | 1       |
| Euro OTC         | Almond oil, refined | 1000010093       | 1       |
| Euro OTC         | Almond oil, refined | 540014-01        | 1       |
| Euro OTC         | Almond oil, refined | 160302501        | 1       |
| Fagron           | Almond oil, refined | 12A18-N09        | 1       |
| Fagron           | Almond oil, refined | 12J26-N05        | 1       |
| Fagron           | Almond oil, refined | 12H23-N01        | 1       |
| Fagron           | Almond oil, refined | 5438301          | 2       |
| Fagron           | Almond oil, refined | 13C25-N20        | 1       |
| Fagron           | Almond oil, refined | 126520           | 1       |
| Fagron           | Almond oil, refined | 281040           | 2       |
| Fagron           | Almond oil, refined | 13236411         | 1       |
| Fagron           | Almond oil, refined | 5615001          | 3       |
| Fagron           | Almond oil, refined | 14F04-B01        | 2       |
| Fagron           | Almond oil, refined | 14D24-B07        | 1       |
| Fagron           | Almond oil, refined | 14F04B01294722   | 1       |
| Fagron           | Almond oil, refined | 15F04-B01        | 2       |
| Fagron           | Almond oil, refined | 14J01-B03-302327 | 2       |
| Fagron           | Almond oil, refined | 14J01-B03        | 1       |
| Fagron           | Almond oil, refined | 15127303         | 1       |

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| Supplier                    | Substance           | Batch            | Spectra |
|-----------------------------|---------------------|------------------|---------|
| Fagron                      | Almond oil, refined | 15F04-B01-309291 | 4       |
| Fagron                      | Almond oil, refined | 12345            | 1       |
| Fagron                      | Almond oil, refined | 15H03-B07-314457 | 3       |
| Fagron                      | Almond oil, refined | 16K30-B07-328711 | 1       |
| Fagron                      | Almond oil, refined | 16K30-B07        | 1       |
| Fagron                      | Almond oil, refined | 16K30-B06        | 1       |
| Fagron                      | Almond oil, refined | 16K30B07328711   | 1       |
| Fagron                      | Almond oil, refined | 1707007-01       | 1       |
| Fagron                      | Almond oil, refined | 8003167001       | 1       |
| Fagron                      | Almond oil, refined | 18184113         | 3       |
| Fagron                      | Almond oil, refined | 16A05-B02        | 1       |
| Fagron                      | Almond oil, refined | 14D24-B07-302332 | 1       |
| Fagron                      | Almond oil, refined | 13350001         | 2       |
| Fagron                      | Almond oil, refined | 16A05-B02-320278 | 1       |
| Fagron                      | Almond oil, refined | 13K28-B01-288270 | 1       |
| Fagron                      | Almond oil, refined | 1000004431       | 1       |
| Fagron                      | Almond oil, refined | 18J08-B02        | 1       |
| Fagron                      | Almond oil, refined | 18J08-B02-360871 | 1       |
| Fagron                      | Almond oil, refined | 15127306         | 1       |
| Fagron                      | Almond oil, refined | 15409702         | 1       |
| Fagron                      | Almond oil, refined | 15409705         | 1       |
| Fargon/Gehe                 | Almond oil, refined | 17207905         | 1       |
| Fiebig                      | Almond oil, refined | 1716508          | 1       |
| Fiebig                      | Almond oil, refined | 8003885002       | 2       |
| Fiebig                      | Almond oil, refined | 18070603         | 1       |
| Fiebig                      | Almond oil, refined | 18004502         | 1       |
| Fiebig                      | Almond oil, refined | 18295903         | 1       |
| Fiebig                      | Almond oil, refined | 18295914         | 1       |
| Fiebig 21.02.13 ek: 2,16EUR | Almond oil, refined | 130145           | 1       |
| Fiebig/Lamotte              | Almond oil, refined | 1000013112       | 1       |
| Finteler Apotheke           | Almond oil, refined | 8002653001       | 1       |
| Fischar                     | Almond oil, refined | 5438301          | 2       |
| Fischer/Gehe                | Almond oil, refined | 15127306         | 1       |
| Gatt-Koller                 | Almond oil, refined | 1803713          | 1       |
| Gatt-Koller                 | Almond oil, refined | 1900551          | 1       |
| Gehe                        | Almond oil, refined | 13178004         | 1       |
| Gehe                        | Almond oil, refined | 13236403         | 1       |
| Gehe                        | Almond oil, refined | 14215809         | 1       |
| Gehe                        | Almond oil, refined | 5748601          | 1       |
| Gehe                        | Almond oil, refined | 15078405         | 1       |
| Gehe                        | Almond oil, refined | 15078404         | 1       |
| Gehe                        | Almond oil, refined | 5919600001       | 1       |
| Gehe                        | Almond oil, refined | 15197401         | 1       |
| Gehe                        | Almond oil, refined | 8000712001       | 1       |
| Gehe                        | Almond oil, refined | 15197409         | 1       |
| Gehe                        | Almond oil, refined | 15197402         | 1       |
| Gehe                        | Almond oil, refined | 7315801          | 1       |
| Gehe                        | Almond oil, refined | 16071007         | 1       |
| Gehe                        | Almond oil, refined | 16327302         | 1       |
| Gehe                        | Almond oil, refined | 16327308         | 3       |
| Gehe                        | Almond oil, refined | 17042204         | 1       |
| Gehe                        | Almond oil, refined | 17042203         | 3       |
| Gehe                        | Almond oil, refined | 17207905         | 1       |
| Gehe                        | Almond oil, refined | 18000342         | 1       |
| Gehe                        | Almond oil, refined | 18015008         | 2       |
| Gehe                        | Almond oil, refined | 8003885002       | 1       |
| Gehe                        | Almond oil, refined | 18070602         | 1       |
| Gehe                        | Almond oil, refined | 18184108         | 1       |
| Gehe                        | Almond oil, refined | 8004548002       | 1       |
| Gehe                        | Almond oil, refined | 18006808         | 1       |

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| <b>Supplier</b>            | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|---------------------|--------------|----------------|
| Gehe                       | Almond oil, refined | 18184113     | 1              |
| Gehe                       | Almond oil, refined | 1000010093   | 1              |
| GEHE                       | Almond oil, refined | 13178003     | 1              |
| GEHE                       | Almond oil, refined | 16327302     | 1              |
| GEHE                       | Almond oil, refined | 17042203     | 1              |
| GEHE                       | Almond oil, refined | 17176501     | 1              |
| GEHE                       | Almond oil, refined | 12019        | 1              |
| GEHE                       | Almond oil, refined | 18015007     | 1              |
| GEHE                       | Almond oil, refined | 18015008     | 1              |
| GEHE                       | Almond oil, refined | 18070602     | 1              |
| GEHE                       | Almond oil, refined | 18184102     | 1              |
| GEHE                       | Almond oil, refined | 18184113     | 3              |
| GEHE                       | Almond oil, refined | 18295902     | 1              |
| GEHE                       | Almond oil, refined | 19084511     | 1              |
| Gehe - Lamotte             | Almond oil, refined | 5438302      | 1              |
| GEHE 11.05.                | Almond oil, refined | 15078404     | 1              |
| Gehe 22.12.14              | Almond oil, refined | 14215808     | 1              |
| Gehe amax                  | Almond oil, refined | 5919600001   | 1              |
| Gehe amax                  | Almond oil, refined | 16327302     | 1              |
| Gehe amax                  | Almond oil, refined | 18070605     | 1              |
| Gehe amax                  | Almond oil, refined | 18184114     | 2              |
| Gehe amax                  | Almond oil, refined | 1000012126   | 1              |
| Gehe Kassel                | Almond oil, refined | 14215814     | 1              |
| Gehe/ Lamotte              | Almond oil, refined | 8004039003   | 1              |
| Caelo                      | Almond oil, refined | 12153505     | 8              |
| Caelo                      | Almond oil, refined | 17207905     | 24             |
| Fagron                     | Almond oil, refined | 8002675001   | 2              |
| Gehe/henry                 | Almond oil, refined | 8000915002   | 1              |
| Gehe/Henry Lamotte         | Almond oil, refined | 1000004431   | 1              |
| Gehe/Henry Lamotte         | Almond oil, refined | 8003503002   | 1              |
| Gehe/Henry Lamotte Oils    | Almond oil, refined | 1000012126   | 2              |
| Gehe/Henry Lamotte Oils... | Almond oil, refined | 5615001      | 2              |
| Gehe/Lamotte               | Almond oil, refined | 8002653001   | 1              |
| Gehe/Lamotte               | Almond oil, refined | 8003167001   | 2              |
| Gehe/Lamotte               | Almond oil, refined | 8003503001   | 1              |
| Gehe/Lamotte               | Almond oil, refined | 8003885002   | 2              |
| Gehe/Lamotte               | Almond oil, refined | 8004390001   | 2              |
| Gehe/Lamotte               | Almond oil, refined | 1000010093   | 1              |
| Grau / Sanacorp            | Almond oil, refined | 18015007     | 1              |
| H. Lamotte                 | Almond oil, refined | 5177001      | 2              |
| H. Lamotte/Noweda          | Almond oil, refined | 5615003      | 1              |
| H. Lamotte/Noweda          | Almond oil, refined | 1000002454   | 1              |
| H. Lamotte/Noweda          | Almond oil, refined | 8000712001   | 2              |
| H.Lamotte                  | Almond oil, refined | 8003885002   | 1              |
| H.Lamotte / Anzag          | Almond oil, refined | 5438302      | 1              |
| H.Lamotte / Gehe           | Almond oil, refined | 8003167001   | 1              |
| H.Lamotte / Gehe           | Almond oil, refined | 8004548002   | 1              |
| H.Lamotte/Anzag            | Almond oil, refined | 5438302      | 1              |
| H.Lamotte/Noweda           | Almond oil, refined | 5269301      | 2              |
| H.Lamotte/Noweda           | Almond oil, refined | 5214206      | 1              |
| H.Lamotte/Noweda           | Almond oil, refined | 130145       | 2              |
| H.Lamotte/Noweda           | Almond oil, refined | 5438301      | 2              |
| H.Lamotte/Noweda           | Almond oil, refined | 5438302      | 2              |
| H.Lamotte/Noweda           | Almond oil, refined | 5415901      | 1              |
| H.Lamotte/Noweda           | Almond oil, refined | 5615001      | 3              |
| H.Lamotte/Noweda           | Almond oil, refined | 5748601      | 2              |
| H.Lamotte/Noweda           | Almond oil, refined | 5919600001   | 1              |
| Henry Lamotte Oils / No... | Almond oil, refined | 8000915001   | 1              |
| Hedinger                   | Almond oil, refined | 1000004431   | 1              |
| Hedinger / Anzag           | Almond oil, refined | 8005936002   | 2              |

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| Supplier             | Substance           | Batch      | Spectra |
|----------------------|---------------------|------------|---------|
| Hedinger/ Noweda     | Almond oil, refined | 14139311   | 1       |
| Klenk                | Almond oil, refined | 5269301    | 2       |
| henry Lamotte oils   | Almond oil, refined | 8002675001 | 1       |
| henry Lamotte oils   | Almond oil, refined | 8003503001 | 1       |
| Henry Lamotte/Noweda | Almond oil, refined | 8003503001 | 1       |
| Henra Lamotte/Jenne  | Almond oil, refined | 1000012126 | 2       |
| Henra Lamotte/Jenne  | Almond oil, refined | 8005936002 | 2       |
| Henra Lamotte/Jenne  | Almond oil, refined | 1000013565 | 2       |
| Henra Lamotte/Jenne  | Almond oil, refined | 8005803006 | 1       |
| Henra Lamotte/Jenne  | Almond oil, refined | 8005803007 | 1       |
| henry                | Almond oil, refined | 8003167001 | 1       |
| henry                | Almond oil, refined | 8004039003 | 1       |
| Henry La Motte       | Almond oil, refined | 5748601    | 2       |
| Henry Lam./ Phönix   | Almond oil, refined | 5438302    | 1       |
| Henry Lamott/Gehe    | Almond oil, refined | 8004548002 | 1       |
| henry lamotte        | Almond oil, refined | 5675003    | 1       |
| henry lamotte        | Almond oil, refined | 5748601    | 1       |
| henry lamotte        | Almond oil, refined | 8000712001 | 3       |
| henry lamotte        | Almond oil, refined | 8000915001 | 1       |
| henry lamotte        | Almond oil, refined | 8001497001 | 1       |
| henry lamotte        | Almond oil, refined | 8005936002 | 1       |
| Henry lamotte        | Almond oil, refined | 8000712001 | 1       |
| Henry Lamotte        | Almond oil, refined | 5177001    | 2       |
| Henry Lamotte        | Almond oil, refined | 5369301    | 1       |
| Henry Lamotte        | Almond oil, refined | 130145     | 3       |
| Henry Lamotte        | Almond oil, refined | 5438301    | 4       |
| Henry Lamotte        | Almond oil, refined | 12061302   | 1       |
| Henry Lamotte        | Almond oil, refined | 543802     | 1       |
| Henry Lamotte        | Almond oil, refined | 5438302    | 3       |
| Henry Lamotte        | Almond oil, refined | 5493001    | 3       |
| Henry Lamotte        | Almond oil, refined | 5415901    | 6       |
| Henry Lamotte        | Almond oil, refined | 5615001    | 4       |
| Henry Lamotte        | Almond oil, refined | 5615003    | 3       |
| Henry Lamotte        | Almond oil, refined | 5669601    | 1       |
| Henry Lamotte        | Almond oil, refined | 5703101    | 4       |
| Henry Lamotte        | Almond oil, refined | 5748401    | 2       |
| Henry Lamotte        | Almond oil, refined | 5748601    | 8       |
| Henry Lamotte        | Almond oil, refined | 5919600001 | 10      |
| Henry Lamotte        | Almond oil, refined | 8000712001 | 10      |
| Henry Lamotte        | Almond oil, refined | 8000725001 | 2       |
| Henry Lamotte        | Almond oil, refined | 8000915001 | 5       |
| Henry Lamotte        | Almond oil, refined | 1000002454 | 1       |
| Henry Lamotte        | Almond oil, refined | 8000915002 | 4       |
| Henry Lamotte        | Almond oil, refined | 1000003242 | 7       |
| Henry Lamotte        | Almond oil, refined | 8001497001 | 9       |
| Henry Lamotte        | Almond oil, refined | 1000004431 | 3       |
| Henry Lamotte        | Almond oil, refined | 8002653001 | 8       |
| Henry Lamotte        | Almond oil, refined | 8002675001 | 3       |
| Henry Lamotte        | Almond oil, refined | 17042209   | 1       |
| Henry Lamotte        | Almond oil, refined | 8003167001 | 10      |
| Henry Lamotte        | Almond oil, refined | 8003503001 | 7       |
| Henry Lamotte        | Almond oil, refined | 18015002   | 1       |
| Henry Lamotte        | Almond oil, refined | 8003503002 | 3       |
| Henry Lamotte        | Almond oil, refined | 8003885002 | 5       |
| Henry Lamotte        | Almond oil, refined | 8004039003 | 4       |
| Henry Lamotte        | Almond oil, refined | 8004390001 | 5       |
| Henry Lamotte        | Almond oil, refined | 8004548002 | 4       |
| Henry Lamotte        | Almond oil, refined | 1000010093 | 6       |
| Henry Lamotte        | Almond oil, refined | 1000010685 | 7       |
| Henry Lamotte        | Almond oil, refined | 8004548007 | 2       |

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| Supplier                   | Substance           | Batch            | Spectra |
|----------------------------|---------------------|------------------|---------|
| Henry Lamotte              | Almond oil, refined | 8004548011       | 8       |
| Henry Lamotte              | Almond oil, refined | 800458011        | 1       |
| Henry Lamotte              | Almond oil, refined | 1000012126       | 15      |
| Henry Lamotte              | Almond oil, refined | 8005936002       | 3       |
| Henry Lamotte              | Almond oil, refined | 1000013565       | 1       |
| Henry Lamotte              | Almond oil, refined | 8005803006       | 1       |
| Henry Lamotte /            | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte /            | Almond oil, refined | 8005936002       | 1       |
| Henry Lamotte / 2          | Almond oil, refined | 1000010093       | 3       |
| Henry Lamotte / Allianc... | Almond oil, refined | 8000915001       | 2       |
| Henry Lamotte / Anzag      | Almond oil, refined | 125 (8004039003) | 1       |
| Henry Lamotte / Anzag      | Almond oil, refined | 126 (8004390001) | 1       |
| Henry Lamotte / Anzag      | Almond oil, refined | 127 (8004548002) | 1       |
| Henry Lamotte / Anzag      | Almond oil, refined | 129 (8004548011) | 1       |
| Henry Lamotte / Gehe       | Almond oil, refined | 8004390001       | 1       |
| Henry Lamotte / Jenne      | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte / Jenne      | Almond oil, refined | 1000013565       | 1       |
| Henry Lamotte / Krieger    | Almond oil, refined | 8005936002       | 2       |
| Henry Lamotte / Krieger    | Almond oil, refined | 8005803006       | 2       |
| Henry Lamotte / Noweda     | Almond oil, refined | 5415901          | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 5703001          | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8000712001       | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8000915002       | 2       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8001497001       | 3       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8002653001       | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8003503001       | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8003885002       | 2       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8004039003       | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8004548002       | 2       |
| Henry Lamotte / Noweda     | Almond oil, refined | 1000010685       | 2       |
| Henry Lamotte / Noweda     | Almond oil, refined | 8004548011       | 1       |
| Henry Lamotte / Noweda     | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte / Phoenix    | Almond oil, refined | 8000915002       | 1       |
| Henry Lamotte / Phönix     | Almond oil, refined | 8001497001       | 3       |
| Henry Lamotte / Sanacorp   | Almond oil, refined | 8003503001       | 1       |
| Henry Lamotte /Gehe        | Almond oil, refined | 1000013112       | 1       |
| Henry Lamotte /Jenne       | Almond oil, refined | 128 (1000010093) | 1       |
| Henry Lamotte /Phoenix     | Almond oil, refined | 8004039003       | 1       |
| Henry Lamotte /Phoenix     | Almond oil, refined | 8003885002       | 1       |
| Henry Lamotte /Phönix p... | Almond oil, refined | 8003503001       | 1       |
| Henry Lamotte /Phönix p... | Almond oil, refined | 8003167001       | 1       |
| Henry Lamotte Anzag        | Almond oil, refined | 8004039003       | 1       |
| Henry lamotte Fiebig       | Almond oil, refined | 1000012126       | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 5269301          | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 8000712001       | 3       |
| Henry Lamotte GmbH         | Almond oil, refined | 8001497001       | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 8003167001       | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 8003503001       | 2       |
| Henry Lamotte GmbH         | Almond oil, refined | 8003885002       | 2       |
| Henry Lamotte GmbH         | Almond oil, refined | 8004039003       | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 8004390001       | 1       |
| Henry Lamotte GmbH         | Almond oil, refined | 1000010093       | 2       |
| Henry Lamotte GmbH         | Almond oil, refined | 8004548011       | 2       |
| Henry Lamotte GmbH         | Almond oil, refined | 1000012126       | 1       |
| Henry Lamotte GmbH, Mer... | Almond oil, refined | 130145           | 1       |
| Henry Lamotte GmbH/ San... | Almond oil, refined | 8002653001       | 1       |
| Henry Lamotte GmbH/Gehe    | Almond oil, refined | 1000012126       | 1       |
| Henry Lamotte GmbH/Phönix  | Almond oil, refined | 8003167001       | 1       |
| Henry Lamotte GmbH/Phönix  | Almond oil, refined | 8005936002       | 1       |
| Henry Lamotte GmbH/Phönix  | Almond oil, refined | 1000012126       | 1       |

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| Supplier                   | Substance           | Batch      | Spectra |
|----------------------------|---------------------|------------|---------|
| Henry Lamotte GmbH/Phönix  | Almond oil, refined | 1000013112 | 2       |
| Henry Lamotte Oil          | Almond oil, refined | 8000915002 | 1       |
| Henry Lamotte Oil          | Almond oil, refined | 8000915001 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 5438302    | 5       |
| Henry Lamotte Oils         | Almond oil, refined | 5214206    | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 5438301    | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 5415901    | 2       |
| Henry Lamotte Oils         | Almond oil, refined | 5703001    | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 5748601    | 3       |
| Henry Lamotte Oils         | Almond oil, refined | 5919600001 | 2       |
| Henry Lamotte Oils         | Almond oil, refined | 8000915001 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 8000725001 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 1000003242 | 3       |
| Henry Lamotte Oils         | Almond oil, refined | 8001497001 | 4       |
| Henry Lamotte Oils         | Almond oil, refined | 1000004431 | 3       |
| Henry Lamotte Oils         | Almond oil, refined | 8002653001 | 3       |
| Henry Lamotte Oils         | Almond oil, refined | 8002675001 | 3       |
| Henry Lamotte Oils         | Almond oil, refined | 8003167001 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 8004390001 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 1000010093 | 2       |
| Henry Lamotte Oils         | Almond oil, refined | 8004548011 | 1       |
| Henry Lamotte Oils         | Almond oil, refined | 1000012126 | 2       |
| henry lamotte oils / Al... | Almond oil, refined | 8004548011 | 1       |
| henry lamotte oils / Al... | Almond oil, refined | 8005803006 | 1       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 548302     | 1       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 5615003    | 2       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 5919600001 | 3       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 1000002454 | 1       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 8000915002 | 2       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 1000003242 | 1       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 8001497001 | 1       |
| Henry Lamotte Oils / Gehe  | Almond oil, refined | 8002653001 | 3       |
| Henry Lamotte Oils / No... | Almond oil, refined | 8000712001 | 1       |
| Henry Lamotte Oils / No... | Almond oil, refined | 1000003242 | 2       |
| Henry Lamotte Oils / No... | Almond oil, refined | 8003885002 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5415901    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000725001 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000915002 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8001497001 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5269301    | 4       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 130145     | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5214206    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5438301    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5438302    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 130143     | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5493001    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5415901    | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5615001    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5615003    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5703001    | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5748601    | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000712001 | 3       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 5919600001 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000725001 | 6       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000915001 | 7       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8000915002 | 5       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000003242 | 3       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8001497001 | 6       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000004431 | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8002653001 | 3       |

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| Supplier                   | Substance           | Batch             | Spectra |
|----------------------------|---------------------|-------------------|---------|
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8002675001        | 3       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8003503002        | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8003167001        | 2       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8003503001        | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8003885002        | 3       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004390001        | 6       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004039003        | 5       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004039001        | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004548002        | 4       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000010093        | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000010685        | 7       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004548007        | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8004548011        | 5       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000012126        | 5       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8005936002        | 6       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 1000013565        | 6       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8005803006        | 3       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8005803007        | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 16092013B         | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 13032014B         | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 260814A           | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 17082015B         | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 170316M8001497001 | 1       |
| Henry Lamotte Oils GmbH    | Almond oil, refined | 8001497001        | 6       |
| HENRY LAMOTTE OILS GmbH    | Almond oil, refined | 1000012126        | 1       |
| HENRY LAMOTTE OILS GmbH    | Almond oil, refined | 8001497001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010685        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000013112        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8000915002        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8002653001        | 3       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003167001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 82675001          | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003885002        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004039003        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004548002        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010093        | 2       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8005936002        | 3       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8002653001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003167001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010685        | 2       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004548011        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004039003        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5615003           | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003503001        | 2       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5438302           | 1       |
| HENRY LAMOTTE OILS GmbH... | Almond oil, refined | 1000010093        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010093        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010685        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5493001           | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 130145            | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5493001           | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1714U-01950       | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000004431        | 2       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003167001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8003503001        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004548011        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000012126        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8004548002        | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 100010093         | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010685        | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000012126  | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000010685  | 2       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5438301     | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5415901     | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5615003     | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5615001     | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5748601     | 3       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 5615001     | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 8002675001  | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000013112  | 1       |
| Henry Lamotte Oils GmbH... | Almond oil, refined | 1000013565  | 3       |
| henry lamotte oils Gmh/N   | Almond oil, refined | 8000915001  | 2       |
| henry lamotte oils Gmh/N   | Almond oil, refined | 8000915002  | 1       |
| Henry Lamotte Oils, Gehe   | Almond oil, refined | 5438302     | 1       |
| Henry Lamotte Oils/ Gehe   | Almond oil, refined | 150001526/2 | 1       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 5438302     | 2       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 7315787     | 1       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 8001497001  | 2       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 8002653001  | 1       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 8003167001  | 1       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 8003503001  | 1       |
| Henry Lamotte Oils/Gehe    | Almond oil, refined | 8003885002  | 2       |
| Henry Lamotte Oils/GEHE    | Almond oil, refined | 5748601     | 1       |
| Henry Lamotte Oils/GEHE    | Almond oil, refined | 8002653001  | 1       |
| Henry Lamotte Oils/Geibo   | Almond oil, refined | 1000010093  | 1       |
| henry lamotte oils/noweda  | Almond oil, refined | 8004390001  | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 8000915002  | 2       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 1000003242  | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 8002653001  | 3       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 170318184   | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 8002675001  | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 180808182   | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 8003503002  | 2       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 8004039003  | 1       |
| Henry Lamotte Oils/Noweda  | Almond oil, refined | 1000010093  | 1       |
| Henry Lamotte Oils/Phoe... | Almond oil, refined | 8004548002  | 1       |
| Henry Lamotte Oils/Phoe... | Almond oil, refined | 1000012126  | 2       |
| Henry Lamotte Oils/Phönix  | Almond oil, refined | 8004548007  | 1       |
| Henry Lamotte Oils/Phönix  | Almond oil, refined | 1000010093  | 1       |
| Henry Lamotte Oils/Sana... | Almond oil, refined | 130145      | 1       |
| Henry Lamotte Oils/Sana... | Almond oil, refined | 5919600001  | 3       |
| Henry Lamotte Oils/Sana... | Almond oil, refined | 10000010093 | 1       |
| Henry Lamotte Olis GmbH... | Almond oil, refined | 5703001     | 6       |
| Henry Lamotte Olis GmbH... | Almond oil, refined | 5919600001  | 1       |
| Henry Lamotte Olis GmbH... | Almond oil, refined | 8000915001  | 2       |
| Henry Lamotte Olis GmbH... | Almond oil, refined | 8000915002  | 2       |
| Henry Lamotte Sanacorp     | Almond oil, refined | 8001497001  | 1       |
| Henry Lamotte Sanacorp     | Almond oil, refined | 8002653001  | 1       |
| Henry Lamotte Sanacorp     | Almond oil, refined | 100001216   | 1       |
| Henry Lamotte/ 11.05.13... | Almond oil, refined | 5438301     | 1       |
| Henry Lamotte/ AH          | Almond oil, refined | 8005936002  | 1       |
| Henry Lamotte/ Alliance    | Almond oil, refined | 8003885002  | 1       |
| Henry Lamotte/ Alliance... | Almond oil, refined | 8002675001  | 1       |
| Henry Lamotte/ Alliance... | Almond oil, refined | 8003885002  | 1       |
| Henry Lamotte/ Alliance... | Almond oil, refined | 1000012126  | 2       |
| Henry Lamotte/ Gehe        | Almond oil, refined | 8000712001  | 1       |
| Henry Lamotte/ Gehe        | Almond oil, refined | 1000010685  | 1       |
| Henry Lamotte/ Henry La... | Almond oil, refined | 8000915001  | 16      |
| Henry Lamotte/ Henry La... | Almond oil, refined | 1000003242  | 19      |
| Henry Lamotte/ Jenne       | Almond oil, refined | 8004390001  | 1       |

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| Supplier                   | Substance           | Batch            | Spectra |
|----------------------------|---------------------|------------------|---------|
| Henry Lamotte/ Krieger     | Almond oil, refined | 1000010093       | 1       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 5615001          | 3       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 5919600001       | 2       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 1000004431       | 1       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 8002653001       | 1       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 8002675001       | 1       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 8004390001       | 3       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 1000010093       | 2       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 8004548007       | 1       |
| Henry Lamotte/ Noweda      | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte/ Phoenix     | Almond oil, refined | 8004039003       | 1       |
| Henry Lamotte/ Phoenix     | Almond oil, refined | 8004548002       | 3       |
| Henry Lamotte/ Phoenix     | Almond oil, refined | 1000010093       | 1       |
| Henry Lamotte/ Phoenix     | Almond oil, refined | 8004548011       | 1       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 1000003242       | 2       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 8001497001       | 2       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 1000004431       | 3       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 8002653001       | 2       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 8002675001       | 3       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 800275001        | 1       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 8003503001       | 1       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 8004548002       | 1       |
| Henry Lamotte/ Phönix      | Almond oil, refined | 1000010685       | 1       |
| Henry Lamotte/ Sanacorp    | Almond oil, refined | 8000712001       | 2       |
| Henry Lamotte/AHD          | Almond oil, refined | 8000915001       | 2       |
| Henry Lamotte/AHD          | Almond oil, refined | 8003503001       | 1       |
| Henry Lamotte/AHD          | Almond oil, refined | 8004390001       | 2       |
| Henry Lamotte/AHD          | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte/Alli. HC     | Almond oil, refined | 8005803006       | 1       |
| Henry Lamotte/Alli. HC     | Almond oil, refined | 8005803007       | 1       |
| Henry Lamotte/Alliance     | Almond oil, refined | 8002675001       | 1       |
| Henry Lamotte/Alliance     | Almond oil, refined | 8003167001       | 1       |
| Henry Lamotte/Alliance     | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte/Alliance     | Almond oil, refined | 8005936002       | 1       |
| Henry Lamotte/Alliance H   | Almond oil, refined | 5748601          | 1       |
| Henry Lamotte/Anzag        | Almond oil, refined | 416E-01950       | 1       |
| henry lamotte/gehe         | Almond oil, refined | 8003503001       | 2       |
| Henry Lamotte/Gehe         | Almond oil, refined | 5415901          | 2       |
| Henry Lamotte/Gehe         | Almond oil, refined | 1000003242       | 1       |
| Henry Lamotte/Gehe         | Almond oil, refined | 10093            | 1       |
| Henry Lamotte/Gehe         | Almond oil, refined | 1000010685       | 2       |
| Henry Lamotte/Gehe         | Almond oil, refined | 8005936002       | 1       |
| Henry Lamotte/Gehe         | Almond oil, refined | 1000013112       | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 121 (8003167001) | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 122 (8003503001) | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 123 (8003503001) | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 124 (8003885002) | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 8004390001       | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 1000010093       | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 1000010685       | 1       |
| Henry Lamotte/Jenne        | Almond oil, refined | 1000012126       | 2       |
| Henry Lamotte/Jenne        | Almond oil, refined | 8005936002       | 2       |
| Henry Lamotte/Kehr         | Almond oil, refined | 8000725001       | 1       |
| Henry Lamotte/N/18.06.1... | Almond oil, refined | 5438301          | 1       |
| Henry Lamotte/N/PZN:731... | Almond oil, refined | 5438302          | 1       |
| Henry Lamotte/Noewda       | Almond oil, refined | 1000004431       | 1       |
| Henry Lamotte/Noewda       | Almond oil, refined | 8003503001       | 2       |
| henry lamotte/Noweda       | Almond oil, refined | 8001497001       | 1       |
| henry lamotte/Noweda       | Almond oil, refined | 8003167001       | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 5615003          | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Henry Lamotte/Noweda       | Almond oil, refined | 8000712001  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8000725001  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 1000003242  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 1000004431  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8002653001  | 4       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8002675001  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8003885002  | 8       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8003167001  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8004039003  | 3       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8004390001  | 6       |
| Henry Lamotte/Noweda       | Almond oil, refined | 80043390001 | 2       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8004548022  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8004548002  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 100010685   | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8004548011  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 1000010685  | 2       |
| Henry Lamotte/Noweda       | Almond oil, refined | 1000012126  | 3       |
| Henry Lamotte/Noweda       | Almond oil, refined | 1000013565  | 1       |
| Henry Lamotte/Noweda       | Almond oil, refined | 8005803006  | 1       |
| Henry Lamotte/Noweda 12... | Almond oil, refined | 8005803007  | 1       |
| Henry Lamotte/Phoenix      | Almond oil, refined | 8002675001  | 1       |
| Henry Lamotte/Phoenix1     | Almond oil, refined | 8001497001  | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 5438301     | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 1000003242  | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8002675001  | 3       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8003167001  | 3       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8004039003  | 3       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8003885002  | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8004390001  | 2       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8003503001  | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 1000012126  | 1       |
| Henry Lamotte/Phönix       | Almond oil, refined | 8005936002  | 1       |
| Henry Lamotte/Poenix       | Almond oil, refined | 8003467001  | 1       |
| Henry Lamotte/Poenix       | Almond oil, refined | 8004039003  | 1       |
| Henry Lamotte/Poenix       | Almond oil, refined | 1000010093  | 1       |
| Henry Lamotte/Sanacorp     | Almond oil, refined | 130145      | 1       |
| Henry Lamotte/Sanacorp     | Almond oil, refined | 8000915002  | 8       |
| Henry Lamotte/Sanacorp     | Almond oil, refined | 8001497001  | 3       |
| Henry Lamotte/Sanacorp     | Almond oil, refined | 8004390001  | 1       |
| Henry Lamotte/Sanacorp     | Almond oil, refined | 1000010093  | 1       |
| Henry Lamotte/Spangro      | Almond oil, refined | 8003167001  | 1       |
| Henry LamotteOils/Gehe     | Almond oil, refined | 8004039003  | 1       |
| henry lsmotte oils g       | Almond oil, refined | 690454      | 1       |
| Henry/Krieger              | Almond oil, refined | 8003885002  | 3       |
| Henry/Krieger              | Almond oil, refined | 8004390001  | 1       |
| Henry/phönix               | Almond oil, refined | 8002653001  | 1       |
| Henry/phönix               | Almond oil, refined | 1000010093  | 1       |
| Henry/Phönix               | Almond oil, refined | 1000004431  | 1       |
| Henry/Phönix               | Almond oil, refined | 8003167001  | 2       |
| HenryLamotte               | Almond oil, refined | 8001497001  | 1       |
| HenryLamotte/ Anzag        | Almond oil, refined | 8004548011  | 1       |
| HenryLamotte/ Phönix       | Almond oil, refined | 1000010685  | 1       |
| HenryLamotte/Alliance H... | Almond oil, refined | 8003885002  | 1       |
| HenryLamotte/Alliance H... | Almond oil, refined | 8004548002  | 1       |
| HenryLamotte/Gehe          | Almond oil, refined | 130145      | 3       |
| HenryLamotte/noweda        | Almond oil, refined | 8000915002  | 1       |
| HenryLamotte/noweda        | Almond oil, refined | 1000010685  | 2       |
| HenryLamotte/noweda        | Almond oil, refined | 800448011   | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 8004390001  | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 8004039003  | 1       |

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| Supplier                   | Substance           | Batch        | Spectra |
|----------------------------|---------------------|--------------|---------|
| HenryLamotte/Noweda        | Almond oil, refined | 1000010685   | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 800458011    | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 8004548011   | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 1000012126   | 1       |
| HenryLamotte/Noweda        | Almond oil, refined | 8005936002   | 4       |
| HenryLamotte/Noweda        | Almond oil, refined | 8005803007   | 2       |
| HenryLamotte/Phoenix       | Almond oil, refined | 5269301      | 2       |
| HenryLamotte/Phoenix       | Almond oil, refined | 8004039003   | 1       |
| HenryLamotte/Phoenix       | Almond oil, refined | 8004390001   | 2       |
| HenryLamotte/Phoenix       | Almond oil, refined | 1000010093   | 2       |
| HenryLamotte/Phönix        | Almond oil, refined | 8002653001   | 1       |
| HenryLamotteOils/Gehe      | Almond oil, refined | 8003503001   | 1       |
| HenryLamotteOilsGmbH/Ph... | Almond oil, refined | 5438302      | 2       |
| Herbasinica                | Almond oil, refined | 14042707     | 2       |
| Hnery Lamotte              | Almond oil, refined | 8004548002   | 1       |
| Holdermann                 | Almond oil, refined | 15078403     | 1       |
| Holdermann/Henry Lamott... | Almond oil, refined | 5162801      | 2       |
| J.H.Müller/direkt/01.08... | Almond oil, refined | 130327       | 2       |
| J.H.Müller/direkt/17.05... | Almond oil, refined | 130103       | 1       |
| jenne                      | Almond oil, refined | 1000010685   | 1       |
| Jenne                      | Almond oil, refined | 18070602     | 1       |
| Jenne                      | Almond oil, refined | 19000779004  | 1       |
| Jenne                      | Almond oil, refined | 20001624012  | 1       |
| Kehr                       | Almond oil, refined | 8004039003   | 1       |
| Caelo                      | Almond oil, refined | 21112PML01   | 1       |
| Caelo                      | Almond oil, refined | 140113PML01  | 1       |
| Caelo                      | Almond oil, refined | 12357110     | 1       |
| Kehr / Lamotte             | Almond oil, refined | 5214206      | 1       |
| Kehr / Lamotte             | Almond oil, refined | 50115PML01   | 1       |
| Caelo                      | Almond oil, refined | 220515PML01  | 1       |
| Kögl                       | Almond oil, refined | 267608164216 | 1       |
| Kögl                       | Almond oil, refined | 373411164816 | 1       |
| Kögl                       | Almond oil, refined | 485801170717 | 1       |
| Kögl                       | Almond oil, refined | 65903171117  | 1       |
| Kögl                       | Almond oil, refined | 109704172417 | 1       |
| Kögl                       | Almond oil, refined | 20172414     | 2       |
| Kögl                       | Almond oil, refined | 1701851      | 1       |
| Kögl                       | Almond oil, refined | 1800278      | 1       |
| Kögl                       | Almond oil, refined | 1700173      | 2       |
| Kögl                       | Almond oil, refined | 1701192      | 1       |
| Kögl                       | Almond oil, refined | 1800813      | 1       |
| Kögl                       | Almond oil, refined | 1802929      | 2       |
| Krieger                    | Almond oil, refined | 13350006     | 1       |
| Krieger                    | Almond oil, refined | 19000779001  | 1       |
| Krieger/Lamotte            | Almond oil, refined | 8001497001   | 1       |
| Krieger/Lamotte/06.01.14   | Almond oil, refined | 5438302      | 1       |
| L 20/ Henry Lamotte        | Almond oil, refined | 1000004431   | 1       |
| L 20/ Henry Lamotte        | Almond oil, refined | 8002653001   | 2       |
| L10/HENRY LAMOTTE          | Almond oil, refined | 8003167001   | 1       |
| L12                        | Almond oil, refined | 8002675001   | 1       |
| L12                        | Almond oil, refined | 8003167001   | 4       |
| L12                        | Almond oil, refined | E1712007     | 1       |
| L12/Henry Lamotte          | Almond oil, refined | 8001497001   | 5       |
| L20/ Henry Lamotte         | Almond oil, refined | 8002675001   | 1       |
| L20/ Henry Lamotte         | Almond oil, refined | 8003503002   | 1       |
| L20/Lamotte                | Almond oil, refined | 1000003242   | 1       |
| L30                        | Almond oil, refined | E1603022     | 1       |
| Lametto/Alliance           | Almond oil, refined | 8004548011   | 1       |
| lamotte                    | Almond oil, refined | 5438301      | 1       |
| lamotte                    | Almond oil, refined | 5615003      | 1       |

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| Supplier         | Substance           | Batch       | Spectra |
|------------------|---------------------|-------------|---------|
| lamotte          | Almond oil, refined | 8003885002  | 1       |
| lamotte          | Almond oil, refined | 1000010093  | 1       |
| Lamotte          | Almond oil, refined | 5269301     | 3       |
| Lamotte          | Almond oil, refined | 5214206     | 6       |
| Lamotte          | Almond oil, refined | 130145      | 6       |
| Lamotte          | Almond oil, refined | 5438301     | 6       |
| Lamotte          | Almond oil, refined | 5438302     | 9       |
| Lamotte          | Almond oil, refined | 548302      | 1       |
| Lamotte          | Almond oil, refined | 5415901     | 12      |
| Lamotte          | Almond oil, refined | 5615001     | 2       |
| Lamotte          | Almond oil, refined | 561001      | 1       |
| Lamotte          | Almond oil, refined | 5615003     | 6       |
| Lamotte          | Almond oil, refined | 5703001     | 1       |
| Lamotte          | Almond oil, refined | 5669601     | 1       |
| Lamotte          | Almond oil, refined | 5748601     | 7       |
| Lamotte          | Almond oil, refined | 5919600001  | 6       |
| Lamotte          | Almond oil, refined | 5713001     | 1       |
| Lamotte          | Almond oil, refined | 5703101     | 1       |
| Lamotte          | Almond oil, refined | 8000712001  | 11      |
| Lamotte          | Almond oil, refined | 8000915001  | 3       |
| Lamotte          | Almond oil, refined | 8000725001  | 2       |
| Lamotte          | Almond oil, refined | 8000915002  | 3       |
| Lamotte          | Almond oil, refined | 1000003242  | 4       |
| Lamotte          | Almond oil, refined | 1000002454  | 1       |
| Lamotte          | Almond oil, refined | 8001497001  | 4       |
| Lamotte          | Almond oil, refined | 1000004431  | 1       |
| Lamotte          | Almond oil, refined | 1000004815  | 1       |
| Lamotte          | Almond oil, refined | 8002653001  | 4       |
| Lamotte          | Almond oil, refined | 8002675001  | 6       |
| Lamotte          | Almond oil, refined | 80031670001 | 1       |
| Lamotte          | Almond oil, refined | 8003167001  | 2       |
| Lamotte          | Almond oil, refined | 8003503002  | 4       |
| Lamotte          | Almond oil, refined | 8003503001  | 1       |
| Lamotte          | Almond oil, refined | 8003885002  | 4       |
| Lamotte          | Almond oil, refined | 8003885001  | 1       |
| Lamotte          | Almond oil, refined | 8003885002  | 1       |
| Lamotte          | Almond oil, refined | 8004039003  | 7       |
| Lamotte          | Almond oil, refined | 8004390001  | 5       |
| Lamotte          | Almond oil, refined | 1000010093  | 2       |
| Lamotte          | Almond oil, refined | 1000010685  | 4       |
| Lamotte          | Almond oil, refined | 8004548011  | 3       |
| Lamotte          | Almond oil, refined | 19084506    | 1       |
| Lamotte          | Almond oil, refined | 1000012126  | 1       |
| Lamotte          | Almond oil, refined | 8005936002  | 3       |
| Lamotte          | Almond oil, refined | 1000013112  | 3       |
| Lamotte / AHC    | Almond oil, refined | 1000003242  | 1       |
| Lamotte / AHC    | Almond oil, refined | 1000010093  | 1       |
| Lamotte / Anzag  | Almond oil, refined | 8004548002  | 1       |
| Lamotte / Anzag  | Almond oil, refined | 8005936002  | 1       |
| Lamotte / Gehe   | Almond oil, refined | 3968/V03/14 | 1       |
| Lamotte / Gehe   | Almond oil, refined | 5615001     | 1       |
| Lamotte / Gehe   | Almond oil, refined | 5703101     | 2       |
| Lamotte / Gehe   | Almond oil, refined | 8000725001  | 2       |
| Lamotte / Gehe   | Almond oil, refined | 8003885002  | 2       |
| Lamotte / Gehe   | Almond oil, refined | 1000010685  | 2       |
| Lamotte / Gehe   | Almond oil, refined | 1000013565  | 1       |
| Lamotte / Noweda | Almond oil, refined | 5615001     | 1       |
| Lamotte / Noweda | Almond oil, refined | 5615003     | 1       |
| Lamotte / Noweda | Almond oil, refined | 5748601     | 2       |
| Lamotte / Noweda | Almond oil, refined | 1000003242  | 2       |

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| <b>Supplier</b>       | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------------|---------------------|--------------|----------------|
| Lamotte / Noweda      | Almond oil, refined | 8001497001   | 2              |
| Lamotte / Noweda      | Almond oil, refined | 8003167001   | 1              |
| Lamotte / Noweda      | Almond oil, refined | 8004390001   | 1              |
| Lamotte / Noweda      | Almond oil, refined | 8004548002   | 2              |
| Lamotte / Noweda      | Almond oil, refined | 1000010685   | 3              |
| Lamotte / Noweda      | Almond oil, refined | 1000012126   | 1              |
| Lamotte / Noweda      | Almond oil, refined | 8005936002   | 1              |
| Lamotte / Noweda      | Almond oil, refined | 1000013565   | 2              |
| Lamotte / Phoenix     | Almond oil, refined | 8004548011   | 1              |
| Lamotte / Phönix      | Almond oil, refined | 8004390001   | 1              |
| lamotte / Sanacorp    | Almond oil, refined | 5615003      | 1              |
| Lamotte / Sanacorp    | Almond oil, refined | 8002675001   | 4              |
| Lamotte / Sanacorp    | Almond oil, refined | 1000013565   | 1              |
| Lamotte /Phoenix      | Almond oil, refined | 8003167001   | 1              |
| Lamotte /Sanacorp     | Almond oil, refined | 1000010685   | 1              |
| Lamotte Henry         | Almond oil, refined | 1000004431   | 1              |
| Lamotte Noweda        | Almond oil, refined | 8004548002   | 3              |
| Lamotte Noweda        | Almond oil, refined | 1000010093   | 1              |
| Lamotte Noweda        | Almond oil, refined | 8005936002   | 6              |
| lamotte noweda,       | Almond oil, refined | 5615001      | 1              |
| Lamotte Phönix        | Almond oil, refined | 5214206      | 1              |
| Lamotte über Phoenix  | Almond oil, refined | 5703001      | 1              |
| Lamotte über Phoenix  | Almond oil, refined | 5748601      | 3              |
| Lamotte über Phoenix  | Almond oil, refined | 8000712001   | 2              |
| Lamotte über Phoenix  | Almond oil, refined | 8000725001   | 1              |
| Lamotte über Sanacorp | Almond oil, refined | 8000915001   | 3              |
| Lamotte über Sanacorp | Almond oil, refined | 8000915002   | 1              |
| Lamotte/ Anzag        | Almond oil, refined | 8002653001   | 1              |
| Lamotte/ Anzag        | Almond oil, refined | 8003503001   | 2              |
| Lamotte/ Anzag        | Almond oil, refined | 8004039003   | 1              |
| Lamotte/ Gehe         | Almond oil, refined | 8004548011   | 1              |
| Lamotte/ Noweda       | Almond oil, refined | 5438301      | 1              |
| Lamotte/ Noweda       | Almond oil, refined | 5415901      | 1              |
| Lamotte/ Noweda       | Almond oil, refined | 8001497001   | 3              |
| Lamotte/ Noweda       | Almond oil, refined | 8002675001   | 1              |
| Lamotte/ Phoenix      | Almond oil, refined | 5748601      | 1              |
| Lamotte/ Phönix       | Almond oil, refined | 5438302      | 1              |
| Lamotte/ Sana         | Almond oil, refined | 5669601      | 1              |
| Lamotte/ Sanacorp     | Almond oil, refined | 8002675001   | 1              |
| Lamotte/ Sanacorp     | Almond oil, refined | 8004039003   | 1              |
| Lamotte/3             | Almond oil, refined | 5748401      | 1              |
| Lamotte/AHD           | Almond oil, refined | 1000003242   | 2              |
| Lamotte/AHD           | Almond oil, refined | 8003503002   | 4              |
| Lamotte/AHD           | Almond oil, refined | 8003885002   | 1              |
| Lamotte/AHD           | Almond oil, refined | 8004548007   | 1              |
| Lamotte/AHD           | Almond oil, refined | 8004548011   | 1              |
| Lamotte/AHD           | Almond oil, refined | 1000010685   | 1              |
| Lamotte/Alliance      | Almond oil, refined | 8002653001   | 1              |
| Lamotte/Alliance      | Almond oil, refined | 8003167001   | 4              |
| Lamotte/Alliance      | Almond oil, refined | 8003885002   | 1              |
| Lamotte/Alliance      | Almond oil, refined | 8004039003   | 3              |
| Lamotte/Alliance      | Almond oil, refined | 1000010685   | 3              |
| Lamotte/Alliance      | Almond oil, refined | 1000013565   | 2              |
| lamotte/anzag         | Almond oil, refined | 5415901      | 3              |
| Lamotte/Anzag         | Almond oil, refined | 130145       | 1              |
| Lamotte/Anzag         | Almond oil, refined | 8000712001   | 4              |
| Lamotte/Anzag         | Almond oil, refined | 1000004431   | 1              |
| Lamotte/Anzag         | Almond oil, refined | 3516I-01950  | 1              |
| Lamotte/Anzag         | Almond oil, refined | 8002675001   | 2              |
| Lamotte/Anzag         | Almond oil, refined | 8002653001   | 1              |

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| Supplier                 | Substance           | Batch       | Spectra |
|--------------------------|---------------------|-------------|---------|
| Lamotte/Anzag            | Almond oil, refined | 1000012126  | 1       |
| Lamotte/Anzag            | Almond oil, refined | 8005936002  | 1       |
| Lamotte/Anzag 12.06.2012 | Almond oil, refined | 5177001     | 1       |
| Caelo                    | Almond oil, refined | 1000010685  | 2       |
| Caelo                    | Almond oil, refined | 5438301     | 4       |
| Lamotte/Ebert            | Almond oil, refined | 5415901     | 1       |
| Lamotte/Ebert            | Almond oil, refined | 8000725001  | 1       |
| Lamotte/Ebert            | Almond oil, refined | 8000915001  | 1       |
| Lamotte/Ebert            | Almond oil, refined | 1000003242  | 1       |
| Lamotte/Ebert            | Almond oil, refined | 8003167001  | 1       |
| Lamotte/Ebert            | Almond oil, refined | 8003503002  | 2       |
| Lamotte/Ebert            | Almond oil, refined | 8004039003  | 3       |
| Lamotte/Ebert&Jacobi     | Almond oil, refined | 5919600001  | 1       |
| Lamotte/Ebert+Jacobi     | Almond oil, refined | 8004039003  | 2       |
| Lamotte/Fiebig           | Almond oil, refined | 1000010685  | 1       |
| Lamotte/Fiebig           | Almond oil, refined | 1000012126  | 1       |
| lamotte/gehe             | Almond oil, refined | 8001497001  | 2       |
| lamotte/gehe             | Almond oil, refined | 8002653001  | 2       |
| lamotte/gehe             | Almond oil, refined | 8003167001  | 1       |
| lamotte/Gehe             | Almond oil, refined | 5415901     | 3       |
| lamotte/Gehe             | Almond oil, refined | 5615001     | 1       |
| Lamotte/gehe             | Almond oil, refined | 5214206     | 1       |
| Lamotte/gehe             | Almond oil, refined | 5274206     | 1       |
| Lamotte/Gehe             | Almond oil, refined | 5415901     | 6       |
| Lamotte/Gehe             | Almond oil, refined | 5615001     | 3       |
| Lamotte/Gehe             | Almond oil, refined | 5438302     | 1       |
| Lamotte/Gehe             | Almond oil, refined | 5615003     | 7       |
| Lamotte/Gehe             | Almond oil, refined | 5703101     | 4       |
| Lamotte/Gehe             | Almond oil, refined | 5748401     | 2       |
| Lamotte/Gehe             | Almond oil, refined | 5748601     | 5       |
| Lamotte/Gehe             | Almond oil, refined | 8000712001  | 2       |
| Lamotte/Gehe             | Almond oil, refined | 8000725001  | 2       |
| Lamotte/Gehe             | Almond oil, refined | 1000002454  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8000915002  | 3       |
| Lamotte/Gehe             | Almond oil, refined | 1000003242  | 4       |
| Lamotte/Gehe             | Almond oil, refined | 8001497001  | 4       |
| Lamotte/Gehe             | Almond oil, refined | 1000004431  | 2       |
| Lamotte/Gehe             | Almond oil, refined | 8002653001  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8002675001  | 2       |
| Lamotte/Gehe             | Almond oil, refined | 8003167001  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8003503002  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8003885002  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8004039003  | 2       |
| Lamotte/Gehe             | Almond oil, refined | 8004390001  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8004548002  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 80045480032 | 1       |
| Lamotte/Gehe             | Almond oil, refined | 1000010685  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 8004548011  | 1       |
| Lamotte/Gehe             | Almond oil, refined | 1000012126  | 2       |
| Lamotte/GEHE             | Almond oil, refined | 5269301     | 2       |
| Lamotte/GEHE             | Almond oil, refined | 5438302     | 3       |
| Lamotte/Geilenkirchen    | Almond oil, refined | 8003167001  | 2       |
| Lamotte/Jenne            | Almond oil, refined | 8004548002  | 1       |
| Lamotte/Jenne            | Almond oil, refined | 8005936002  | 2       |
| Lamotte/Kehr             | Almond oil, refined | 8004039003  | 1       |
| Lamotte/Kehr             | Almond oil, refined | 1000012126  | 1       |
| Lamotte/Krieger          | Almond oil, refined | 5081301     | 1       |
| Lamotte/Krieger          | Almond oil, refined | 5177001     | 1       |
| Lamotte/Krieger          | Almond oil, refined | 5269301     | 2       |
| Lamotte/Krieger          | Almond oil, refined | 8004390001  | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Lamotte/N/31.05.13/PZN:... | Almond oil, refined | 5214206     | 1       |
| lamotte/noweda             | Almond oil, refined | 8000712001  | 2       |
| lamotte/noweda             | Almond oil, refined | 8003503001  | 1       |
| lamotte/Noweda             | Almond oil, refined | 74760       | 1       |
| lamotte/Noweda             | Almond oil, refined | 5615001     | 1       |
| Lamotte/Noweda             | Almond oil, refined | 130145      | 3       |
| Lamotte/Noweda             | Almond oil, refined | 5438301     | 1       |
| Lamotte/Noweda             | Almond oil, refined | 5438302     | 1       |
| Lamotte/Noweda             | Almond oil, refined | 5615003     | 2       |
| Lamotte/Noweda             | Almond oil, refined | 8000712001  | 2       |
| Lamotte/Noweda             | Almond oil, refined | 8000915001  | 1       |
| Lamotte/Noweda             | Almond oil, refined | 8000915002  | 1       |
| Lamotte/Noweda             | Almond oil, refined | 1000004431  | 2       |
| Lamotte/Noweda             | Almond oil, refined | 8002653001  | 3       |
| Lamotte/Noweda             | Almond oil, refined | 8002675001  | 1       |
| Lamotte/Noweda             | Almond oil, refined | 8003167001  | 4       |
| Lamotte/Noweda             | Almond oil, refined | 8003503002  | 2       |
| Lamotte/Noweda             | Almond oil, refined | 8004039003  | 5       |
| Lamotte/Noweda             | Almond oil, refined | 8004390001  | 3       |
| Lamotte/Noweda             | Almond oil, refined | 1000010093  | 2       |
| Lamotte/Noweda             | Almond oil, refined | 1000010685  | 1       |
| Lamotte/Noweda             | Almond oil, refined | 8004548011  | 2       |
| Lamotte/Noweda             | Almond oil, refined | 1000012126  | 3       |
| Lamotte/Noweda             | Almond oil, refined | 8005936002  | 3       |
| LAMOTTE/NOWEDA             | Almond oil, refined | 5415901     | 4       |
| LAMOTTE/NOWEDA             | Almond oil, refined | 5615003     | 4       |
| Lamotte/Ph                 | Almond oil, refined | 8003503001  | 1       |
| Lamotte/Ph                 | Almond oil, refined | 8004548011  | 2       |
| Lamotte/Ph                 | Almond oil, refined | 8005936002  | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 5415901     | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 5615003     | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 5615001     | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 5703001     | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 5748601     | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 5919600001  | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 8000712001  | 4       |
| Lamotte/Phoenix            | Almond oil, refined | 8003167001  | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 8003503001  | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 8004039003  | 3       |
| Lamotte/Phoenix            | Almond oil, refined | 8003885002  | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 8004390001  | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 8004548002  | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 1000010093  | 5       |
| Lamotte/Phoenix            | Almond oil, refined | 10000010685 | 1       |
| Lamotte/Phoenix            | Almond oil, refined | 1000010685  | 2       |
| Lamotte/Phoenix            | Almond oil, refined | 1000012126  | 3       |
| Lamotte/Phoenix            | Almond oil, refined | 8005936002  | 4       |
| lamotte/phönix             | Almond oil, refined | 5438302     | 1       |
| lamotte/phönix             | Almond oil, refined | 5919600001  | 1       |
| lamotte/Phönix             | Almond oil, refined | 5748601     | 1       |
| lamotte/Phönix             | Almond oil, refined | 1000010685  | 2       |
| Lamotte/Phönix             | Almond oil, refined | 5415901     | 1       |
| Lamotte/Phönix             | Almond oil, refined | 5615003     | 1       |
| Lamotte/Phönix             | Almond oil, refined | 8000725001  | 2       |
| Lamotte/Phönix             | Almond oil, refined | 3243        | 1       |
| Lamotte/Phönix             | Almond oil, refined | 8003167001  | 1       |
| Lamotte/Phönix             | Almond oil, refined | 8003675001  | 1       |
| Lamotte/Phönix             | Almond oil, refined | 8003503002  | 1       |
| Lamotte/Phönix             | Almond oil, refined | 8004039003  | 3       |
| Lamotte/Phönix             | Almond oil, refined | 8003503001  | 1       |

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| Supplier                   | Substance           | Batch        | Spectra |
|----------------------------|---------------------|--------------|---------|
| Lamotte/Phönix             | Almond oil, refined | 8004548002   | 3       |
| Lamotte/Phönix             | Almond oil, refined | 1000010685   | 1       |
| Lamotte/Phönix             | Almond oil, refined | 1000010093   | 1       |
| Lamotte/Phönix             | Almond oil, refined | 1000012126   | 4       |
| Lamotte/Phönix             | Almond oil, refined | 8005936002   | 4       |
| Lamotte/Phönix             | Almond oil, refined | 1000013112   | 1       |
| Lamotte/Poenix             | Almond oil, refined | 8004039003   | 1       |
| Lamotte/PPL                | Almond oil, refined | 8000712001   | 2       |
| Lamotte/Sana               | Almond oil, refined | 8004548007   | 1       |
| Lamotte/Sana               | Almond oil, refined | 1000010685   | 1       |
| Lamotte/Sana               | Almond oil, refined | 8004548011   | 1       |
| Lamotte/Sana               | Almond oil, refined | 1000012126   | 1       |
| Lamotte/Sana               | Almond oil, refined | 8005936002   | 1       |
| Lamotte/sanacorp           | Almond oil, refined | 8004548002   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5214206      | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5438301      | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 130145       | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5438302      | 3       |
| Lamotte/Sanacorp           | Almond oil, refined | 5615001      | 3       |
| Lamotte/Sanacorp           | Almond oil, refined | 5669601      | 2       |
| Lamotte/Sanacorp           | Almond oil, refined | 5703101      | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5703001      | 6       |
| Lamotte/Sanacorp           | Almond oil, refined | 8748401      | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5748401      | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 5748601      | 14      |
| Lamotte/Sanacorp           | Almond oil, refined | 8000712001   | 6       |
| Lamotte/Sanacorp           | Almond oil, refined | 1000002454   | 2       |
| Lamotte/Sanacorp           | Almond oil, refined | 8000725001   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 8000915002   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 1000003242   | 2       |
| Lamotte/Sanacorp           | Almond oil, refined | 8001497001   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 8003503002   | 2       |
| Lamotte/Sanacorp           | Almond oil, refined | 8004390001   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 1000010685   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 8004548011   | 1       |
| Lamotte/Sanacorp           | Almond oil, refined | 8005803007   | 3       |
| Lamotte/Sanacorp 02.11.... | Almond oil, refined | 5919600001   | 1       |
| lamotte-phönix             | Almond oil, refined | 1000013565   | 3       |
| LamotteTFiebig             | Almond oil, refined | 8004390001   | 1       |
| Midas                      | Almond oil, refined | 1000002705   | 1       |
| Midas                      | Almond oil, refined | 1000004431   | 2       |
| Midas                      | Almond oil, refined | 8003503001   | 1       |
| Midas                      | Almond oil, refined | 8004039003   | 4       |
| Midas                      | Almond oil, refined | 8004390001   | 4       |
| Midas                      | Almond oil, refined | 8004548002   | 3       |
| Midas                      | Almond oil, refined | 1000010093   | 1       |
| MIDAS/Henry Lamotte        | Almond oil, refined | 1000010685   | 1       |
| MPK                        | Almond oil, refined | 36480-127127 | 1       |
| noweda                     | Almond oil, refined | 8004548011   | 3       |
| Noweda                     | Almond oil, refined | 11078806     | 1       |
| Noweda                     | Almond oil, refined | 5177001      | 4       |
| Noweda                     | Almond oil, refined | 5269301      | 4       |
| Noweda                     | Almond oil, refined | 12080803     | 2       |
| Noweda                     | Almond oil, refined | 12357101     | 1       |
| Noweda                     | Almond oil, refined | 13178003     | 1       |
| Noweda                     | Almond oil, refined | 13178011     | 2       |
| Noweda                     | Almond oil, refined | 13H08-N11    | 1       |
| Noweda                     | Almond oil, refined | 13236411     | 2       |
| Noweda                     | Almond oil, refined | 5748601      | 2       |
| Noweda                     | Almond oil, refined | 15197404     | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Noweda                     | Almond oil, refined | 294784      | 1       |
| Noweda                     | Almond oil, refined | 8004039003  | 1       |
| Noweda                     | Almond oil, refined | 18184102    | 1       |
| Noweda                     | Almond oil, refined | 18184113    | 1       |
| Noweda                     | Almond oil, refined | 18295902    | 2       |
| Noweda                     | Almond oil, refined | 18295903    | 1       |
| Noweda                     | Almond oil, refined | 884548007   | 1       |
| Noweda                     | Almond oil, refined | 18295909    | 2       |
| Noweda                     | Almond oil, refined | 19084506    | 1       |
| Noweda / Henry Lamotte     | Almond oil, refined | 5214206     | 3       |
| Noweda / Henry Lamotte     | Almond oil, refined | 5438301     | 3       |
| Noweda / Henry Lamotte     | Almond oil, refined | 130145      | 1       |
| Noweda / Henry Lamotte     | Almond oil, refined | 5748601     | 1       |
| Noweda / Henry Lamotte     | Almond oil, refined | 8000725001  | 1       |
| Noweda / Lamotte Oil       | Almond oil, refined | 8005936002  | 2       |
| Noweda Lamotte GmBH        | Almond oil, refined | 5919600001  | 1       |
| Bombastus                  | Almond oil, refined | 281765      | 1       |
| noweda/anzag               | Almond oil, refined | 18295903    | 1       |
| Fagron                     | Almond oil, refined | 17042203    | 1       |
| Noweda/Henry               | Almond oil, refined | 8003503002  | 1       |
| Noweda/Henry Lamotte       | Almond oil, refined | 5615003     | 4       |
| Noweda/Henry Lamotte       | Almond oil, refined | 5748501     | 1       |
| Noweda/Henry Lamotte       | Almond oil, refined | 8000915001  | 1       |
| Noweda/Henry Lamotte Oi... | Almond oil, refined | 8004390001  | 1       |
| Noweda/Henry Lamottee      | Almond oil, refined | 10000013565 | 1       |
| noweda/Ichtyol             | Almond oil, refined | 5438302     | 2       |
| Noweda/Lamotte             | Almond oil, refined | 5438302     | 3       |
| Noweda/Lamotte             | Almond oil, refined | 5748601     | 1       |
| Noweda/Lamotte             | Almond oil, refined | 5919600001  | 1       |
| Noweda/Lamotte             | Almond oil, refined | 8000712001  | 3       |
| Noweda/Lamotte             | Almond oil, refined | 8000915001  | 1       |
| Noweda/Lamotte             | Almond oil, refined | 8003503001  | 1       |
| Noweda/Lamotte             | Almond oil, refined | 8004039003  | 1       |
| Euro OTC                   | Almond oil, refined | 1301001-02  | 2       |
| Euro OTC                   | Almond oil, refined | 17176501    | 1       |
| Ph.Eur.7.0                 | Almond oil, refined | 13350003    | 1       |
| Caelo                      | Almond oil, refined | 18184107    | 30      |
| Pharmachem/Noweda          | Almond oil, refined | 8000712001  | 1       |
| Phoenix                    | Almond oil, refined | 5269301     | 1       |
| Phoenix                    | Almond oil, refined | 163327303   | 1       |
| Phoenix                    | Almond oil, refined | 16327304    | 1       |
| Phoenix                    | Almond oil, refined | 17176503    | 1       |
| Phoenix                    | Almond oil, refined | 8003167001  | 1       |
| Phoenix                    | Almond oil, refined | 18015007    | 1       |
| Phoenix                    | Almond oil, refined | 3202        | 1       |
| Phoenix                    | Almond oil, refined | 18184107    | 1       |
| Phoenix                    | Almond oil, refined | 18184101    | 1       |
| Phoenix                    | Almond oil, refined | 18295901    | 1       |
| Phoenix                    | Almond oil, refined | 18295908    | 1       |
| Phoenix                    | Almond oil, refined | 19084505    | 1       |
| Phoenix                    | Almond oil, refined | 19187101    | 1       |
| Phoenix (Henry Lamotte ... | Almond oil, refined | 5269301     | 1       |
| PHOENIX 03.06.2014         | Almond oil, refined | 14042705    | 1       |
| Caelo                      | Almond oil, refined | 12357112    | 2       |
| Phoenix/ Henry Lamotte     | Almond oil, refined | 1000010685  | 1       |
| Phoenix/ Lamotte           | Almond oil, refined | 5438301     | 2       |
| Bombastus                  | Almond oil, refined | 17000425    | 3       |
| Caelo                      | Almond oil, refined | 8000915001  | 5       |
| Phoenix/Lamotte            | Almond oil, refined | 5214206     | 1       |
| Phoenix/Lamotte            | Almond oil, refined | 5415901     | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| phönix                     | Almond oil, refined | 12153505    | 1       |
| phönix                     | Almond oil, refined | 8001497001  | 1       |
| phönix                     | Almond oil, refined | 8004039003  | 2       |
| Phönix                     | Almond oil, refined | 5438301     | 1       |
| Phönix                     | Almond oil, refined | 13178004    | 1       |
| Phönix                     | Almond oil, refined | 543801      | 1       |
| Phönix                     | Almond oil, refined | 8000915001  | 1       |
| Phönix                     | Almond oil, refined | 15409710    | 1       |
| Phönix                     | Almond oil, refined | 16071006    | 2       |
| Phönix                     | Almond oil, refined | 298745      | 1       |
| Phönix                     | Almond oil, refined | 16327302    | 2       |
| Phönix                     | Almond oil, refined | 16327303    | 1       |
| Phönix                     | Almond oil, refined | 17176502    | 2       |
| Phönix                     | Almond oil, refined | 17207907    | 1       |
| Phönix                     | Almond oil, refined | 8003167001  | 2       |
| Phönix                     | Almond oil, refined | 8004548002  | 1       |
| Phönix                     | Almond oil, refined | 18295908    | 1       |
| Phönix                     | Almond oil, refined | 8004548011  | 1       |
| Phönix                     | Almond oil, refined | 100001216   | 1       |
| Phönix                     | Almond oil, refined | 19000779001 | 4       |
| Phönix                     | Almond oil, refined | 1000012126  | 1       |
| Phönix                     | Almond oil, refined | 8005936002  | 1       |
| PHÖNIX                     | Almond oil, refined | 16327302    | 1       |
| PHÖNIX                     | Almond oil, refined | 18015002    | 1       |
| PHÖNIX                     | Almond oil, refined | 18295910    | 1       |
| Phönix , 03.09.13          | Almond oil, refined | 13178003    | 1       |
| Phönix aep                 | Almond oil, refined | 18014402    | 1       |
| Phönix Gotha               | Almond oil, refined | 12153501    | 1       |
| Phönix Gotha               | Almond oil, refined | 18015007    | 1       |
| Phönix Gotha               | Almond oil, refined | 18184107    | 1       |
| Phönix Gotha               | Almond oil, refined | 18295902    | 1       |
| Phönix Gotha               | Almond oil, refined | 19187102    | 1       |
| Phönix, 17.06.2013         | Almond oil, refined | 5438301     | 1       |
| Caelo                      | Almond oil, refined | 13236403    | 7       |
| Caelo                      | Almond oil, refined | 19084505    | 25      |
| Phönix/ Caesar&Loretz G... | Almond oil, refined | 19000779004 | 2       |
| Phönix/ Lamotte            | Almond oil, refined | 5615001     | 1       |
| Phönix/ Lamotte            | Almond oil, refined | 5615003     | 2       |
| Caelo                      | Almond oil, refined | 12153506    | 4       |
| Caelo                      | Almond oil, refined | 1326403     | 1       |
| Caelo                      | Almond oil, refined | 16327304    | 19      |
| Caelo                      | Almond oil, refined | 17207906    | 23      |
| Euro OTC                   | Almond oil, refined | 18184113    | 1       |
| Phönix/Fagon               | Almond oil, refined | 18015003    | 1       |
| Phönix/Lamotte             | Almond oil, refined | 1000003242  | 1       |
| Phytocomm                  | Almond oil, refined | 15197406    | 1       |
| Prima Vera                 | Almond oil, refined | 8603152     | 1       |
| Primavera                  | Almond oil, refined | 3808131     | 2       |
| Primavera                  | Almond oil, refined | 4811131     | 1       |
| Primavera                  | Almond oil, refined | 1551041     | 2       |
| Primavera                  | Almond oil, refined | 15510141    | 1       |
| Primavera                  | Almond oil, refined | 7708L22     | 1       |
| Primavera                  | Almond oil, refined | 82B23       | 2       |
| Primavera                  | Almond oil, refined | 11G23       | 2       |
| Primavera                  | Almond oil, refined | 480K23      | 1       |
| Primavera                  | Almond oil, refined | 12H24       | 1       |
| Primavera                  | Almond oil, refined | 241C25      | 4       |
| Primavera                  | Almond oil, refined | 243C25      | 1       |
| Primavera                  | Almond oil, refined | 511E25      | 1       |

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| <b>Supplier</b>             | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------------------|---------------------|--------------|----------------|
| Primavera                   | Almond oil, refined | 298H25       | 3              |
| Primavera                   | Almond oil, refined | 552K25       | 1              |
| Primavera                   | Almond oil, refined | 444C26       | 1              |
| Primavera                   | Almond oil, refined | 60E26        | 1              |
| Primavera                   | Almond oil, refined | 381F26       | 3              |
| Primavera                   | Almond oil, refined | 143D27       | 2              |
| Primavera                   | Almond oil, refined | 141D27       | 1              |
| Primavera                   | Almond oil, refined | 382L27       | 1              |
| Primavera                   | Almond oil, refined | 410K27       | 3              |
| Primavera 19.10.15          | Almond oil, refined | 944H23       | 1              |
| Primavera Wareneingang...   | Almond oil, refined | 792D23       | 1              |
| Primavera (14.06.2018)      | Almond oil, refined | 60E26        | 1              |
| Primavera (14.06.2018)      | Almond oil, refined | 444C26       | 2              |
| Primavera WE 29.03.17 -...  | Almond oil, refined | 241C25       | 1              |
| Primavera/Direkt            | Almond oil, refined | 737K25       | 1              |
| Primavera/Sanacorp          | Almond oil, refined | 682E25       | 1              |
| Primavera/Sanacorp          | Almond oil, refined | 912L25       | 1              |
| Primvavera                  | Almond oil, refined | 218D24       | 1              |
| Primvavera                  | Almond oil, refined | 21D24        | 1              |
| Resana/Fiebig               | Almond oil, refined | 1708-5766    | 1              |
| Sanacoro W.E:16.03.18 ...   | Almond oil, refined | 8003503002   | 1              |
| Sanacorp                    | Almond oil, refined | 12080803     | 1              |
| Sanacorp                    | Almond oil, refined | 5214206      | 2              |
| Sanacorp                    | Almond oil, refined | 12357102     | 3              |
| Sanacorp                    | Almond oil, refined | 12357103     | 1              |
| Sanacorp                    | Almond oil, refined | 5438302      | 1              |
| Sanacorp                    | Almond oil, refined | 13178004     | 1              |
| Sanacorp                    | Almond oil, refined | 5415901      | 2              |
| Sanacorp                    | Almond oil, refined | 13236406     | 1              |
| Sanacorp                    | Almond oil, refined | 13350007     | 1              |
| Sanacorp                    | Almond oil, refined | 1413935      | 1              |
| Sanacorp                    | Almond oil, refined | 15078401     | 1              |
| Sanacorp                    | Almond oil, refined | 15078405     | 1              |
| Sanacorp                    | Almond oil, refined | 8001497001   | 1              |
| Sanacorp                    | Almond oil, refined | 17176502     | 1              |
| Sanacorp                    | Almond oil, refined | 17176507     | 2              |
| Sanacorp                    | Almond oil, refined | 17176512     | 2              |
| Sanacorp                    | Almond oil, refined | 8003503002   | 1              |
| Sanacorp                    | Almond oil, refined | 8003503001   | 1              |
| Sanacorp                    | Almond oil, refined | 18070605     | 2              |
| Sanacorp                    | Almond oil, refined | 18184107     | 1              |
| Sanacorp                    | Almond oil, refined | 18184113     | 1              |
| Sanacorp                    | Almond oil, refined | 18295901     | 1              |
| Sanacorp                    | Almond oil, refined | 18295909     | 2              |
| Sanacorp                    | Almond oil, refined | 18295915     | 1              |
| Sanacorp                    | Almond oil, refined | 19084502     | 1              |
| Sanacorp                    | Almond oil, refined | 19084510     | 1              |
| Sanacorp                    | Almond oil, refined | 19084506     | 1              |
| Sanacorp                    | Almond oil, refined | 19187101     | 1              |
| Sanacorp                    | Almond oil, refined | 18006808     | 1              |
| Sanacorp                    | Almond oil, refined | 19187102     | 1              |
| Sanacorp                    | Almond oil, refined | 1000012126   | 1              |
| Sanacorp                    | Almond oil, refined | 19000779001  | 2              |
| Sanacorp                    | Almond oil, refined | 20001624004  | 1              |
| Sanacorp 24.05.2017 2,84EUR | Almond oil, refined | 17042203     | 1              |
| Sanacorp WE:04.02.2017 ...  | Almond oil, refined | 8001497001   | 1              |
| Sanacorp, 11.03.17, 5,46EUR | Almond oil, refined | 16327309     | 2              |
| Sanacorp, 4,88EUR, 18.1.17  | Almond oil, refined | 16327303     | 1              |
| Sanacorp/ Lamotte           | Almond oil, refined | 1000010093   | 2              |
| Caelo                       | Almond oil, refined | 12041803     | 3              |

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| <b>Supplier</b>              | <b>Substance</b>            | <b>Batch</b>    | <b>Spectra</b> |
|------------------------------|-----------------------------|-----------------|----------------|
| Caelo                        | Almond oil, refined         | 13H08-N11       | 1              |
| Caelo                        | Almond oil, refined         | 14215808        | 8              |
| Sanacorp/Henry Lamotte ...   | Almond oil, refined         | 8003167001      | 3              |
| Sanacrop                     | Almond oil, refined         | 19187101        | 1              |
| Schupp                       | Almond oil, refined         | 17010           | 1              |
| Spangro 19.5.14              | Almond oil, refined         | 5615001         | 1              |
| Spinnrad                     | Almond oil, refined         | 1215048093      | 1              |
| Spinnrad                     | Almond oil, refined         | 316101221       | 3              |
| Spinnrad                     | Almond oil, refined         | 118401071       | 2              |
| Spinnrad                     | Almond oil, refined         | 418048091       | 1              |
| Spinnrad                     | Almond oil, refined         | 1219101224      | 1              |
| Spinnrad GmbH                | Almond oil, refined         | 713301223       | 1              |
| Spinnrad GmbH                | Almond oil, refined         | 913301224       | 1              |
| Spinnrad/ Noweda             | Almond oil, refined         | 419101222       | 1              |
| Spinnrad/Phoenix             | Almond oil, refined         | 219401071       | 1              |
| Spinnrad/Phönix              | Almond oil, refined         | 118401071       | 1              |
| Stumpf/Henry Lamotte         | Almond oil, refined         | 5438302         | 4              |
| Stumpf/Henry Lamotte         | Almond oil, refined         | 5415901         | 2              |
| Stumpf/Henry Lamotte         | Almond oil, refined         | 5493001         | 4              |
| Stumpf/Henry Lamotte         | Almond oil, refined         | 5748601         | 2              |
| Stumpf/Henry Lamotte         | Almond oil, refined         | 5919600001      | 2              |
| Taoasis                      | Almond oil, refined         | 118979-108698   | 1              |
| Taoasis                      | Almond oil, refined         | 119249-109910   | 1              |
| Taoasis                      | Almond oil, refined         | 5452701-111421  | 1              |
| Taoasis                      | Almond oil, refined         | 5511701-1113571 | 1              |
| Taoasis                      | Almond oil, refined         | 102235-111893   | 1              |
| Taoasis                      | Almond oil, refined         | 5511701-113571  | 1              |
| Taoasis                      | Almond oil, refined         | 3548810         | 1              |
| Taoasis                      | Almond oil, refined         | 12842-116104    | 1              |
| Taoasis                      | Almond oil, refined         | 130973-116149   | 1              |
| Taoasis                      | Almond oil, refined         | 130973-118607   | 1              |
| Taoasis                      | Almond oil, refined         | 132805-118635   | 1              |
| Taoasis                      | Almond oil, refined         | 133805-120282   | 1              |
| Taoasis                      | Almond oil, refined         | 134032-120671   | 1              |
| Taoasis                      | Almond oil, refined         | 134475-1215919  | 1              |
| Taoasis                      | Almond oil, refined         | 135831-121621   | 2              |
| Taoasis                      | Almond oil, refined         | 31952-123336    | 1              |
| Taoasis                      | Almond oil, refined         | 33489-124674    | 1              |
| Taoasis                      | Almond oil, refined         | 34371-125478    | 1              |
| Taoasis                      | Almond oil, refined         | 35171-125735    | 1              |
| Taoasis                      | Almond oil, refined         | 37293-128349    | 1              |
| Taoasis                      | Almond oil, refined         | 22-896          | 1              |
| Taoasis                      | Almond oil, refined         | 19103325-896    | 1              |
| Taoasis                      | Almond oil, refined         | 103325-1265     | 1              |
| Taoasis                      | Almond oil, refined         | 19103616-1718   | 1              |
| Taoasis                      | Almond oil, refined         | 103944-1719     | 1              |
| Taoasis                      | Almond oil, refined         | 19103325-1991   | 1              |
| Taoasis                      | Almond oil, refined         | 104542-6050     | 1              |
| Taoasis/Noweda               | Almond oil, refined         | 130973          | 1              |
| Taoasis/Phoenix              | Almond oil, refined         | 103325-1265     | 1              |
| THC/ Phönix Pharma Eink. ... | Almond oil, refined         | 128843          | 1              |
| VDL 21.05;Preis 9,84         | Almond oil, refined         | 13236406//05R05 | 1              |
| VDL;22.05.15;11.47EUR        | Almond oil, refined         | 14215807        | 1              |
| WE:Phönix 25.08.2016 EK...   | Almond oil, refined         | 1000003242      | 2              |
| Bombastus                    | Apricot kernel oil, refined | 274930          | 1              |
| Bombastus                    | Apricot kernel oil, refined | 302095          | 2              |
| Bombastus                    | Apricot kernel oil, refined | 307653          | 1              |
| Caelo                        | Apricot kernel oil, refined | 13253203        | 2              |
| Caelo                        | Apricot kernel oil, refined | 13011804        | 1              |
| Caelo                        | Apricot kernel oil, refined | 17251802        | 1              |

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| Supplier                   | Substance                   | Batch         | Spectra |
|----------------------------|-----------------------------|---------------|---------|
| Caelo                      | Apricot kernel oil, refined | 13011805      | 1       |
| Caelo                      | Apricot kernel oil, refined | 20002355003   | 1       |
| Caelo                      | Apricot kernel oil, refined | 18329901      | 2       |
| Caelo                      | Apricot kernel oil, refined | 20001746003   | 2       |
| Gehe/Spinnrad              | Apricot kernel oil, refined | 919301012     | 1       |
| Primavera                  | Apricot kernel oil, refined | 3612131       | 1       |
| taosis/Phönix              | Apricot kernel oil, refined | 134933-124392 | 1       |
| Alliance Healthcare        | Avocado oil, refined        | 18044910      | 1       |
| Anzag 06.02.2013           | Avocado oil, refined        | 1208028-01    | 1       |
| Anzag 16.10.12 ek: 3,90EUR | Avocado oil, refined        | 1204047-01    | 1       |
| Audor Pharma               | Avocado oil, refined        | 13361414      | 1       |
| Bomastus/Phönix            | Avocado oil, refined        | 309826        | 2       |
| Bombastus                  | Avocado oil, refined        | 2091235000130 | 1       |
| Bombastus                  | Avocado oil, refined        | 274935        | 1       |
| Bombastus                  | Avocado oil, refined        | 267660        | 1       |
| Bombastus                  | Avocado oil, refined        | 289240        | 2       |
| Bombastus                  | Avocado oil, refined        | 298491        | 1       |
| Bombastus                  | Avocado oil, refined        | 300403        | 2       |
| Bombastus                  | Avocado oil, refined        | 306789        | 1       |
| Bombastus                  | Avocado oil, refined        | 294183        | 4       |
| Bombastus                  | Avocado oil, refined        | 18002515      | 4       |
| Bombastus                  | Avocado oil, refined        | 18003611      | 3       |
| Bombastus                  | Avocado oil, refined        | 286519        | 1       |
| Caeli/Alliance             | Avocado oil, refined        | 18044901      | 1       |
| Caelo                      | Avocado oil, refined        | 5216901       | 1       |
| Caelo                      | Avocado oil, refined        | 12064802      | 3       |
| Caelo                      | Avocado oil, refined        | 12064804      | 3       |
| Caelo                      | Avocado oil, refined        | 12064813      | 3       |
| Caelo                      | Avocado oil, refined        | 13031303      | 1       |
| Caelo                      | Avocado oil, refined        | 12064810      | 2       |
| Caelo                      | Avocado oil, refined        | 11147607      | 1       |
| Caelo                      | Avocado oil, refined        | 12248311      | 2       |
| Caelo                      | Avocado oil, refined        | 2081303       | 1       |
| Caelo                      | Avocado oil, refined        | 12248315      | 2       |
| Caelo                      | Avocado oil, refined        | 1304039-1     | 1       |
| Caelo                      | Avocado oil, refined        | 28111308      | 1       |
| Caelo                      | Avocado oil, refined        | 130172        | 1       |
| Caelo                      | Avocado oil, refined        | 13361407      | 3       |
| Caelo                      | Avocado oil, refined        | 13361441      | 1       |
| Caelo                      | Avocado oil, refined        | 14170105      | 3       |
| Caelo                      | Avocado oil, refined        | 14363704      | 1       |
| Caelo                      | Avocado oil, refined        | 19081501      | 1       |
| Caelo                      | Avocado oil, refined        | 15155203      | 2       |
| Caelo                      | Avocado oil, refined        | 14363706      | 2       |
| Caelo                      | Avocado oil, refined        | 15155206      | 9       |
| Caelo                      | Avocado oil, refined        | 15268205      | 7       |
| Caelo                      | Avocado oil, refined        | 1436706       | 1       |
| Caelo                      | Avocado oil, refined        | 300403        | 1       |
| Caelo                      | Avocado oil, refined        | 15268213      | 2       |
| Caelo                      | Avocado oil, refined        | 15426305      | 11      |
| Caelo                      | Avocado oil, refined        | 15426306      | 5       |
| Caelo                      | Avocado oil, refined        | 16104704      | 2       |
| Caelo                      | Avocado oil, refined        | 16185907      | 11      |
| Caelo                      | Avocado oil, refined        | 16185908      | 6       |
| Caelo                      | Avocado oil, refined        | 1618908       | 1       |
| Caelo                      | Avocado oil, refined        | 17038802      | 41      |
| Caelo                      | Avocado oil, refined        | 1685908       | 1       |
| Caelo                      | Avocado oil, refined        | 127889        | 1       |
| Caelo                      | Avocado oil, refined        | 17038803      | 7       |
| Caelo                      | Avocado oil, refined        | 17038814      | 2       |

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| Supplier | Substance            | Batch        | Spectra |
|----------|----------------------|--------------|---------|
| Caelo    | Avocado oil, refined | 18007501     | 20      |
| Caelo    | Avocado oil, refined | 18007503     | 2       |
| Caelo    | Avocado oil, refined | 18007502     | 4       |
| Caelo    | Avocado oil, refined | 1605034-03   | 1       |
| Caelo    | Avocado oil, refined | 3071802      | 1       |
| Caelo    | Avocado oil, refined | 16081811     | 1       |
| Caelo    | Avocado oil, refined | 12091807     | 1       |
| Caelo    | Avocado oil, refined | 18044909     | 3       |
| Caelo    | Avocado oil, refined | 3250         | 1       |
| Caelo    | Avocado oil, refined | 5121805      | 1       |
| Caelo    | Avocado oil, refined | 18044911     | 5       |
| Caelo    | Avocado oil, refined | 18044914     | 2       |
| Caelo    | Avocado oil, refined | 18044910     | 1       |
| Caelo    | Avocado oil, refined | 30011904     | 1       |
| Caelo    | Avocado oil, refined | 8306803      | 1       |
| Caelo    | Avocado oil, refined | 18303809     | 1       |
| Caelo    | Avocado oil, refined | 19000459005  | 1       |
| Caelo    | Avocado oil, refined | 19000459008  | 1       |
| Caelo    | Avocado oil, refined | 19000459012  | 2       |
| Caelo    | Avocado oil, refined | 1605034-01   | 2       |
| Caelo    | Avocado oil, refined | 18044913     | 16      |
| Caelo    | Avocado oil, refined | 2517M-01960  | 1       |
| Caelo    | Avocado oil, refined | 13361414     | 7       |
| Caelo    | Avocado oil, refined | 16104702     | 20      |
| Caelo    | Avocado oil, refined | 36(18044901) | 1       |
| Caelo    | Avocado oil, refined | 17038817     | 1       |
| Caelo    | Avocado oil, refined | 18306804     | 1       |
| Caelo    | Avocado oil, refined | 18306811     | 4       |
| Caelo    | Avocado oil, refined | 1405007-01   | 1       |
| Caelo    | Avocado oil, refined | 17038812     | 1       |
| Caelo    | Avocado oil, refined | 12248312     | 3       |
| Caelo    | Avocado oil, refined | 17038811     | 7       |
| Caelo    | Avocado oil, refined | 18306808     | 5       |
| Caelo    | Avocado oil, refined | 11227207     | 1       |
| Caelo    | Avocado oil, refined | 12248310     | 12      |
| Caelo    | Avocado oil, refined | 13129103     | 10      |
| Caelo    | Avocado oil, refined | 15426303     | 2       |
| Caelo    | Avocado oil, refined | 18306802     | 2       |
| Caelo    | Avocado oil, refined | 19000459011  | 4       |
| Caelo    | Avocado oil, refined | 35(18007501) | 1       |
| Caelo    | Avocado oil, refined | 1331406      | 1       |
| Caelo    | Avocado oil, refined | 12248302     | 1       |
| Caelo    | Avocado oil, refined | 13129111     | 1       |
| Caelo    | Avocado oil, refined | 12064812     | 2       |
| Caelo    | Avocado oil, refined | 18306801     | 2       |
| Caelo    | Avocado oil, refined | 14170104     | 11      |
| Caelo    | Avocado oil, refined | 15155207     | 4       |
| Caelo    | Avocado oil, refined | 15426304     | 11      |
| Caelo    | Avocado oil, refined | 18044901     | 28      |
| Caelo    | Avocado oil, refined | 18044908     | 18      |
| Caelo    | Avocado oil, refined | 18044902     | 1       |
| Caelo    | Avocado oil, refined | 19000459003  | 12      |
| Caelo    | Avocado oil, refined | 4718201      | 2       |
| Caelo    | Avocado oil, refined | 13129106     | 3       |
| Caelo    | Avocado oil, refined | 3413M-01960  | 2       |
| Caelo    | Avocado oil, refined | 14363702     | 14      |
| Caelo    | Avocado oil, refined | 17038804     | 3       |
| Caelo    | Avocado oil, refined | 14363705     | 4       |
| Caelo    | Avocado oil, refined | 1436705      | 1       |
| Caelo    | Avocado oil, refined | 2515I-01960  | 1       |

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| Supplier                   | Substance            | Batch        | Spectra |
|----------------------------|----------------------|--------------|---------|
| Caelo                      | Avocado oil, refined | 16104703     | 4       |
| Caelo                      | Avocado oil, refined | 4216Q-01960  | 1       |
| Caelo                      | Avocado oil, refined | 3518M-01960  | 1       |
| Caelo                      | Avocado oil, refined | 13129104     | 2       |
| Caelo                      | Avocado oil, refined | 15268203     | 17      |
| Caelo                      | Avocado oil, refined | 13129108     | 7       |
| Caelo                      | Avocado oil, refined | 13361411     | 4       |
| Caelo                      | Avocado oil, refined | 124656       | 1       |
| Caelo                      | Avocado oil, refined | 18044905     | 3       |
| Caelo                      | Avocado oil, refined | 973418044902 | 1       |
| Caelo                      | Avocado oil, refined | 19000459007  | 11      |
| Caerlo/Noweda              | Avocado oil, refined | 20001638004  | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 12H24-N02    | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18044913     | 2       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18306809     | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18306808     | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18306801     | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18306806     | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 18306811     | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 19000459005  | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 1900459003   | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 19000459008  | 1       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 19000459007  | 3       |
| Caesar & Loretz GmbH       | Avocado oil, refined | 20001638003  | 3       |
| Caesar & Loretz GmbH / ... | Avocado oil, refined | 18306808     | 1       |
| Caesar & Loretz GmbH Hi... | Avocado oil, refined | 13361414     | 1       |
| Caesar & Loretz GmbH/AHD   | Avocado oil, refined | 18306809     | 1       |
| Caesar & Loretz GmbH/Gehe  | Avocado oil, refined | 19000459003  | 1       |
| Caesar & Loretz GmbH/No... | Avocado oil, refined | 18306812     | 2       |
| Caesar & Loretz GmbH/ph... | Avocado oil, refined | 20001638003  | 1       |
| Caesar & Loretz GmbH/Sa... | Avocado oil, refined | 19000459008  | 1       |
| Caesar & Loretz Hilden     | Avocado oil, refined | 18044909     | 1       |
| Caesar & Loretz Hilden     | Avocado oil, refined | 18306802     | 1       |
| Caesar & Loretz/ Noweda    | Avocado oil, refined | 12248312     | 2       |
| Caesar & Loretz/Noweda     | Avocado oil, refined | 15268203     | 1       |
| Caesar & Loretz/Noweda     | Avocado oil, refined | 17038802     | 1       |
| Caesar & Loretz/Noweda     | Avocado oil, refined | 17038803     | 1       |
| Caesar/Noweda              | Avocado oil, refined | 12064801     | 1       |
| Caesar/Noweda              | Avocado oil, refined | 12064812     | 2       |
| Dr. Wolff                  | Avocado oil, refined | 17038802     | 1       |
| Ebert u. Jacobi 16.0...    | Avocado oil, refined | 302706       | 1       |
| EuRho                      | Avocado oil, refined | 4111M-01960  | 1       |
| Euro OTC                   | Avocado oil, refined | 1410027-01   | 5       |
| Euro OTC                   | Avocado oil, refined | 1501015-01   | 3       |
| Euro OTC                   | Avocado oil, refined | 13111404     | 1       |
| Euro OTC                   | Avocado oil, refined | 30121424     | 1       |
| Euro OTC                   | Avocado oil, refined | 1605034-03   | 4       |
| Euro OTC                   | Avocado oil, refined | 1112018-01   | 1       |
| Euro OTC                   | Avocado oil, refined | 1304039-01   | 3       |
| Euro OTC                   | Avocado oil, refined | 1305046-01   | 5       |
| Euro OTC                   | Avocado oil, refined | 1501015V-01  | 1       |
| Euro OTC                   | Avocado oil, refined | 1605034-01   | 7       |
| Euro OTC                   | Avocado oil, refined | 150101501    | 1       |
| Euro OTC                   | Avocado oil, refined | 160503403    | 1       |
| Euro OTC                   | Avocado oil, refined | 1301017-01   | 1       |
| Euro OTC                   | Avocado oil, refined | 1405007-01   | 3       |
| Euro OTC                   | Avocado oil, refined | 28041506     | 1       |
| Euro OTC                   | Avocado oil, refined | 1402027-01   | 6       |
| Fagron                     | Avocado oil, refined | 12F25-N12    | 1       |
| Fagron                     | Avocado oil, refined | 13361406     | 1       |

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| Supplier                   | Substance            | Batch        | Spectra |
|----------------------------|----------------------|--------------|---------|
| Fagron                     | Avocado oil, refined | 12H24-N02    | 1       |
| Fiebig                     | Avocado oil, refined | 18044905     | 2       |
| Fiebig                     | Avocado oil, refined | 18044914     | 1       |
| Gatt-Koller                | Avocado oil, refined | 1803162      | 5       |
| Gatt-Koller                | Avocado oil, refined | 1900505      | 1       |
| Gehe                       | Avocado oil, refined | 18044908     | 3       |
| Gehe                       | Avocado oil, refined | 18044913     | 1       |
| Gehe                       | Avocado oil, refined | 18306801     | 1       |
| gehe 15.01.2014            | Avocado oil, refined | 1305046-01   | 1       |
| Caelo                      | Avocado oil, refined | 14170102     | 1       |
| H. Lamotte/Sanacorp        | Avocado oil, refined | 100001532    | 1       |
| H.Lamotte / Gehe           | Avocado oil, refined | 1000005537   | 1       |
| Hedinger                   | Avocado oil, refined | 18306803     | 2       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 8001641001   | 2       |
| Henry Lamotte              | Avocado oil, refined | 130143       | 1       |
| Henry Lamotte              | Avocado oil, refined | 8002616001   | 1       |
| Henry Lamotte              | Avocado oil, refined | 100001532    | 1       |
| Henry Lamotte              | Avocado oil, refined | 19000459003  | 1       |
| Henry Lamotte Oils         | Avocado oil, refined | 122470       | 1       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 122490       | 2       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 130243       | 1       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 125529       | 2       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 1000001098   | 1       |
| Henry Lamotte Oils GmbH    | Avocado oil, refined | 8002616001   | 1       |
| HENRY LAMOTTE OILS GmbH    | Avocado oil, refined | 1000001451   | 1       |
| Henry lamotte Oils GmbH... | Avocado oil, refined | 130243       | 1       |
| Henry Lamotte/ Noweda      | Avocado oil, refined | 8002616001   | 1       |
| Henry Lamotte/ Noweda      | Avocado oil, refined | 1000005537   | 1       |
| Henry Lamotte/AHD          | Avocado oil, refined | 1000004363   | 1       |
| Henry Lamotte/Anzag        | Avocado oil, refined | 1000001098   | 2       |
| Henry Lamotte/Sana         | Avocado oil, refined | 1000001098   | 1       |
| HenryLamotte/Phoenix       | Avocado oil, refined | 130143       | 1       |
| Holdermann                 | Avocado oil, refined | 13361406     | 1       |
| Kögl                       | Avocado oil, refined | 407211164916 | 1       |
| Kögl                       | Avocado oil, refined | 407211161117 | 2       |
| Kögl                       | Avocado oil, refined | 159805171917 | 3       |
| Kögl                       | Avocado oil, refined | 20171598     | 2       |
| Kögl                       | Avocado oil, refined | 1702199      | 2       |
| Kögl                       | Avocado oil, refined | 1800426      | 4       |
| LABORCHEMIE APOLDA GmbH... | Avocado oil, refined | 8001641001   | 1       |
| Lamotte                    | Avocado oil, refined | 122490       | 1       |
| Lamotte                    | Avocado oil, refined | 130143       | 1       |
| Lamotte                    | Avocado oil, refined | 130243       | 1       |
| Lamotte                    | Avocado oil, refined | 1000001451   | 1       |
| Lamotte                    | Avocado oil, refined | 8001641001   | 2       |
| Lamotte                    | Avocado oil, refined | 1000005537   | 1       |
| Lamotte / Gehe             | Avocado oil, refined | 130193       | 1       |
| Lamotte / phönix           | Avocado oil, refined | 1000004363   | 1       |
| Lamotte /Phönix            | Avocado oil, refined | 8002616001   | 1       |
| Lamotte GmbH               | Avocado oil, refined | 1000001451   | 1       |
| Lamotte/Sanacorp           | Avocado oil, refined | 130193       | 1       |
| Lamotte/Sanacorp           | Avocado oil, refined | 130214       | 1       |
| Lamotte/Sanacorp           | Avocado oil, refined | 124656       | 1       |
| Lamotte/Sanacorp           | Avocado oil, refined | 125529       | 1       |
| Lamotte/Sanacorp           | Avocado oil, refined | 1000001098   | 1       |
| Nachprüfung                | Avocado oil, refined | 143637021    | 1       |
| Noveda                     | Avocado oil, refined | 13129103     | 1       |
| Noweda                     | Avocado oil, refined | 18044901     | 2       |
| Noweda                     | Avocado oil, refined | 18044908     | 1       |
| Noweda                     | Avocado oil, refined | 18306808     | 1       |

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| Supplier                    | Substance                       | Batch            | Spectra |
|-----------------------------|---------------------------------|------------------|---------|
| Noweda                      | Avocado oil, refined            | 19000459011      | 1       |
| Caelo                       | Avocado oil, refined            | 1000005537       | 2       |
| Euro OTC                    | Avocado oil, refined            | 1301039-01       | 1       |
| Euro OTC                    | Avocado oil, refined            | 2041404          | 1       |
| Phoenix                     | Avocado oil, refined            | 311166           | 1       |
| Phoenix                     | Avocado oil, refined            | 18306804         | 1       |
| Phoenix 19.01.2019          | Avocado oil, refined            | 18044914         | 1       |
| Phoenix 19.03.2014          | Avocado oil, refined            | 13129102         | 1       |
| Phoenix 29.04.2014          | Avocado oil, refined            | 13361406         | 1       |
| phönix                      | Avocado oil, refined            | 16185908         | 1       |
| phönix                      | Avocado oil, refined            | 17038802         | 1       |
| Phönix                      | Avocado oil, refined            | 18007501         | 1       |
| Phönix                      | Avocado oil, refined            | 18306808         | 2       |
| Phönix / Alliance Healt...  | Avocado oil, refined            | 17038802         | 1       |
| Phönix 11.11.2019           | Avocado oil, refined            | 18306802         | 1       |
| Phönix 15.01.2014           | Avocado oil, refined            | 279025           | 1       |
| Caelo                       | Avocado oil, refined            | 12248303         | 2       |
| Primavera                   | Avocado oil, refined            | 83M26            | 1       |
| Primavera/AHD               | Avocado oil, refined            | 575G27           | 1       |
| PVL                         | Avocado oil, refined            | 2410131          | 1       |
| PVL                         | Avocado oil, refined            | 2807133          | 1       |
| Raben-Apotheke Mildenau     | Avocado oil, refined            | 1402027-01       | 1       |
| Sanacorp                    | Avocado oil, refined            | 1304039-01       | 1       |
| Sanacorp                    | Avocado oil, refined            | 713301202        | 1       |
| Sanacorp                    | Avocado oil, refined            | 14170104         | 1       |
| Sanacorp                    | Avocado oil, refined            | 18007502         | 1       |
| Sanacorp, 16.02.17, 3,04EUR | Avocado oil, refined            | 16104702         | 1       |
| Sanacorp,31.03.17, 5,20EUR  | Avocado oil, refined            | 16185908         | 1       |
| Bombastus                   | Avocado oil, refined            | 268579           | 1       |
| Caelo                       | Avocado oil, refined            | 19000459002      | 3       |
| Spangro 22.10.2018          | Avocado oil, refined            | 1000005537       | 1       |
| Spangropharm                | Avocado oil, refined            | 13361402         | 1       |
| spinnrad                    | Avocado oil, refined            | 1118301202       | 1       |
| Spinnrad                    | Avocado oil, refined            | 917301202        | 1       |
| Spinnrad                    | Avocado oil, refined            | 418301201        | 1       |
| Spinnrad                    | Avocado oil, refined            | 618301212        | 1       |
| Spinnrad GmbH               | Avocado oil, refined            | 916301202        | 1       |
| Spinnrad/AHD                | Avocado oil, refined            | 720301202        | 1       |
| Taoasis                     | Avocado oil, refined            | 92010-105977     | 1       |
| Taoasis/Sanacorp            | Avocado oil, refined            | 1606A1034-126013 | 1       |
| Taoasis/Sanacorp            | Avocado oil, refined            | 126503-160A1196  | 1       |
| Taoasis/Sanacorp            | Avocado oil, refined            | 127660           | 1       |
| VDL 06.05.Preis 6,70        | Avocado oil, refined            | 700325//05R06    | 1       |
| VDL;11.3.16;2,77EUR         | Avocado oil, refined            | 15268203         | 1       |
| Wepa/ Phoenix               | Avocado oil, refined            | 17038802         | 1       |
| AHD                         | Borage oil, refined, stabili... | 18295808         | 1       |
| Anzag 15.10.12              | Borage oil, refined, stabili... | 965-028          | 2       |
| Aurica                      | Borage oil, refined, stabili... | Z13902/A         | 1       |
| Aurica Vital                | Borage oil, refined, stabili... | 28/05/15         | 1       |
| Aurica Vital                | Borage oil, refined, stabili... | Z13902/A         | 1       |
| Aurica Vital                | Borage oil, refined, stabili... | Z14456           | 1       |
| Aurica Vital                | Borage oil, refined, stabili... | Z14966           | 1       |
| Aurica Vital                | Borage oil, refined, stabili... | ZR1287           | 1       |
| Aurica/ Noweda              | Borage oil, refined, stabili... | ZR1540           | 1       |
| Aurica/Noweda               | Borage oil, refined, stabili... | 957-038          | 1       |
| Bergland                    | Borage oil, refined, stabili... | H300590          | 2       |
| Bergland-Pharma             | Borage oil, refined, stabili... | H103019          | 2       |
| Bombastus                   | Borage oil, refined, stabili... | 15305001         | 1       |
| Caelo                       | Borage oil, refined, stabili... | 1713M-02881      | 1       |
| Caelo                       | Borage oil, refined, stabili... | 11002607         | 1       |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Borage oil, refined, stabili... | 12027004     | 1       |
| Caelo    | Borage oil, refined, stabili... | 12161202     | 8       |
| Caelo    | Borage oil, refined, stabili... | 123118       | 1       |
| Caelo    | Borage oil, refined, stabili... | 12161207     | 4       |
| Caelo    | Borage oil, refined, stabili... | 13136504     | 9       |
| Caelo    | Borage oil, refined, stabili... | 13170604     | 1       |
| Caelo    | Borage oil, refined, stabili... | 13170610     | 7       |
| Caelo    | Borage oil, refined, stabili... | 13170613     | 4       |
| Caelo    | Borage oil, refined, stabili... | 26041404     | 1       |
| Caelo    | Borage oil, refined, stabili... | 14203004     | 10      |
| Caelo    | Borage oil, refined, stabili... | 14203012     | 1       |
| Caelo    | Borage oil, refined, stabili... | 15063406     | 3       |
| Caelo    | Borage oil, refined, stabili... | 15063412     | 2       |
| Caelo    | Borage oil, refined, stabili... | 15305001     | 14      |
| Caelo    | Borage oil, refined, stabili... | 15305002     | 5       |
| Caelo    | Borage oil, refined, stabili... | 1534-08      | 1       |
| Caelo    | Borage oil, refined, stabili... | 722915305009 | 1       |
| Caelo    | Borage oil, refined, stabili... | 16052302     | 4       |
| Caelo    | Borage oil, refined, stabili... | 153050009    | 1       |
| Caelo    | Borage oil, refined, stabili... | 16266002     | 6       |
| Caelo    | Borage oil, refined, stabili... | 16266012     | 1       |
| Caelo    | Borage oil, refined, stabili... | 17055401     | 21      |
| Caelo    | Borage oil, refined, stabili... | 17055402     | 7       |
| Caelo    | Borage oil, refined, stabili... | 6170717      | 1       |
| Caelo    | Borage oil, refined, stabili... | 17361802     | 1       |
| Caelo    | Borage oil, refined, stabili... | 17361804     | 11      |
| Caelo    | Borage oil, refined, stabili... | 18080501     | 40      |
| Caelo    | Borage oil, refined, stabili... | 17261805     | 2       |
| Caelo    | Borage oil, refined, stabili... | 1808054      | 1       |
| Caelo    | Borage oil, refined, stabili... | 2011906      | 1       |
| Caelo    | Borage oil, refined, stabili... | 18080510     | 2       |
| Caelo    | Borage oil, refined, stabili... | 18295801     | 4       |
| Caelo    | Borage oil, refined, stabili... | 18080511     | 1       |
| Caelo    | Borage oil, refined, stabili... | 182958904    | 1       |
| Caelo    | Borage oil, refined, stabili... | 18295808     | 8       |
| Caelo    | Borage oil, refined, stabili... | 18295812     | 3       |
| Caelo    | Borage oil, refined, stabili... | 19249204     | 8       |
| Caelo    | Borage oil, refined, stabili... | 18295816     | 1       |
| Caelo    | Borage oil, refined, stabili... | 19249203     | 1       |
| Caelo    | Borage oil, refined, stabili... | 192492001    | 16      |
| Caelo    | Borage oil, refined, stabili... | 11260102     | 2       |
| Caelo    | Borage oil, refined, stabili... | 13170605     | 3       |
| Caelo    | Borage oil, refined, stabili... | 14203005     | 14      |
| Caelo    | Borage oil, refined, stabili... | 192492004    | 1       |
| Caelo    | Borage oil, refined, stabili... | 14161901     | 4       |
| Caelo    | Borage oil, refined, stabili... | 15063411     | 6       |
| Caelo    | Borage oil, refined, stabili... | 11260106     | 2       |
| Caelo    | Borage oil, refined, stabili... | 12027008     | 2       |
| Caelo    | Borage oil, refined, stabili... | 1825808      | 1       |
| Caelo    | Borage oil, refined, stabili... | 14203011     | 6       |
| Caelo    | Borage oil, refined, stabili... | 1316504      | 1       |
| Caelo    | Borage oil, refined, stabili... | 5594400002   | 2       |
| Caelo    | Borage oil, refined, stabili... | 1(18295808)  | 1       |
| Caelo    | Borage oil, refined, stabili... | 13170601     | 4       |
| Caelo    | Borage oil, refined, stabili... | 2492         | 1       |
| Caelo    | Borage oil, refined, stabili... | 13170607     | 1       |
| Caelo    | Borage oil, refined, stabili... | 14203001     | 2       |
| Caelo    | Borage oil, refined, stabili... | 12152108     | 1       |
| Caelo    | Borage oil, refined, stabili... | 18080506     | 3       |
| Caelo    | Borage oil, refined, stabili... | 18295807     | 3       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | Borage oil, refined, stabili... | 12355205    | 4       |
| Caelo                      | Borage oil, refined, stabili... | 5012A-02881 | 1       |
| Caelo                      | Borage oil, refined, stabili... | 1418E-02881 | 1       |
| Caelo                      | Borage oil, refined, stabili... | 192492005   | 3       |
| Caelo                      | Borage oil, refined, stabili... | 18295804    | 3       |
| Caelo                      | Borage oil, refined, stabili... | 12161203    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 1626608     | 1       |
| Caelo                      | Borage oil, refined, stabili... | 12355203    | 9       |
| Caelo                      | Borage oil, refined, stabili... | 1461906     | 1       |
| Caelo                      | Borage oil, refined, stabili... | 20004100002 | 5       |
| Caelo                      | Borage oil, refined, stabili... | 18080509    | 7       |
| Caelo                      | Borage oil, refined, stabili... | 13170603    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 13372104    | 6       |
| Caelo                      | Borage oil, refined, stabili... | 13372107    | 8       |
| Caelo                      | Borage oil, refined, stabili... | 14161906    | 2       |
| Caelo                      | Borage oil, refined, stabili... | 15063413    | 2       |
| Caelo                      | Borage oil, refined, stabili... | 15305009    | 8       |
| Caelo                      | Borage oil, refined, stabili... | 16052307    | 12      |
| Caelo                      | Borage oil, refined, stabili... | 16052301    | 16      |
| Caelo                      | Borage oil, refined, stabili... | 16266011    | 11      |
| Caelo                      | Borage oil, refined, stabili... | 16266008    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 16266009    | 2       |
| Caelo                      | Borage oil, refined, stabili... | 17053189    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 17361805    | 11      |
| Caelo                      | Borage oil, refined, stabili... | 173618805   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15305003    | 5       |
| Caelo                      | Borage oil, refined, stabili... | 20000791003 | 2       |
| Caelo                      | Borage oil, refined, stabili... | 170307801   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 12161209    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 1235504     | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15063402    | 12      |
| Caelo                      | Borage oil, refined, stabili... | 14203009    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15305005    | 3       |
| Caelo                      | Borage oil, refined, stabili... | 15305006    | 4       |
| Caelo                      | Borage oil, refined, stabili... | 17307801    | 23      |
| Caelo                      | Borage oil, refined, stabili... | 18080502    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 18080507    | 2       |
| Caelo                      | Borage oil, refined, stabili... | 18295803    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 192492003   | 5       |
| Caelo                      | Borage oil, refined, stabili... | 15063408    | 3       |
| Caelo                      | Borage oil, refined, stabili... | 18080504    | 12      |
| Caelo                      | Borage oil, refined, stabili... | 18295815    | 2       |
| Caelo                      | Borage oil, refined, stabili... | 18295809    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 20003248003 | 1       |
| Caelo                      | Borage oil, refined, stabili... | 20004100005 | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15063409    | 3       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 16266011    | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 18080509    | 4       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 18080501    | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 18295808    | 11      |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 18295804    | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 18295815    | 2       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 19249203    | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 192492001   | 3       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 19249204    | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 192492003   | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 20000791003 | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 20003248002 | 1       |
| Caesar & Loretz GmbH       | Borage oil, refined, stabili... | 20004100002 | 4       |
| Caesar & Loretz GmbH / ... | Borage oil, refined, stabili... | 15063412    | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caesar & Loretz GmbH / ... | Borage oil, refined, stabili... | 17307801    | 1       |
| Caesar & Loretz GmbH/ AHD  | Borage oil, refined, stabili... | 18295812    | 1       |
| Caesar & Loretz GmbH/AHD   | Borage oil, refined, stabili... | 18295808    | 1       |
| Caesar & Loretz GmbH/AHD   | Borage oil, refined, stabili... | 18295807    | 1       |
| Caesar & Loretz GmbH/AHD   | Borage oil, refined, stabili... | 20000791003 | 1       |
| Caesar & Loretz GmbH/Gehe  | Borage oil, refined, stabili... | 18295808    | 2       |
| Caesar & Loretz GmbH/Je... | Borage oil, refined, stabili... | 18295817    | 1       |
| Caesar & Loretz GmbH/Je... | Borage oil, refined, stabili... | 192492005   | 1       |
| Caesar & Loretz GmbH/Ph... | Borage oil, refined, stabili... | 18295812    | 1       |
| Caesar & Loretz GmbH/Ph... | Borage oil, refined, stabili... | 18295815    | 1       |
| Caesar & Loretz GmbH/Ph... | Borage oil, refined, stabili... | 20000791003 | 2       |
| Caesar & Loretz GmbH/AHD   | Borage oil, refined, stabili... | 18080509    | 2       |
| Caesar/Noweda              | Borage oil, refined, stabili... | 12161202    | 1       |
| Caesar/Noweda              | Borage oil, refined, stabili... | 13136504    | 1       |
| Caesar/Noweda              | Borage oil, refined, stabili... | 13136501    | 1       |
| Caesar/Noweda              | Borage oil, refined, stabili... | 13372103    | 1       |
| Caesar/Noweda              | Borage oil, refined, stabili... | 15305003    | 1       |
| Cealo/Anzag                | Borage oil, refined, stabili... | 17307801    | 1       |
| Cealo/Gehe                 | Borage oil, refined, stabili... | 18080501    | 1       |
| Euro OTC                   | Borage oil, refined, stabili... | 14203012    | 1       |
| Euro OTC                   | Borage oil, refined, stabili... | 15063407    | 1       |
| Euro OTC                   | Borage oil, refined, stabili... | 17307801    | 1       |
| Euro OTC                   | Borage oil, refined, stabili... | 1018204582  | 5       |
| Euro OTC                   | Borage oil, refined, stabili... | 18080501    | 1       |
| Fagron                     | Borage oil, refined, stabili... | 14A20-B03   | 1       |
| Fagron                     | Borage oil, refined, stabili... | 1000007871  | 1       |
| Fagron                     | Borage oil, refined, stabili... | 130402      | 4       |
| Fiebig                     | Borage oil, refined, stabili... | 17055401    | 1       |
| Gehe                       | Borage oil, refined, stabili... | 12027008    | 1       |
| Gehe                       | Borage oil, refined, stabili... | 12161203    | 1       |
| Gehe                       | Borage oil, refined, stabili... | 192492003   | 4       |
| GEHE                       | Borage oil, refined, stabili... | 16266011    | 1       |
| GEHE                       | Borage oil, refined, stabili... | 17307801    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 17361801    | 3       |
| Caelo                      | Borage oil, refined, stabili... | 20000791002 | 1       |
| Henry                      | Borage oil, refined, stabili... | 1000006205  | 1       |
| Henry Lamotte              | Borage oil, refined, stabili... | 145678      | 2       |
| Henry Lamotte              | Borage oil, refined, stabili... | 5402901     | 3       |
| Henry Lamotte              | Borage oil, refined, stabili... | 145579      | 1       |
| Henry Lamotte              | Borage oil, refined, stabili... | 12345       | 1       |
| Henry Lamotte              | Borage oil, refined, stabili... | 1000006595  | 1       |
| Henry Lamotte GmbH         | Borage oil, refined, stabili... | 5594400001  | 1       |
| Henry Lamotte GmbH Bremen  | Borage oil, refined, stabili... | 122791      | 1       |
| Henry Lamotte Oils         | Borage oil, refined, stabili... | 123118      | 1       |
| Henry Lamotte Oils GmbH    | Borage oil, refined, stabili... | 130402      | 1       |
| Henry Lamotte Oils GmbH... | Borage oil, refined, stabili... | 1000004932  | 1       |
| Henry Lamotte Oils GmbH... | Borage oil, refined, stabili... | 1000006205  | 1       |
| Henry Lamotte Oils/Sana... | Borage oil, refined, stabili... | 5402901     | 1       |
| Henry Lamotte/Anzag        | Borage oil, refined, stabili... | 125354      | 1       |
| Henry Lamotte/Anzag        | Borage oil, refined, stabili... | 1000001388  | 1       |
| Henry Lamotte/Anzag        | Borage oil, refined, stabili... | 5594400001  | 1       |
| Caelo                      | Borage oil, refined, stabili... | 1000006595  | 1       |
| J.H.Müller/direkt/17.05... | Borage oil, refined, stabili... | 130302      | 1       |
| Lamotte / Phönix           | Borage oil, refined, stabili... | 5594400001  | 1       |
| Lamotte über Sanacorp      | Borage oil, refined, stabili... | 125354      | 1       |
| Lamotte/Alliance           | Borage oil, refined, stabili... | 125354      | 1       |
| Lamotte/Alliance           | Borage oil, refined, stabili... | 1000006595  | 2       |
| Lamotte/Phönix             | Borage oil, refined, stabili... | 145579      | 1       |
| Midas                      | Borage oil, refined, stabili... | 17361804    | 2       |
| Nachprüfung                | Borage oil, refined, stabili... | 1503412     | 1       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Noweda                     | Borage oil, refined, stabili... | 12355203   | 2       |
| Noweda                     | Borage oil, refined, stabili... | 13136504   | 1       |
| Noweda                     | Borage oil, refined, stabili... | 13170606   | 1       |
| Noweda                     | Borage oil, refined, stabili... | 13372101   | 1       |
| Noweda                     | Borage oil, refined, stabili... | 13372104   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 1416906    | 1       |
| Caelo                      | Borage oil, refined, stabili... | 13372110   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15063407   | 16      |
| noweda/anzag               | Borage oil, refined, stabili... | 18295804   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 15063401   | 2       |
| Euro OTC                   | Borage oil, refined, stabili... | 16052301   | 1       |
| PG-Naturpharm              | Borage oil, refined, stabili... | 397-045    | 2       |
| PG-Naturpharma/ Phönix     | Borage oil, refined, stabili... | 202-058    | 1       |
| Phoenix                    | Borage oil, refined, stabili... | 12355203   | 1       |
| Phoenix                    | Borage oil, refined, stabili... | 14161906   | 1       |
| Phoenix                    | Borage oil, refined, stabili... | 16266011   | 1       |
| PHOENIX 15.05.2014         | Borage oil, refined, stabili... | 13372104   | 1       |
| Phoenix 25.7.2018          | Borage oil, refined, stabili... | 18080501   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 13372101   | 2       |
| Caelo                      | Borage oil, refined, stabili... | 13372106   | 2       |
| Phönix                     | Borage oil, refined, stabili... | 12161207   | 1       |
| Phönix / Alliance Healt... | Borage oil, refined, stabili... | 16266002   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 18050509   | 1       |
| Phönix 14.01.15            | Borage oil, refined, stabili... | 14203004   | 1       |
| Caelo                      | Borage oil, refined, stabili... | 12161205   | 3       |
| Sanacorp                   | Borage oil, refined, stabili... | 14203006   | 1       |
| Sanacorp                   | Borage oil, refined, stabili... | 619204581  | 1       |
| Sanacorp W.E: 01.02.18 ... | Borage oil, refined, stabili... | 17307801   | 2       |
| Caelo                      | Borage oil, refined, stabili... | 15305011   | 1       |
| Spinnrad                   | Borage oil, refined, stabili... | 1115204582 | 1       |
| Spinnrad                   | Borage oil, refined, stabili... | 617204582  | 1       |
| Spinnrad                   | Borage oil, refined, stabili... | 418204581  | 2       |
| Spinnrad                   | Borage oil, refined, stabili... | 619204581  | 1       |
| Spinnrad / Alliance Hea... | Borage oil, refined, stabili... | 1217204583 | 1       |
| Spinnrad GmbH              | Borage oil, refined, stabili... | 616204581  | 1       |
| Spinnrad/ Noweda           | Borage oil, refined, stabili... | 418204581  | 1       |
| Spinnrad/Sanacorp          | Borage oil, refined, stabili... | 1018204582 | 2       |
| Stifts-Apotheke            | Borage oil, refined, stabili... | 15305002   | 1       |
| THC/ Phönix Pharma Eink... | Borage oil, refined, stabili... | 141603     | 1       |
| ACM                        | Codliver oil (type A)           | KNC0300J15 | 1       |
| ACM                        | Codliver oil (type A)           | KNC0302J15 | 1       |
| ACM                        | Codliver oil (type A)           | KNC0303J15 | 1       |
| AHD                        | Codliver oil (type A)           | 8002338002 | 2       |
| AHD                        | Codliver oil (type A)           | 8001765001 | 1       |
| AHD                        | Codliver oil (type A)           | 8003727001 | 2       |
| Anzag                      | Codliver oil (type A)           | 5228001    | 2       |
| Anzag 17.12.2012           | Codliver oil (type A)           | 12062501   | 1       |
| anzag, 9,45EUR, 19.11.14   | Codliver oil (type A)           | 5693101    | 1       |
| Caelo                      | Codliver oil (type A)           | 5437202    | 13      |
| Bombastus                  | Codliver oil (type A)           | 8001176004 | 1       |
| Bremen / Noweda            | Codliver oil (type A)           | 5529601    | 1       |
| BREMER SCHLÜSSEL/ Noweda   | Codliver oil (type A)           | 5437202    | 1       |
| BremerSchlüssel Phoenix    | Codliver oil (type A)           | 8003727001 | 2       |
| Caelo                      | Codliver oil (type A)           | 5061202    | 1       |
| Caelo                      | Codliver oil (type A)           | 21101401   | 1       |
| Caelo                      | Codliver oil (type A)           | 26061202   | 1       |
| Caelo                      | Codliver oil (type A)           | 5228001    | 2       |
| Caelo                      | Codliver oil (type A)           | 11081202   | 1       |
| Caelo                      | Codliver oil (type A)           | 25091210   | 1       |
| Caelo                      | Codliver oil (type A)           | 10101207   | 1       |

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| Supplier | Substance             | Batch       | Spectra |
|----------|-----------------------|-------------|---------|
| Caelo    | Codliver oil (type A) | 12009308    | 2       |
| Caelo    | Codliver oil (type A) | 3121201     | 1       |
| Caelo    | Codliver oil (type A) | 21111204    | 1       |
| Caelo    | Codliver oil (type A) | 13011301    | 1       |
| Caelo    | Codliver oil (type A) | 119929      | 2       |
| Caelo    | Codliver oil (type A) | 6021302     | 1       |
| Caelo    | Codliver oil (type A) | 12148703    | 10      |
| Caelo    | Codliver oil (type A) | 18031308    | 1       |
| Caelo    | Codliver oil (type A) | 12009301    | 1       |
| Caelo    | Codliver oil (type A) | 11315302    | 1       |
| Caelo    | Codliver oil (type A) | 30041302    | 1       |
| Caelo    | Codliver oil (type A) | 14061312    | 1       |
| Caelo    | Codliver oil (type A) | 121487703   | 1       |
| Caelo    | Codliver oil (type A) | 10061302    | 1       |
| Caelo    | Codliver oil (type A) | 13065503    | 5       |
| Caelo    | Codliver oil (type A) | 5091309     | 1       |
| Caelo    | Codliver oil (type A) | 3021402     | 1       |
| Caelo    | Codliver oil (type A) | 8042014/A   | 1       |
| Caelo    | Codliver oil (type A) | 4061403     | 1       |
| Caelo    | Codliver oil (type A) | 5081402     | 1       |
| Caelo    | Codliver oil (type A) | 13396407    | 4       |
| Caelo    | Codliver oil (type A) | 14075015    | 3       |
| Caelo    | Codliver oil (type A) | 2121404     | 1       |
| Caelo    | Codliver oil (type A) | 23121414    | 1       |
| Caelo    | Codliver oil (type A) | 17011503    | 1       |
| Caelo    | Codliver oil (type A) | 80000601001 | 1       |
| Caelo    | Codliver oil (type A) | 8000918001  | 6       |
| Caelo    | Codliver oil (type A) | 19101704    | 1       |
| Caelo    | Codliver oil (type A) | 10031501    | 1       |
| Caelo    | Codliver oil (type A) | 28041507    | 1       |
| Caelo    | Codliver oil (type A) | 15047201    | 6       |
| Caelo    | Codliver oil (type A) | 10061501    | 1       |
| Caelo    | Codliver oil (type A) | 8071504     | 1       |
| Caelo    | Codliver oil (type A) | 28071504    | 1       |
| Caelo    | Codliver oil (type A) | 15056802    | 1       |
| Caelo    | Codliver oil (type A) | 15047210    | 1       |
| Caelo    | Codliver oil (type A) | 15201203    | 3       |
| Caelo    | Codliver oil (type A) | 15325202    | 1       |
| Caelo    | Codliver oil (type A) | 16018202    | 4       |
| Caelo    | Codliver oil (type A) | 16304601    | 1       |
| Caelo    | Codliver oil (type A) | 16018301    | 1       |
| Caelo    | Codliver oil (type A) | 1041704     | 1       |
| Caelo    | Codliver oil (type A) | 16344001    | 1       |
| Caelo    | Codliver oil (type A) | 11051705    | 1       |
| Caelo    | Codliver oil (type A) | 2091712     | 1       |
| Caelo    | Codliver oil (type A) | 17295101    | 2       |
| Caelo    | Codliver oil (type A) | 19021808    | 1       |
| Caelo    | Codliver oil (type A) | 8003468002  | 1       |
| Caelo    | Codliver oil (type A) | 18080801    | 8       |
| Caelo    | Codliver oil (type A) | 19051807    | 1       |
| Caelo    | Codliver oil (type A) | 17344602    | 1       |
| Caelo    | Codliver oil (type A) | 3111804     | 1       |
| Caelo    | Codliver oil (type A) | 18191801    | 3       |
| Caelo    | Codliver oil (type A) | 18184501    | 5       |
| Caelo    | Codliver oil (type A) | 8003906002  | 1       |
| Caelo    | Codliver oil (type A) | 183223907   | 1       |
| Caelo    | Codliver oil (type A) | 20000831003 | 1       |
| Caelo    | Codliver oil (type A) | 19032201    | 1       |
| Caelo    | Codliver oil (type A) | 13277707    | 1       |
| Caelo    | Codliver oil (type A) | 8001765001  | 2       |

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| Supplier                   | Substance             | Batch               | Spectra |
|----------------------------|-----------------------|---------------------|---------|
| Caelo                      | Codliver oil (type A) | 17137801            | 1       |
| Caelo                      | Codliver oil (type A) | 18213302            | 3       |
| Caelo                      | Codliver oil (type A) | 5693101             | 4       |
| Caelo                      | Codliver oil (type A) | 8001176004          | 5       |
| Caelo                      | Codliver oil (type A) | 13277706            | 7       |
| Caelo                      | Codliver oil (type A) | 12009302            | 5       |
| Caelo                      | Codliver oil (type A) | 15201201            | 3       |
| Caelo                      | Codliver oil (type A) | 18323907            | 1       |
| Caelo                      | Codliver oil (type A) | 8001215002          | 10      |
| Caelo                      | Codliver oil (type A) | 17344601            | 4       |
| Caelo                      | Codliver oil (type A) | 8004742002          | 2       |
| Caelo                      | Codliver oil (type A) | 19100301            | 2       |
| Caelo                      | Codliver oil (type A) | 8003727001          | 9       |
| Caelo                      | Codliver oil (type A) | 19000632004         | 1       |
| Caelo                      | Codliver oil (type A) | 13106201-3392131070 | 1       |
| Caelo                      | Codliver oil (type A) | 11315303            | 1       |
| Caelo                      | Codliver oil (type A) | 12126102            | 1       |
| Caelo                      | Codliver oil (type A) | 17058302            | 2       |
| Caelo                      | Codliver oil (type A) | 13106201            | 9       |
| Caelo                      | Codliver oil (type A) | 5641901             | 2       |
| Caelo                      | Codliver oil (type A) | 14305701            | 2       |
| Caelo                      | Codliver oil (type A) | 8000601001          | 1       |
| Caelo                      | Codliver oil (type A) | 15325201            | 2       |
| Caelo                      | Codliver oil (type A) | 16074305            | 2       |
| Caelo                      | Codliver oil (type A) | 8002338002          | 3       |
| Caelo                      | Codliver oil (type A) | 80023380002         | 1       |
| Caelo                      | Codliver oil (type A) | 17036701            | 2       |
| Caelo                      | Codliver oil (type A) | 8003906001          | 8       |
| Caelo                      | Codliver oil (type A) | 14305002            | 1       |
| Caelo                      | Codliver oil (type A) | 1000013131          | 2       |
| Caelo                      | Codliver oil (type A) | 13069201            | 1       |
| Caelo                      | Codliver oil (type A) | 5878701             | 3       |
| Caelo                      | Codliver oil (type A) | 14305003            | 1       |
| Caelo                      | Codliver oil (type A) | 16074301            | 1       |
| Caelo                      | Codliver oil (type A) | 17055303            | 2       |
| Caelo                      | Codliver oil (type A) | 8131-01985          | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 18323905            | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 18323907            | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 19000632001         | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 20000831003         | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 19000632004         | 1       |
| Caesar & Loretz GmbH       | Codliver oil (type A) | 20003364003         | 1       |
| Caesar & Loretz GmbH / ... | Codliver oil (type A) | 17137805            | 1       |
| Caesar & Loretz/Noweda     | Codliver oil (type A) | 15325201            | 1       |
| Cealo/GEHE                 | Codliver oil (type A) | 18323905            | 1       |
| Dr. Paulsen                | Codliver oil (type A) | 5437202             | 1       |
| Caelo                      | Codliver oil (type A) | 12346810            | 8       |
| Euro OTC                   | Codliver oil (type A) | 1506009-01          | 1       |
| Euro OTC                   | Codliver oil (type A) | 8002468002          | 4       |
| Euro OTC                   | Codliver oil (type A) | 5529601             | 2       |
| Fagron                     | Codliver oil (type A) | 5029209             | 1       |
| Fagron                     | Codliver oil (type A) | 8002338002          | 1       |
| Fagron                     | Codliver oil (type A) | 12H15-N02           | 2       |
| Fiebig                     | Codliver oil (type A) | 80000918001         | 1       |
| Fiebig                     | Codliver oil (type A) | 8001176004          | 1       |
| Fiebig                     | Codliver oil (type A) | 8002338002          | 5       |
| Fiebig                     | Codliver oil (type A) | 8002468002          | 9       |
| Fiebig                     | Codliver oil (type A) | 8003727001          | 3       |
| Fiebig                     | Codliver oil (type A) | 800372001           | 1       |
| Fiebig                     | Codliver oil (type A) | 8003906001          | 4       |

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| Supplier                   | Substance             | Batch       | Spectra |
|----------------------------|-----------------------|-------------|---------|
| Fiebig                     | Codliver oil (type A) | 8003906002  | 8       |
| Fiebig                     | Codliver oil (type A) | 8004742002  | 4       |
| Fiebig/Henr Lamotte        | Codliver oil (type A) | 8004742003  | 3       |
| GallPharma/Phoenix         | Codliver oil (type A) | V-00010519  | 1       |
| Gehe                       | Codliver oil (type A) | 2613A-01985 | 1       |
| Gehe                       | Codliver oil (type A) | 5437202     | 1       |
| Gehe                       | Codliver oil (type A) | 8002338002  | 3       |
| Gehe                       | Codliver oil (type A) | 18184501    | 1       |
| Caelo                      | Codliver oil (type A) | 17058301    | 1       |
| Gehe/Henry Lamotte         | Codliver oil (type A) | 8002338002  | 2       |
| Gehe/Henry Lamotte         | Codliver oil (type A) | 8002468002  | 1       |
| Gehe/Henry Lamotte Oils... | Codliver oil (type A) | 119929      | 1       |
| Gehe/Lamotte               | Codliver oil (type A) | 8004742002  | 2       |
| H. Lamotte/gehe            | Codliver oil (type A) | 8003906001  | 1       |
| H. Lamotte/gehe            | Codliver oil (type A) | 8005296002  | 1       |
| H. Lamotte/Noweda          | Codliver oil (type A) | 119929      | 2       |
| H.Lamotte                  | Codliver oil (type A) | 8003906002  | 1       |
| H.Lamotte/Noweda           | Codliver oil (type A) | 5228001     | 1       |
| H.Lamotte/Noweda           | Codliver oil (type A) | 5228004     | 1       |
| H.Lamotte/Noweda           | Codliver oil (type A) | 5878701     | 1       |
| Harry Lamotte Oils         | Codliver oil (type A) | 2101204     | 1       |
| Hedinger                   | Codliver oil (type A) | 8000601001  | 1       |
| Klenk                      | Codliver oil (type A) | 17344601    | 1       |
| henry lamotte              | Codliver oil (type A) | 5693101     | 1       |
| henry lamotte              | Codliver oil (type A) | 5529601     | 1       |
| Henry Lamotte              | Codliver oil (type A) | 5029207     | 1       |
| Henry Lamotte              | Codliver oil (type A) | 5228001     | 1       |
| Henry Lamotte              | Codliver oil (type A) | 5228004     | 1       |
| Henry Lamotte              | Codliver oil (type A) | 119929      | 1       |
| Henry Lamotte              | Codliver oil (type A) | 18101303    | 1       |
| Henry Lamotte              | Codliver oil (type A) | 26111303    | 1       |
| Henry Lamotte              | Codliver oil (type A) | 5529601     | 4       |
| Henry Lamotte              | Codliver oil (type A) | 20021413    | 1       |
| Henry Lamotte              | Codliver oil (type A) | 26111402    | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8000601001  | 4       |
| Henry Lamotte              | Codliver oil (type A) | 75860       | 1       |
| Henry Lamotte              | Codliver oil (type A) | 5878701     | 3       |
| Henry Lamotte              | Codliver oil (type A) | 800060101   | 1       |
| Henry Lamotte              | Codliver oil (type A) | 80000601001 | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8000918001  | 4       |
| Henry Lamotte              | Codliver oil (type A) | 8001176004  | 2       |
| Henry Lamotte              | Codliver oil (type A) | 8001215002  | 12      |
| Henry Lamotte              | Codliver oil (type A) | 8001765001  | 3       |
| Henry Lamotte              | Codliver oil (type A) | 800765001   | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8002468002  | 2       |
| Henry Lamotte              | Codliver oil (type A) | 8003727001  | 7       |
| Henry Lamotte              | Codliver oil (type A) | 80037277001 | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8003906001  | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8003906002  | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8004742002  | 1       |
| Henry Lamotte              | Codliver oil (type A) | 8004742003  | 1       |
| HENRY LAMOTTE              | Codliver oil (type A) | 8002468002  | 1       |
| HENRY LAMOTTE              | Codliver oil (type A) | 8005296002  | 1       |
| Henry Lamotte /            | Codliver oil (type A) | 8005296002  | 1       |
| Henry Lamotte / Anzag      | Codliver oil (type A) | 5641901     | 1       |
| Henry Lamotte / Anzag      | Codliver oil (type A) | 8000918001  | 2       |
| Henry Lamotte Anzag        | Codliver oil (type A) | 8002468002  | 1       |
| Henry Lamotte Anzag        | Codliver oil (type A) | 8003727001  | 1       |
| Henry Lamotte GmbH         | Codliver oil (type A) | 5437202     | 1       |
| Henry Lamotte GmbH         | Codliver oil (type A) | 5228004     | 1       |

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| Supplier                   | Substance             | Batch      | Spectra |
|----------------------------|-----------------------|------------|---------|
| Henry Lamotte GmbH/Hold... | Codliver oil (type A) | 5228001    | 1       |
| henry lamotte oils         | Codliver oil (type A) | 5437202    | 1       |
| Henry Lamotte Oils         | Codliver oil (type A) | 5437202    | 2       |
| Henry Lamotte Oils         | Codliver oil (type A) | 5228001    | 1       |
| Henry Lamotte Oils         | Codliver oil (type A) | 5529601    | 2       |
| Henry Lamotte Oils         | Codliver oil (type A) | 5693101    | 1       |
| Henry Lamotte Oils         | Codliver oil (type A) | 5641901    | 1       |
| Henry Lamotte Oils         | Codliver oil (type A) | 8002338002 | 4       |
| Henry Lamotte Oils         | Codliver oil (type A) | 8002468002 | 2       |
| Henry Lamotte Oils         | Codliver oil (type A) | 16011901   | 1       |
| henry lamotte oils gmbh    | Codliver oil (type A) | 8000918001 | 1       |
| henry lamotte oils gmbh    | Codliver oil (type A) | 8001176004 | 1       |
| Henry Lamotte oils GmbH    | Codliver oil (type A) | 123823     | 3       |
| Henry Lamotte oils GmbH    | Codliver oil (type A) | 5529601    | 3       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5029205    | 3       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5228001    | 2       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5228004    | 2       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 4931805    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 123108     | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5437202    | 3       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 123420L900 | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5529601    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5693101    | 2       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5641901    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8062015A   | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8000601001 | 4       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 5878701    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8000918001 | 5       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8001176004 | 6       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8001765001 | 3       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8002338002 | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8002468002 | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8003906001 | 3       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8003906002 | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8004742002 | 2       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 6082013A   | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 280913A    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 291013A    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 16012014A  | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 30614A     | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 18092014A  | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 301214a    | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 29012015A  | 1       |
| Henry Lamotte Oils GmbH    | Codliver oil (type A) | 8001215002 | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 8004742003 | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 8003906002 | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 8001215002 | 1       |
| Henry Lamotte oils GmbH... | Codliver oil (type A) | 5641901    | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 8003727001 | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 123823     | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 5641901    | 1       |
| Henry Lamotte Oils GmbH... | Codliver oil (type A) | 8004742002 | 1       |
| Henry Lamotte Oils, Anzag  | Codliver oil (type A) | 123823     | 2       |
| Henry Lamotte Oils, Gehe   | Codliver oil (type A) | 5529601    | 1       |
| Henry Lamotte Oils/Gehe    | Codliver oil (type A) | 8002338002 | 1       |
| Henry Lamotte Oils/GEHE    | Codliver oil (type A) | 5693101    | 1       |
| Henry Lamotte Oils/Geibo   | Codliver oil (type A) | 8005296002 | 1       |
| Henry Lamotte Oils/Noweda  | Codliver oil (type A) | 5529601    | 1       |
| Henry Lamotte Oils/Noweda  | Codliver oil (type A) | 5878701    | 1       |
| Henry Lamotte Oils/Phoe... | Codliver oil (type A) | 8006235003 | 1       |

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| Supplier                   | Substance             | Batch          | Spectra |
|----------------------------|-----------------------|----------------|---------|
| HENRY LAMOTTE OIS GmbH     | Codliver oil (type A) | 800125002      | 1       |
| Henry Lamotte/Alliance     | Codliver oil (type A) | 8005296002     | 1       |
| Henry Lamotte/Gehe/24.0... | Codliver oil (type A) | 8004742002     | 1       |
| Henry Lamotte/Kehr         | Codliver oil (type A) | 5529601        | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 5529601        | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 5641901        | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 8001215002     | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 8002338002     | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 8003906002     | 1       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 8004742002     | 2       |
| Henry Lamotte/Noweda       | Codliver oil (type A) | 8004742003     | 3       |
| Henry Lamotte/Phoenix      | Codliver oil (type A) | 8001176004     | 1       |
| Henry Lamotte/Phönix       | Codliver oil (type A) | 5878701        | 1       |
| Henry Lamotte/Phönix       | Codliver oil (type A) | 8000601001     | 1       |
| Henry Lamotte/Phönix       | Codliver oil (type A) | 8003727001     | 1       |
| Henry Lamotte/Sanacorp     | Codliver oil (type A) | 123823         | 1       |
| Henry Lamotte/Sanacorp     | Codliver oil (type A) | 5529601        | 1       |
| Henry Lamotte/V.d.L.       | Codliver oil (type A) | 5437202        | 1       |
| Henry Lamotte;VDL; 22,5... | Codliver oil (type A) | 8000601001     | 1       |
| HenryLamotte/Gehe          | Codliver oil (type A) | 8004742003     | 1       |
| HenryLamotte/Gehe          | Codliver oil (type A) | 8005296003     | 6       |
| HenryLamotte/Gehe          | Codliver oil (type A) | 8006235003     | 1       |
| HenryLamotte/Noweda        | Codliver oil (type A) | 8002338002     | 1       |
| Jenne                      | Codliver oil (type A) | 8003727001     | 1       |
| Caelo                      | Codliver oil (type A) | 20003364002    | 1       |
| Klenk                      | Codliver oil (type A) | 5228004        | 2       |
| Kögl                       | Codliver oil (type A) | 355510164416   | 1       |
| Kögl                       | Codliver oil (type A) | 13202170617    | 2       |
| Kögl                       | Codliver oil (type A) | 242207172717   | 2       |
| Kögl                       | Codliver oil (type A) | 1700194        | 2       |
| Kögl                       | Codliver oil (type A) | 1800814        | 4       |
| Kögl                       | Codliver oil (type A) | 1802500        | 2       |
| Lam                        | Codliver oil (type A) | 5878701        | 1       |
| Lam / Now                  | Codliver oil (type A) | 8001765001     | 1       |
| lamotte                    | Codliver oil (type A) | 5029205        | 1       |
| Lamotte                    | Codliver oil (type A) | 119929         | 1       |
| Lamotte                    | Codliver oil (type A) | 5437202        | 3       |
| Lamotte                    | Codliver oil (type A) | 5529601        | 1       |
| Lamotte                    | Codliver oil (type A) | 123823         | 1       |
| Lamotte                    | Codliver oil (type A) | 5693101        | 6       |
| Lamotte                    | Codliver oil (type A) | 5878701        | 5       |
| Lamotte                    | Codliver oil (type A) | 8001176004     | 1       |
| Lamotte                    | Codliver oil (type A) | 8000601001     | 3       |
| Lamotte                    | Codliver oil (type A) | 8000918001     | 4       |
| Lamotte                    | Codliver oil (type A) | 8001215002     | 2       |
| Lamotte                    | Codliver oil (type A) | 8001765001     | 3       |
| Lamotte                    | Codliver oil (type A) | 8002338002     | 6       |
| Lamotte                    | Codliver oil (type A) | 8002468002     | 1       |
| Lamotte                    | Codliver oil (type A) | 8003727001     | 4       |
| Lamotte                    | Codliver oil (type A) | 8003906001     | 1       |
| Lamotte                    | Codliver oil (type A) | 8004742002     | 1       |
| Lamotte                    | Codliver oil (type A) | 8004742003     | 5       |
| Lamotte                    | Codliver oil (type A) | 8006235003     | 1       |
| Lamotte / Sanacorp         | Codliver oil (type A) | 80024680025600 | 1       |
| Lamotte Jenne              | Codliver oil (type A) | 5228004        | 2       |
| Lamotte / Gehe             | Codliver oil (type A) | 5693101        | 1       |
| Lamotte / Gehe             | Codliver oil (type A) | 8003727001     | 1       |
| Lamotte / Gehe             | Codliver oil (type A) | 8005296002     | 1       |
| Lamotte / Noweda           | Codliver oil (type A) | 8004742003     | 1       |
| Lamotte / Noweda           | Codliver oil (type A) | 8005296003     | 1       |

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| Supplier              | Substance             | Batch      | Spectra |
|-----------------------|-----------------------|------------|---------|
| Lamotte Henry         | Codliver oil (type A) | 8001176004 | 1       |
| lamotte jenne         | Codliver oil (type A) | 8000601001 | 1       |
| Lamotte Oils GmbH / E | Codliver oil (type A) | 5437202    | 2       |
| Lamotte Oils GmbH / G | Codliver oil (type A) | 5228004    | 1       |
| Lamotte über Sanacorp | Codliver oil (type A) | 5641901    | 1       |
| Lamotte/ Alliance     | Codliver oil (type A) | 8004742002 | 1       |
| Lamotte/ Anzag        | Codliver oil (type A) | 1000011373 | 1       |
| Lamotte/ Noweda       | Codliver oil (type A) | A458       | 1       |
| Lamotte/ Noweda       | Codliver oil (type A) | 5437202    | 1       |
| Lamotte/ Noweda       | Codliver oil (type A) | 8000918001 | 2       |
| Lamotte/ Noweda       | Codliver oil (type A) | 8005296002 | 1       |
| Lamotte/ Phoenix      | Codliver oil (type A) | 8003906001 | 1       |
| Lamotte/ Phoenix      | Codliver oil (type A) | 8003906002 | 1       |
| Lamotte/ Sanacorp     | Codliver oil (type A) | 5029207    | 1       |
| Lamotte/ Sanacorp     | Codliver oil (type A) | 8000601001 | 2       |
| Lamotte/ Sanacorp     | Codliver oil (type A) | 8001176004 | 3       |
| Lamotte/ Sanacorp     | Codliver oil (type A) | 8002338002 | 2       |
| Lamotte/ Sanacorp     | Codliver oil (type A) | 8004742003 | 3       |
| Lamotte/AHD           | Codliver oil (type A) | 8004742003 | 1       |
| Lamotte/Anzag         | Codliver oil (type A) | 8000918001 | 1       |
| Lamotte/Anzag         | Codliver oil (type A) | 8002338002 | 2       |
| Lamotte/Anzag         | Codliver oil (type A) | 8003727001 | 1       |
| Lamotte/Anzag         | Codliver oil (type A) | 8003906002 | 1       |
| Lamotte/Anzag         | Codliver oil (type A) | 800472002  | 1       |
| Caelo                 | Codliver oil (type A) | 5529601    | 11      |
| Lamotte/Fiebig        | Codliver oil (type A) | 8001765001 | 4       |
| lamotte/Gehe          | Codliver oil (type A) | 123823     | 1       |
| lamotte/Gehe          | Codliver oil (type A) | 5529601    | 4       |
| lamotte/Gehe          | Codliver oil (type A) | 5641901    | 3       |
| Lamotte/gehe          | Codliver oil (type A) | 5437202    | 4       |
| Lamotte/gehe          | Codliver oil (type A) | 5693101    | 3       |
| Lamotte/gehe          | Codliver oil (type A) | 8003906001 | 1       |
| Lamotte/gehe          | Codliver oil (type A) | 8003906002 | 2       |
| Lamotte/Gehe          | Codliver oil (type A) | 5693101    | 3       |
| Lamotte/Gehe          | Codliver oil (type A) | 5878701    | 1       |
| Lamotte/Gehe          | Codliver oil (type A) | 8000601001 | 2       |
| Lamotte/Gehe          | Codliver oil (type A) | 8000918001 | 1       |
| Lamotte/Gehe          | Codliver oil (type A) | 8001176004 | 1       |
| Lamotte/Gehe          | Codliver oil (type A) | 8001215002 | 2       |
| Lamotte/Gehe          | Codliver oil (type A) | 8002338002 | 3       |
| Lamotte/Gehe          | Codliver oil (type A) | 8002468002 | 2       |
| Lamotte/Gehe          | Codliver oil (type A) | 8003906001 | 1       |
| Lamotte/Gehe          | Codliver oil (type A) | 8003906002 | 1       |
| Lamotte/Gehe          | Codliver oil (type A) | 8005296002 | 1       |
| Lamotte/GEHE          | Codliver oil (type A) | 5437202    | 7       |
| Lamotte/Geibo         | Codliver oil (type A) | 8000918001 | 2       |
| Lamotte/L3            | Codliver oil (type A) | 123823     | 1       |
| lamotte/Nowe          | Codliver oil (type A) | 8002468002 | 1       |
| Lamotte/Noweda        | Codliver oil (type A) | 5437202    | 3       |
| Lamotte/Noweda        | Codliver oil (type A) | 5529601    | 2       |
| Lamotte/Noweda        | Codliver oil (type A) | 8000601001 | 3       |
| Lamotte/Phoenix       | Codliver oil (type A) | 8000918001 | 1       |
| Lamotte/Phoenix       | Codliver oil (type A) | 8002338002 | 10      |
| Lamotte/Phoenix       | Codliver oil (type A) | 8004742003 | 1       |
| Lamotte/Phönix        | Codliver oil (type A) | 123823     | 1       |
| Lamotte/Phönix        | Codliver oil (type A) | 8001215002 | 1       |
| Lamotte/Phönix        | Codliver oil (type A) | 8000601001 | 1       |
| Lamotte/Phönix        | Codliver oil (type A) | 8002338002 | 1       |
| Lamotte/Phönix        | Codliver oil (type A) | 8002338002 | 3       |
| Lamotte/Phönix        | Codliver oil (type A) | 8002468002 | 7       |

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| Supplier                   | Substance             | Batch      | Spectra |
|----------------------------|-----------------------|------------|---------|
| Lamotte/Phönix             | Codliver oil (type A) | 8003727001 | 2       |
| Lamotte/Phönix             | Codliver oil (type A) | 8003906002 | 3       |
| Lamotte/Phönix             | Codliver oil (type A) | 8004742002 | 1       |
| Lamotte/Phönix             | Codliver oil (type A) | 8004742003 | 1       |
| Lamotte/Sanacorp           | Codliver oil (type A) | 5693101    | 3       |
| Lamotte/Sanacorp           | Codliver oil (type A) | 8000918001 | 1       |
| Lamotte/Sanacorp           | Codliver oil (type A) | 8003906001 | 1       |
| Lamotte/Sanacorp           | Codliver oil (type A) | 8003906002 | 2       |
| LaMotte/Spangro            | Codliver oil (type A) | 80117604   | 1       |
| LaMotte/Spangro            | Codliver oil (type A) | 8004742002 | 1       |
| Lamotte/Stumpf             | Codliver oil (type A) | 5529601    | 1       |
| Lamotte/V.d.L.             | Codliver oil (type A) | 123823     | 1       |
| Lamotte/V.d.L.             | Codliver oil (type A) | 5529601    | 4       |
| Midas/Henry Lamotte        | Codliver oil (type A) | 8001176004 | 1       |
| Noweda                     | Codliver oil (type A) | 5228001    | 1       |
| Noweda                     | Codliver oil (type A) | 4537202    | 1       |
| Noweda                     | Codliver oil (type A) | 5529601    | 4       |
| Noweda                     | Codliver oil (type A) | 8003906002 | 2       |
| Noweda                     | Codliver oil (type A) | 8004742002 | 1       |
| Caelo                      | Codliver oil (type A) | 1900632003 | 1       |
| Noweda / Henry Lamotte     | Codliver oil (type A) | 5437202    | 1       |
| Noweda / Lamotte Oil       | Codliver oil (type A) | 8005296003 | 1       |
| Noweda/Henry Lamotte       | Codliver oil (type A) | 5529601    | 2       |
| Noweda/Henry Lamotte       | Codliver oil (type A) | 8000601001 | 2       |
| Noweda/Henry Lamotte       | Codliver oil (type A) | 8003906002 | 1       |
| Noweda/henry lamotte GmbH  | Codliver oil (type A) | 8005296002 | 1       |
| Ph.Oele                    | Codliver oil (type A) | 8005296002 | 4       |
| Ph/Henry Lamotte           | Codliver oil (type A) | 8003727001 | 2       |
| Phoenix                    | Codliver oil (type A) | 11315303   | 1       |
| Phoenix                    | Codliver oil (type A) | 8002338002 | 1       |
| Phoenix                    | Codliver oil (type A) | 8002468002 | 1       |
| Phoenix                    | Codliver oil (type A) | 8003727001 | 1       |
| Phoenix                    | Codliver oil (type A) | 18080801   | 1       |
| Phoenix                    | Codliver oil (type A) | 8003906002 | 2       |
| pHOENIX 18.02.2014         | Codliver oil (type A) | 5529601    | 1       |
| phönix                     | Codliver oil (type A) | 15201201   | 1       |
| phönix                     | Codliver oil (type A) | 16074301   | 1       |
| PHÖNIX                     | Codliver oil (type A) | 17137805   | 1       |
| Phönix/Henry Lamotte       | Codliver oil (type A) | 8003906001 | 1       |
| Phönix/Henry Lamotte oi... | Codliver oil (type A) | 8003906001 | 3       |
| Phönix/Henry Lamotte oi... | Codliver oil (type A) | 8005296003 | 1       |
| Sanacorp                   | Codliver oil (type A) | 8002468002 | 1       |
| Sanacorp/ Lamotte          | Codliver oil (type A) | 8003906002 | 1       |
| Sanacorp/ Lamotte          | Codliver oil (type A) | 8004742003 | 3       |
| Sanacorp/ Lamotte          | Codliver oil (type A) | 8005296003 | 1       |
| Sanacorp/ Lamotte          | Codliver oil (type A) | 800709001  | 1       |
| Sanacorp/ Lamotte          | Codliver oil (type A) | 8006235003 | 1       |
| Spangropharm               | Codliver oil (type A) | 5529601    | 1       |
| Stumpf / Hedinger          | Codliver oil (type A) | 5878701    | 1       |
| Stumpf/Henry Lamotte       | Codliver oil (type A) | 119929     | 1       |
| Stumpf/Henry Lamotte       | Codliver oil (type A) | 123823     | 1       |
| Stumpf/Henry Lamotte       | Codliver oil (type A) | 5693101    | 1       |
| VDL                        | Codliver oil (type A) | 5878701    | 1       |
| Caelo                      | Corn oil, refined     | 19112904   | 1       |
| Bombastus                  | Corn oil, refined     | 10032015A  | 1       |
| Caelo                      | Corn oil, refined     | 13010710   | 1       |
| Caelo                      | Corn oil, refined     | 15050506   | 1       |
| Caelo                      | Corn oil, refined     | 11267907   | 1       |
| Caelo                      | Corn oil, refined     | 16260309   | 2       |
| Caelo                      | Corn oil, refined     | 17300102   | 1       |

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| <b>Supplier</b>            | <b>Substance</b>              | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|-------------------------------|------------------|----------------|
| Caelo                      | Corn oil, refined             | 13010707         | 2              |
| Caelo                      | Corn oil, refined             | 15296407         | 5              |
| Caesar & Loretz GmbH / ... | Corn oil, refined             | 19112904         | 1              |
| Caelo                      | Corn oil, refined             | 17055008         | 1              |
| Caelo                      | Corn oil, refined             | 18244602         | 4              |
| Noweda                     | Corn oil, refined             | 1824606          | 1              |
| Resana                     | Corn oil, refined             | 1208-3678        | 1              |
| Resana                     | Corn oil, refined             | 1308-4063        | 1              |
| 17215601                   | Decyl oleate                  | 17215601         | 1              |
| Alliance Healthcare        | Decyl oleate                  | 18069402         | 1              |
| Caelo                      | Decyl oleate                  | 14005002         | 1              |
| Caelo                      | Decyl oleate                  | 15191501         | 1              |
| Caelo                      | Decyl oleate                  | 15082205         | 1              |
| Caelo                      | Decyl oleate                  | 15393704         | 2              |
| Caelo                      | Decyl oleate                  | 2812             | 1              |
| Caelo                      | Decyl oleate                  | 16223409         | 1              |
| Caelo                      | Decyl oleate                  | 17215601         | 18             |
| Caelo                      | Decyl oleate                  | 18079402         | 1              |
| Caelo                      | Decyl oleate                  | 18069407         | 12             |
| Caelo                      | Decyl oleate                  | 18282502         | 4              |
| Caelo                      | Decyl oleate                  | 19088301         | 3              |
| Caelo                      | Decyl oleate                  | 192834003        | 1              |
| Caelo                      | Decyl oleate                  | 190883001        | 5              |
| Caelo                      | Decyl oleate                  | 16224309         | 4              |
| Caelo                      | Decyl oleate                  | 18282506         | 1              |
| Caelo                      | Decyl oleate                  | 13291606         | 2              |
| Caelo                      | Decyl oleate                  | 15047702         | 2              |
| Caelo                      | Decyl oleate                  | 18069402         | 17             |
| Caelo                      | Decyl oleate                  | 16107101         | 16             |
| Caelo                      | Decyl oleate                  | 161071           | 1              |
| Caelo                      | Decyl oleate                  | 15248408         | 2              |
| Caelo                      | Decyl oleate                  | 18214604         | 7              |
| Caelo                      | Decyl oleate                  | 15248405         | 7              |
| Caelo                      | Decyl oleate                  | 192834006        | 2              |
| Caelo                      | Decyl oleate                  | 1869402          | 1              |
| Caelo                      | Decyl oleate                  | 16224302         | 6              |
| Caelo                      | Decyl oleate                  | 15191502         | 5              |
| Caelo                      | Decyl oleate                  | 18069404         | 2              |
| Caesar & Loretz GmbH       | Decyl oleate                  | 18282506         | 3              |
| Caesar & Loretz GmbH       | Decyl oleate                  | 19088301         | 2              |
| Caesar & Loretz GmbH       | Decyl oleate                  | 190883001        | 1              |
| Caesar & Loretz GmbH       | Decyl oleate                  | 20004076004      | 2              |
| Caesar & Loretz GmbH       | Decyl oleate                  | 192834003        | 1              |
| Euro OTC                   | Decyl oleate                  | 1309018-03       | 1              |
| Euro OTC                   | Decyl oleate                  | 16107101         | 1              |
| Gehe                       | Decyl oleate                  | 18282506         | 1              |
| L12                        | Decyl oleate                  | 18069402         | 1              |
| Nachtestung                | Decyl oleate                  | 288/18           | 1              |
| Phoenix                    | Decyl oleate                  | 3061             | 1              |
| Phoenix                    | Decyl oleate                  | 18069407         | 1              |
| Phönix                     | Decyl oleate                  | 17215601         | 1              |
| Raben-Apotheke Mildenau    | Decyl oleate                  | 14814-B03-292195 | 1              |
| Sanacorp                   | Decyl oleate                  | 15082206         | 1              |
| Caelo                      | Decyl oleate                  | 15082206         | 3              |
| aelo/Gehe                  | Evening primrose oil, refined | 17255801         | 2              |
| AHD                        | Evening primrose oil, refined | 18009114         | 1              |
| AHD                        | Evening primrose oil, refined | 18216202         | 2              |
| AHD                        | Evening primrose oil, refined | 18216201         | 2              |
| AHD                        | Evening primrose oil, refined | 1000008469       | 2              |
| AHD                        | Evening primrose oil, refined | 18216217         | 1              |

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| Supplier                   | Substance                     | Batch         | Spectra |
|----------------------------|-------------------------------|---------------|---------|
| AHD                        | Evening primrose oil, refined | 19175401      | 1       |
| AHD                        | Evening primrose oil, refined | 192982001     | 1       |
| AHD                        | Evening primrose oil, refined | 192982004     | 1       |
| AHD                        | Evening primrose oil, refined | 20001052001   | 1       |
| Caelo                      | Evening primrose oil, refined | 1703020-01    | 8       |
| allcura                    | Evening primrose oil, refined | L2641         | 1       |
| Allcura                    | Evening primrose oil, refined | 1364          | 1       |
| Allcura                    | Evening primrose oil, refined | L-387         | 1       |
| Allcura                    | Evening primrose oil, refined | L-406         | 1       |
| Allcura                    | Evening primrose oil, refined | L416          | 1       |
| Alliance Healthcare        | Evening primrose oil, refined | 16281315      | 1       |
| Alliance Healthcare        | Evening primrose oil, refined | AP147307N     | 1       |
| Euro OTC                   | Evening primrose oil, refined | 2008037-01    | 24      |
| Allianz                    | Evening primrose oil, refined | 18009109      | 1       |
| Allianz                    | Evening primrose oil, refined | 18009106      | 1       |
| Allianz Healthcare 01.0... | Evening primrose oil, refined | AP562-124N    | 2       |
| Alte Apotheke              | Evening primrose oil, refined | 15417808      | 1       |
| Andor                      | Evening primrose oil, refined | AP869-100N    | 1       |
| Andor                      | Evening primrose oil, refined | AP920-114N    | 1       |
| Anzag                      | Evening primrose oil, refined | 130401812     | 1       |
| Anzag                      | Evening primrose oil, refined | 13121818      | 1       |
| Anzag                      | Evening primrose oil, refined | 16281309      | 1       |
| Anzag                      | Evening primrose oil, refined | 17255801      | 1       |
| Anzag                      | Evening primrose oil, refined | AP141023N     | 1       |
| Anzag                      | Evening primrose oil, refined | EP745611-1    | 1       |
| Anzag                      | Evening primrose oil, refined | 18216202      | 1       |
| Anzag                      | Evening primrose oil, refined | 18216217      | 1       |
| Anzag 30.01.13 ek:16,40EUR | Evening primrose oil, refined | 1205023-02    | 1       |
| Anzag ek:13.04EUR 08.08.12 | Evening primrose oil, refined | 1205023-01    | 2       |
| Euro OTC                   | Evening primrose oil, refined | 191100901     | 2       |
| Euro OTC                   | Evening primrose oil, refined | 2003029       | 2       |
| Anzag/Henry Lamotte        | Evening primrose oil, refined | 145675        | 1       |
| apo ident                  | Evening primrose oil, refined | 1608008-01    | 3       |
| Apo Ident/Fiebig           | Evening primrose oil, refined | 2008037-01    | 1       |
| Apo Ident/Noweda           | Evening primrose oil, refined | 2003029-01    | 1       |
| Apo Ident/Noweda           | Evening primrose oil, refined | 20001052009   | 1       |
| apo-ident                  | Evening primrose oil, refined | 1710011-02    | 1       |
| apo-ident                  | Evening primrose oil, refined | 1803006-01    | 2       |
| apo-Ident                  | Evening primrose oil, refined | BTR349512-01  | 1       |
| apomix 004                 | Evening primrose oil, refined | 1605027-01    | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP140319N5300 | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP140319N5383 | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP141023N5499 | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP191-088/1N  | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP869-100N    | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP869-100/1N  | 1       |
| Audor Pharma               | Evening primrose oil, refined | 869-100N      | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP920-114N    | 7       |
| Audor Pharma               | Evening primrose oil, refined | AP920-114/1N  | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP094-115N    | 1       |
| Audor Pharma               | Evening primrose oil, refined | AP273-116N    | 5       |
| Audor Pharma               | Evening primrose oil, refined | AP294-118N    | 13      |
| Audor Pharma               | Evening primrose oil, refined | AP396-120N    | 7       |
| Audor Pharma               | Evening primrose oil, refined | AP-788-128N   | 1       |
| Audor Pharma               | Evening primrose oil, refined | 392-133N      | 2       |
| Audor Pharma               | Evening primrose oil, refined | AP392-133N    | 10      |
| Audor Pharma               | Evening primrose oil, refined | AP140319      | 2       |
| Audor Pharma               | Evening primrose oil, refined | AP140319N     | 7       |
| Audor Pharma               | Evening primrose oil, refined | 140319N       | 1       |
| Audor Pharma               | Evening primrose oil, refined | 144330        | 1       |

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| Supplier           | Substance                     | Batch         | Spectra |
|--------------------|-------------------------------|---------------|---------|
| Audor Pharma       | Evening primrose oil, refined | AP144174N     | 15      |
| Audor Pharma       | Evening primrose oil, refined | Ap147307N     | 1       |
| Audor Pharma       | Evening primrose oil, refined | 144174        | 2       |
| Audor Pharma       | Evening primrose oil, refined | AP141023N5584 | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP144330N5736 | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP144330N5770 | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP141023N     | 10      |
| Audor Pharma       | Evening primrose oil, refined | AP366-108N    | 3       |
| Audor Pharma       | Evening primrose oil, refined | AP140319N5341 | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP676-078N    | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP141023      | 2       |
| Audor Pharma       | Evening primrose oil, refined | AP147307N     | 31      |
| Audor Pharma       | Evening primrose oil, refined | AP562-124     | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP562-124N    | 17      |
| Audor Pharma       | Evening primrose oil, refined | Ap869-100N    | 1       |
| Audor Pharma       | Evening primrose oil, refined | AP144330N     | 13      |
| Audor Pharma       | Evening primrose oil, refined | 1911009-01    | 8       |
| Audor Pharma       | Evening primrose oil, refined | AP147307      | 1       |
| Audor Pharma       | Evening primrose oil, refined | 144330N       | 2       |
| Audor Pharma       | Evening primrose oil, refined | AP144174      | 1       |
| Audor Pharma       | Evening primrose oil, refined | 141023N       | 2       |
| Audor Pharma       | Evening primrose oil, refined | AP191-088N    | 2       |
| Audor Pharma       | Evening primrose oil, refined | AP788-128N    | 14      |
| Audor Pharma       | Evening primrose oil, refined | AP273116N     | 1       |
| Bergland           | Evening primrose oil, refined | K6013776      | 1       |
| Bergland           | Evening primrose oil, refined | K800621       | 1       |
| Bergland           | Evening primrose oil, refined | K702516       | 1       |
| Bergland / Krieger | Evening primrose oil, refined | 1072021/1     | 1       |
| Bergland/Anzag     | Evening primrose oil, refined | H500690       | 1       |
| Bergland/Phönix    | Evening primrose oil, refined | H302605       | 1       |
| Bergland/Phönix    | Evening primrose oil, refined | K501908       | 1       |
| Bionorica ethics   | Evening primrose oil, refined | 1901046-01    | 2       |
| Bombastus          | Evening primrose oil, refined | 15171110      | 1       |
| Bombastus          | Evening primrose oil, refined | 1703020-01    | 1       |
| Bombastus          | Evening primrose oil, refined | 1803006-01    | 1       |
| Bombastus          | Evening primrose oil, refined | 1000003443    | 3       |
| Bombastus          | Evening primrose oil, refined | 1710011-01    | 1       |
| Bombastus          | Evening primrose oil, refined | 15171108      | 1       |
| Bombastus          | Evening primrose oil, refined | 13121806      | 1       |
| Bombastus          | Evening primrose oil, refined | 12325114      | 1       |
| Bombastus          | Evening primrose oil, refined | 133339        | 1       |
| Cae                | Evening primrose oil, refined | 14002501      | 1       |
| Caelo              | Evening primrose oil, refined | 13121818      | 3       |
| Caelo              | Evening primrose oil, refined | 14256810      | 1       |
| Caelo              | Evening primrose oil, refined | 15081403      | 8       |
| Caelo              | Evening primrose oil, refined | 150081403     | 1       |
| Caelo              | Evening primrose oil, refined | 150303101     | 1       |
| Caelo              | Evening primrose oil, refined | 18216203      | 25      |
| Caelo              | Evening primrose oil, refined | 192982009     | 2       |
| Caelo              | Evening primrose oil, refined | 11019201      | 1       |
| Caelo              | Evening primrose oil, refined | 12032906      | 2       |
| Caelo              | Evening primrose oil, refined | 12032913      | 2       |
| Caelo              | Evening primrose oil, refined | 12112901      | 1       |
| Caelo              | Evening primrose oil, refined | 12112905      | 3       |
| Caelo              | Evening primrose oil, refined | 120543078-13  | 1       |
| Caelo              | Evening primrose oil, refined | 12112911      | 4       |
| Caelo              | Evening primrose oil, refined | 3112M-03075   | 1       |
| Caelo              | Evening primrose oil, refined | 12112908      | 6       |
| Caelo              | Evening primrose oil, refined | 12112912      | 1       |
| Caelo              | Evening primrose oil, refined | 12112906      | 1       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Evening primrose oil, refined | 20140612-18 | 1       |
| Caelo    | Evening primrose oil, refined | 12112915    | 2       |
| Caelo    | Evening primrose oil, refined | 12325110    | 1       |
| Caelo    | Evening primrose oil, refined | 123235106   | 1       |
| Caelo    | Evening primrose oil, refined | 12325113    | 7       |
| Caelo    | Evening primrose oil, refined | 12112910    | 1       |
| Caelo    | Evening primrose oil, refined | 12325115    | 3       |
| Caelo    | Evening primrose oil, refined | 4061305     | 1       |
| Caelo    | Evening primrose oil, refined | 12325116    | 5       |
| Caelo    | Evening primrose oil, refined | 13121807    | 6       |
| Caelo    | Evening primrose oil, refined | 13121814    | 7       |
| Caelo    | Evening primrose oil, refined | 13121812    | 7       |
| Caelo    | Evening primrose oil, refined | 2011409     | 1       |
| Caelo    | Evening primrose oil, refined | 1312812     | 1       |
| Caelo    | Evening primrose oil, refined | 1312816     | 1       |
| Caelo    | Evening primrose oil, refined | 14002503    | 5       |
| Caelo    | Evening primrose oil, refined | 160213003   | 1       |
| Caelo    | Evening primrose oil, refined | 14002502    | 2       |
| Caelo    | Evening primrose oil, refined | AP094-115N  | 1       |
| Caelo    | Evening primrose oil, refined | 14010908    | 21      |
| Caelo    | Evening primrose oil, refined | 1210012-02  | 1       |
| Caelo    | Evening primrose oil, refined | 14002501    | 1       |
| Caelo    | Evening primrose oil, refined | 14010912    | 2       |
| Caelo    | Evening primrose oil, refined | 14010917    | 1       |
| Caelo    | Evening primrose oil, refined | 10101404    | 1       |
| Caelo    | Evening primrose oil, refined | 14010920    | 1       |
| Caelo    | Evening primrose oil, refined | 14258608    | 12      |
| Caelo    | Evening primrose oil, refined | 15121405    | 1       |
| Caelo    | Evening primrose oil, refined | 5011508     | 1       |
| Caelo    | Evening primrose oil, refined | 7011502     | 1       |
| Caelo    | Evening primrose oil, refined | 15081404    | 13      |
| Caelo    | Evening primrose oil, refined | 1414201710  | 1       |
| Caelo    | Evening primrose oil, refined | 30031501    | 1       |
| Caelo    | Evening primrose oil, refined | 1428616     | 1       |
| Caelo    | Evening primrose oil, refined | 15081402    | 3       |
| Caelo    | Evening primrose oil, refined | 15081405    | 19      |
| Caelo    | Evening primrose oil, refined | 15081407    | 19      |
| Caelo    | Evening primrose oil, refined | 5061505     | 1       |
| Caelo    | Evening primrose oil, refined | 15171101    | 5       |
| Caelo    | Evening primrose oil, refined | 1517113     | 1       |
| Caelo    | Evening primrose oil, refined | 15141102    | 1       |
| Caelo    | Evening primrose oil, refined | 15171109    | 14      |
| Caelo    | Evening primrose oil, refined | 1503031-01  | 1       |
| Caelo    | Evening primrose oil, refined | 15171110    | 41      |
| Caelo    | Evening primrose oil, refined | 15417801    | 61      |
| Caelo    | Evening primrose oil, refined | 12031604    | 1       |
| Caelo    | Evening primrose oil, refined | 1512000501  | 1       |
| Caelo    | Evening primrose oil, refined | 15171106    | 1       |
| Caelo    | Evening primrose oil, refined | 1512005-01  | 1       |
| Caelo    | Evening primrose oil, refined | 458528      | 1       |
| Caelo    | Evening primrose oil, refined | 15417807    | 3       |
| Caelo    | Evening primrose oil, refined | 1512005-02  | 2       |
| Caelo    | Evening primrose oil, refined | 15417083    | 1       |
| Caelo    | Evening primrose oil, refined | 15417805    | 35      |
| Caelo    | Evening primrose oil, refined | 1603048-01  | 3       |
| Caelo    | Evening primrose oil, refined | 15417809    | 10      |
| Caelo    | Evening primrose oil, refined | 16281301    | 20      |
| Caelo    | Evening primrose oil, refined | 16245602    | 1       |
| Caelo    | Evening primrose oil, refined | 16281303    | 5       |
| Caelo    | Evening primrose oil, refined | 14031701    | 1       |

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| Supplier | Substance                     | Batch            | Spectra |
|----------|-------------------------------|------------------|---------|
| Caelo    | Evening primrose oil, refined | 21041716         | 1       |
| Caelo    | Evening primrose oil, refined | 16281308         | 39      |
| Caelo    | Evening primrose oil, refined | 162891302        | 1       |
| Caelo    | Evening primrose oil, refined | 24061711         | 1       |
| Caelo    | Evening primrose oil, refined | 16281311         | 1       |
| Caelo    | Evening primrose oil, refined | 16281209         | 1       |
| Caelo    | Evening primrose oil, refined | 7170717          | 1       |
| Caelo    | Evening primrose oil, refined | 16281313         | 21      |
| Caelo    | Evening primrose oil, refined | 16281314         | 13      |
| Caelo    | Evening primrose oil, refined | 16281315         | 11      |
| Caelo    | Evening primrose oil, refined | 10281314         | 1       |
| Caelo    | Evening primrose oil, refined | 1628315          | 1       |
| Caelo    | Evening primrose oil, refined | 16281319         | 6       |
| Caelo    | Evening primrose oil, refined | 1281315          | 1       |
| Caelo    | Evening primrose oil, refined | 1704018-01       | 3       |
| Caelo    | Evening primrose oil, refined | 6121707          | 1       |
| Caelo    | Evening primrose oil, refined | 1710011-01       | 4       |
| Caelo    | Evening primrose oil, refined | 17255803         | 23      |
| Caelo    | Evening primrose oil, refined | 1628109          | 1       |
| Caelo    | Evening primrose oil, refined | 7255801          | 1       |
| Caelo    | Evening primrose oil, refined | 108009103        | 1       |
| Caelo    | Evening primrose oil, refined | 18009103         | 17      |
| Caelo    | Evening primrose oil, refined | 18009101         | 56      |
| Caelo    | Evening primrose oil, refined | 17255804         | 2       |
| Caelo    | Evening primrose oil, refined | 18009104         | 2       |
| Caelo    | Evening primrose oil, refined | 18009107         | 2       |
| Caelo    | Evening primrose oil, refined | 3051806          | 1       |
| Caelo    | Evening primrose oil, refined | 23051821         | 1       |
| Caelo    | Evening primrose oil, refined | 18001901         | 1       |
| Caelo    | Evening primrose oil, refined | 18009109         | 39      |
| Caelo    | Evening primrose oil, refined | 169071803        | 1       |
| Caelo    | Evening primrose oil, refined | 18009117         | 1       |
| Caelo    | Evening primrose oil, refined | 180091701        | 1       |
| Caelo    | Evening primrose oil, refined | 1800910903385897 | 1       |
| Caelo    | Evening primrose oil, refined | AP144330N        | 1       |
| Caelo    | Evening primrose oil, refined | 182162003        | 1       |
| Caelo    | Evening primrose oil, refined | 18216202         | 43      |
| Caelo    | Evening primrose oil, refined | 18216204         | 2       |
| Caelo    | Evening primrose oil, refined | 1821602          | 2       |
| Caelo    | Evening primrose oil, refined | 3385897          | 3       |
| Caelo    | Evening primrose oil, refined | 1901046-01       | 4       |
| Caelo    | Evening primrose oil, refined | 18216214         | 21      |
| Caelo    | Evening primrose oil, refined | 18216216         | 1       |
| Caelo    | Evening primrose oil, refined | 18216219         | 11      |
| Caelo    | Evening primrose oil, refined | 18216221         | 1       |
| Caelo    | Evening primrose oil, refined | 19164407         | 18      |
| Caelo    | Evening primrose oil, refined | 19164409         | 2       |
| Caelo    | Evening primrose oil, refined | 19164408         | 1       |
| Caelo    | Evening primrose oil, refined | 192982001        | 39      |
| Caelo    | Evening primrose oil, refined | 191644003        | 10      |
| Caelo    | Evening primrose oil, refined | 51929821         | 1       |
| Caelo    | Evening primrose oil, refined | 192982005        | 1       |
| Caelo    | Evening primrose oil, refined | 192982008        | 1       |
| Caelo    | Evening primrose oil, refined | 20001052001      | 16      |
| Caelo    | Evening primrose oil, refined | 192982012        | 2       |
| Caelo    | Evening primrose oil, refined | 1052001          | 1       |
| Caelo    | Evening primrose oil, refined | 200001052001     | 1       |
| Caelo    | Evening primrose oil, refined | 2000010520015    | 1       |
| Caelo    | Evening primrose oil, refined | 2001052009       | 1       |
| Caelo    | Evening primrose oil, refined | 20001052004      | 3       |

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| Supplier | Substance                     | Batch               | Spectra |
|----------|-------------------------------|---------------------|---------|
| Caelo    | Evening primrose oil, refined | 200040447009        | 1       |
| Caelo    | Evening primrose oil, refined | 18216218            | 12      |
| Caelo    | Evening primrose oil, refined | 192982011           | 2       |
| Caelo    | Evening primrose oil, refined | 12325114            | 5       |
| Caelo    | Evening primrose oil, refined | 1803006-02          | 5       |
| Caelo    | Evening primrose oil, refined | 19175401            | 44      |
| Caelo    | Evening primrose oil, refined | 21000915003         | 1       |
| Caelo    | Evening primrose oil, refined | 20004047006         | 1       |
| Caelo    | Evening primrose oil, refined | 160502701           | 1       |
| Caelo    | Evening primrose oil, refined | 20004047009         | 11      |
| Caelo    | Evening primrose oil, refined | 122966              | 3       |
| Caelo    | Evening primrose oil, refined | 145691              | 14      |
| Caelo    | Evening primrose oil, refined | 13121804            | 1       |
| Caelo    | Evening primrose oil, refined | 14010901            | 1       |
| Caelo    | Evening primrose oil, refined | 14258606            | 12      |
| Caelo    | Evening primrose oil, refined | 14258611            | 4       |
| Caelo    | Evening primrose oil, refined | 20004047008         | 7       |
| Caelo    | Evening primrose oil, refined | 14010914            | 2       |
| Caelo    | Evening primrose oil, refined | 18216212            | 1       |
| Caelo    | Evening primrose oil, refined | 17255801            | 51      |
| Caelo    | Evening primrose oil, refined | 18009110            | 43      |
| Caelo    | Evening primrose oil, refined | 18009108            | 1       |
| Caelo    | Evening primrose oil, refined | 18009116            | 14      |
| Caelo    | Evening primrose oil, refined | 192982010           | 5       |
| Caelo    | Evening primrose oil, refined | 20001052009         | 3       |
| Caelo    | Evening primrose oil, refined | 1218404553          | 1       |
| Caelo    | Evening primrose oil, refined | 17255802            | 53      |
| Caelo    | Evening primrose oil, refined | 180009101           | 1       |
| Caelo    | Evening primrose oil, refined | 1235106             | 1       |
| Caelo    | Evening primrose oil, refined | 1407002-01          | 2       |
| Caelo    | Evening primrose oil, refined | 12325111            | 10      |
| Caelo    | Evening primrose oil, refined | 192982004P-200806-5 | 1       |
| Caelo    | Evening primrose oil, refined | 15417808            | 25      |
| Caelo    | Evening primrose oil, refined | 18216220            | 2       |
| Caelo    | Evening primrose oil, refined | 154178806           | 1       |
| Caelo    | Evening primrose oil, refined | 18009115            | 12      |
| Caelo    | Evening primrose oil, refined | 1821206             | 1       |
| Caelo    | Evening primrose oil, refined | 18216215            | 5       |
| Caelo    | Evening primrose oil, refined | 20001052005         | 9       |
| Caelo    | Evening primrose oil, refined | 1608008-01          | 2       |
| Caelo    | Evening primrose oil, refined | 16281306            | 14      |
| Caelo    | Evening primrose oil, refined | 18009106            | 29      |
| Caelo    | Evening primrose oil, refined | 18009105            | 22      |
| Caelo    | Evening primrose oil, refined | 14010913            | 11      |
| Caelo    | Evening primrose oil, refined | 19164401            | 56      |
| Caelo    | Evening primrose oil, refined | 18009111            | 3       |
| Caelo    | Evening primrose oil, refined | 1407002-02          | 1       |
| Caelo    | Evening primrose oil, refined | 14258604            | 4       |
| Caelo    | Evening primrose oil, refined | 14258612            | 3       |
| Caelo    | Evening primrose oil, refined | 16281307            | 12      |
| Caelo    | Evening primrose oil, refined | 19282001            | 1       |
| Caelo    | Evening primrose oil, refined | 162813078           | 1       |
| Caelo    | Evening primrose oil, refined | 21000915002         | 1       |
| Caelo    | Evening primrose oil, refined | 14258601            | 11      |
| Caelo    | Evening primrose oil, refined | 1620                | 1       |
| Caelo    | Evening primrose oil, refined | 14010907            | 1       |
| Caelo    | Evening primrose oil, refined | AP141023N           | 1       |
| Caelo    | Evening primrose oil, refined | 1232516             | 1       |
| Caelo    | Evening primrose oil, refined | 1401908             | 1       |
| Caelo    | Evening primrose oil, refined | 14717806            | 1       |

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| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Evening primrose oil, refined | 18216217    | 16      |
| Caelo    | Evening primrose oil, refined | 120502302   | 1       |
| Caelo    | Evening primrose oil, refined | 12325105    | 7       |
| Caelo    | Evening primrose oil, refined | 13121816    | 15      |
| Caelo    | Evening primrose oil, refined | 14010910    | 12      |
| Caelo    | Evening primrose oil, refined | 14258616    | 17      |
| Caelo    | Evening primrose oil, refined | 14258617    | 13      |
| Caelo    | Evening primrose oil, refined | 16281302    | 26      |
| Caelo    | Evening primrose oil, refined | 16281309    | 57      |
| Caelo    | Evening primrose oil, refined | 172558012x  | 1       |
| Caelo    | Evening primrose oil, refined | 18009114    | 16      |
| Caelo    | Evening primrose oil, refined | 1800915     | 1       |
| Caelo    | Evening primrose oil, refined | 180300602   | 2       |
| Caelo    | Evening primrose oil, refined | 18216207    | 13      |
| Caelo    | Evening primrose oil, refined | 1816211     | 1       |
| Caelo    | Evening primrose oil, refined | 192982013   | 6       |
| Caelo    | Evening primrose oil, refined | 15171104    | 20      |
| Caelo    | Evening primrose oil, refined | 1704018_01  | 2       |
| Caelo    | Evening primrose oil, refined | 20004047010 | 2       |
| Caelo    | Evening primrose oil, refined | 1605027-01  | 2       |
| Caelo    | Evening primrose oil, refined | 192982002   | 32      |
| Caelo    | Evening primrose oil, refined | 20001052003 | 18      |
| Caelo    | Evening primrose oil, refined | 1800914     | 1       |
| Caelo    | Evening primrose oil, refined | EP7137111   | 1       |
| Caelo    | Evening primrose oil, refined | 12325109    | 6       |
| Caelo    | Evening primrose oil, refined | 13121806    | 2       |
| Caelo    | Evening primrose oil, refined | 12032908    | 1       |
| Caelo    | Evening primrose oil, refined | 12325101    | 9       |
| Caelo    | Evening primrose oil, refined | 15081401    | 4       |
| Caelo    | Evening primrose oil, refined | 586061428   | 1       |
| Caelo    | Evening primrose oil, refined | 15171108    | 1       |
| Caelo    | Evening primrose oil, refined | 15171102    | 24      |
| Caelo    | Evening primrose oil, refined | 15171111    | 16      |
| Caelo    | Evening primrose oil, refined | 1601059-01  | 1       |
| Caelo    | Evening primrose oil, refined | 3878-124466 | 1       |
| Caelo    | Evening primrose oil, refined | 16282301    | 1       |
| Caelo    | Evening primrose oil, refined | 1000003443  | 1       |
| Caelo    | Evening primrose oil, refined | 16281310    | 13      |
| Caelo    | Evening primrose oil, refined | 1710011-11  | 1       |
| Caelo    | Evening primrose oil, refined | 1710011-02  | 6       |
| Caelo    | Evening primrose oil, refined | EP713711-1  | 1       |
| Caelo    | Evening primrose oil, refined | 18216201    | 25      |
| Caelo    | Evening primrose oil, refined | EP8482111   | 1       |
| Caelo    | Evening primrose oil, refined | 1916401     | 1       |
| Caelo    | Evening primrose oil, refined | 190104601   | 2       |
| Caelo    | Evening primrose oil, refined | 192982006   | 4       |
| Caelo    | Evening primrose oil, refined | 19992982010 | 1       |
| Caelo    | Evening primrose oil, refined | 12032912    | 2       |
| Caelo    | Evening primrose oil, refined | 12112914    | 2       |
| Caelo    | Evening primrose oil, refined | 12112902    | 2       |
| Caelo    | Evening primrose oil, refined | 14010905    | 1       |
| Caelo    | Evening primrose oil, refined | 14010903    | 2       |
| Caelo    | Evening primrose oil, refined | 14258615    | 2       |
| Caelo    | Evening primrose oil, refined | 15171105    | 13      |
| Caelo    | Evening primrose oil, refined | 150601-01   | 1       |
| Caelo    | Evening primrose oil, refined | 1506001-01  | 1       |
| Caelo    | Evening primrose oil, refined | 170302001   | 1       |
| Caelo    | Evening primrose oil, refined | 16281318    | 13      |
| Caelo    | Evening primrose oil, refined | 19164402    | 19      |
| Caelo    | Evening primrose oil, refined | 192982004   | 32      |

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| Supplier             | Substance                     | Batch        | Spectra |
|----------------------|-------------------------------|--------------|---------|
| Caelo                | Evening primrose oil, refined | 18009102     | 29      |
| Caelo                | Evening primrose oil, refined | 1235101      | 1       |
| Caelo                | Evening primrose oil, refined | 12355115     | 1       |
| Caelo                | Evening primrose oil, refined | 13121813     | 5       |
| Caelo                | Evening primrose oil, refined | 15417802     | 56      |
| Caelo                | Evening primrose oil, refined | 15417806     | 21      |
| Caelo                | Evening primrose oil, refined | 151200502    | 1       |
| Caelo                | Evening primrose oil, refined | 1547801      | 1       |
| Caelo                | Evening primrose oil, refined | 1628308      | 1       |
| Caelo                | Evening primrose oil, refined | 16261313     | 1       |
| Caelo                | Evening primrose oil, refined | 16281317     | 6       |
| Caelo                | Evening primrose oil, refined | 17307802     | 16      |
| Caelo                | Evening primrose oil, refined | 17322105     | 1       |
| Caelo                | Evening primrose oil, refined | 1826212      | 1       |
| Caelo                | Evening primrose oil, refined | 19164403     | 1       |
| Caelo                | Evening primrose oil, refined | 2001052001   | 1       |
| Caelo                | Evening primrose oil, refined | 15171103     | 9       |
| Caelo                | Evening primrose oil, refined | 1235113      | 1       |
| Caelo                | Evening primrose oil, refined | 14010904     | 8       |
| Caelo                | Evening primrose oil, refined | 14010918     | 6       |
| Caelo                | Evening primrose oil, refined | 14258603     | 12      |
| Caelo                | Evening primrose oil, refined | 14258607     | 5       |
| Caelo                | Evening primrose oil, refined | 1541801      | 1       |
| Caelo                | Evening primrose oil, refined | 2416A-03075  | 1       |
| Caelo                | Evening primrose oil, refined | 1755601      | 1       |
| Caelo                | Evening primrose oil, refined | 1911009-01   | 4       |
| Caelo                | Evening primrose oil, refined | 200010522003 | 1       |
| Caelo                | Evening primrose oil, refined | AP788-128N   | 3       |
| Caelo                | Evening primrose oil, refined | 18216211     | 18      |
| Caerol/Phönix        | Evening primrose oil, refined | 13121814     | 1       |
| Caesar & Loretz      | Evening primrose oil, refined | 13121809     | 1       |
| Caesar & Loretz      | Evening primrose oil, refined | 15417808     | 1       |
| Caesar & Loretz      | Evening primrose oil, refined | 18009110     | 1       |
| Caesar & Loretz      | Evening primrose oil, refined | 19164403     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 12325107     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 13121812     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 14010910     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 14258611     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 15171104     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 15171109     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 15417801     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | EP745611-1   | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216202     | 5       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216203     | 2       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216206     | 3       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216208     | 5       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18009109     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216211     | 3       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216207     | 3       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216212     | 2       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 180300602    | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216214     | 7       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216201     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216217     | 3       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216215     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216219     | 3       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 18216218     | 1       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 19164401     | 17      |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 19164402     | 7       |
| Caesar & Loretz GmbH | Evening primrose oil, refined | 19175401     | 5       |

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| Supplier                    | Substance                     | Batch       | Spectra |
|-----------------------------|-------------------------------|-------------|---------|
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 1901046-01  | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 19164409    | 2       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 19164407    | 5       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982001   | 4       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 191644003   | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 19164408    | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982002   | 13      |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 191644002   | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982003   | 3       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982004   | 9       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982005   | 2       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982009   | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982006   | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982010   | 4       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20001052001 | 6       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982013   | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 192982012   | 2       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20001052005 | 4       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20001052003 | 4       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20001052004 | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20004047009 | 4       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20004047006 | 2       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20004047010 | 1       |
| Caesar & Loretz GmbH        | Evening primrose oil, refined | 20004047008 | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 192982001   | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 19164402    | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 192982001   | 2       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 16281301    | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 192982001   | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 1803006-02  | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 18216211    | 1       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 18216217    | 3       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 19175401    | 3       |
| Caesar & Loretz GmbH / ...  | Evening primrose oil, refined | 192982004   | 1       |
| Caesar & Loretz GmbH / G... | Evening primrose oil, refined | 20001052001 | 1       |
| Caesar & Loretz GmbH 40...  | Evening primrose oil, refined | 11150007    | 1       |
| Caesar & Loretz GmbH, 4...  | Evening primrose oil, refined | 12032913    | 1       |
| Caesar & Loretz GmbH, 4...  | Evening primrose oil, refined | 12112911    | 1       |
| Caesar & Loretz GmbH, 4...  | Evening primrose oil, refined | 12325106    | 1       |
| Caesar & Loretz GmbH, 4...  | Evening primrose oil, refined | 12325113    | 1       |
| Caesar & Loretz GmbH, 4...  | Evening primrose oil, refined | 12325101    | 1       |
| Caesar & Loretz GmbH/ A...  | Evening primrose oil, refined | 19164402    | 1       |
| Caesar & Loretz GmbH/ F...  | Evening primrose oil, refined | 18216202    | 1       |
| Caesar & Loretz GmbH/Gehe   | Evening primrose oil, refined | 19164407    | 2       |
| Caesar & Loretz GmbH/Gehe   | Evening primrose oil, refined | 192982004   | 2       |
| Caesar & Loretz GmbH/Gehe   | Evening primrose oil, refined | 192982002   | 1       |
| Caesar & Loretz GmbH/Gehe   | Evening primrose oil, refined | 20001052003 | 1       |
| Caesar & Loretz GmbH/Je...  | Evening primrose oil, refined | 19164401    | 1       |
| Caesar & Loretz GmbH/Je...  | Evening primrose oil, refined | 192982001   | 1       |
| Caesar & Loretz GmbH/Je...  | Evening primrose oil, refined | 2000102009  | 1       |
| Caesar & Loretz GmbH/Je...  | Evening primrose oil, refined | 21000915002 | 1       |
| Caesar & Loretz GmbH/No...  | Evening primrose oil, refined | 19164402    | 1       |
| Caesar & Loretz GmbH/No...  | Evening primrose oil, refined | 192982004   | 2       |
| Caesar & Loretz GmbH/No...  | Evening primrose oil, refined | 192982002   | 1       |
| Caesar & Loretz GmbH/Ph...  | Evening primrose oil, refined | 20004047009 | 1       |
| Caesar & Loretz GmbH/Ph...  | Evening primrose oil, refined | 18216211    | 1       |
| Caesar & Loretz GmbH/Ph...  | Evening primrose oil, refined | 19164401    | 2       |
| Caesar & Loretz GmbH/sa...  | Evening primrose oil, refined | 20001052001 | 1       |
| Caesar & Loretz GmbH/Sa...  | Evening primrose oil, refined | 19175401    | 1       |
| Caesar & Loretz GmbH/Sa...  | Evening primrose oil, refined | 19164402    | 1       |

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| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| Caesar & Loretz GmbH/Sa... | Evening primrose oil, refined | 192982010    | 1       |
| Caesar & Loretz GmbH/Sa... | Evening primrose oil, refined | 20004047009  | 1       |
| Caesar & Loretz Hilden     | Evening primrose oil, refined | 20004047008  | 1       |
| Caesar & Loretz/Noweda     | Evening primrose oil, refined | 1512005-01   | 1       |
| Caesar und Loretz          | Evening primrose oil, refined | 19164401     | 1       |
| Caesar und Loretz GmbH     | Evening primrose oil, refined | 18216214     | 1       |
| Caesar&Lorenz / Gehe       | Evening primrose oil, refined | 18216217     | 1       |
| Caesar&Lorenz/Anzag        | Evening primrose oil, refined | 18216207     | 1       |
| caesar&lorenz              | Evening primrose oil, refined | 15171110     | 1       |
| Caesar&Loretz              | Evening primrose oil, refined | 18009110     | 5       |
| caesar&lorenz / AHD        | Evening primrose oil, refined | 192982013    | 1       |
| Caesar&Loretz GmbH         | Evening primrose oil, refined | 19164401     | 1       |
| Caesar&Loretz GmbH         | Evening primrose oil, refined | 192982002    | 1       |
| Caesar&Loretz GmbH/ Gehe   | Evening primrose oil, refined | 16281306     | 1       |
| Caeser und Loretz GmbH     | Evening primrose oil, refined | 19164401     | 2       |
| Caleo/ Noweda              | Evening primrose oil, refined | 18216203     | 3       |
| Caleo/Phönix               | Evening primrose oil, refined | 19175401     | 1       |
| calo                       | Evening primrose oil, refined | 18009107     | 1       |
| Cealo / Noweda             | Evening primrose oil, refined | 13121814     | 1       |
| Ceasar&Lorenz GmbH/ San... | Evening primrose oil, refined | 191644003    | 1       |
| celo/phönix                | Evening primrose oil, refined | 13121814     | 1       |
| Delta                      | Evening primrose oil, refined | 1704018-01   | 1       |
| dr.r.hahn                  | Evening primrose oil, refined | 1509005-01   | 1       |
| Ebert & Jacobi             | Evening primrose oil, refined | AP144330N    | 1       |
| Eu Rho                     | Evening primrose oil, refined | 1911009-01   | 3       |
| eur                        | Evening primrose oil, refined | 1710011-02   | 2       |
| Eurho                      | Evening primrose oil, refined | 1710011-01   | 2       |
| EuRho                      | Evening primrose oil, refined | 1210012-02   | 5       |
| EuRho                      | Evening primrose oil, refined | 1506001-01   | 1       |
| EuRho                      | Evening primrose oil, refined | 1509005-01   | 2       |
| EuRho                      | Evening primrose oil, refined | 1704018-01   | 1       |
| EuRho                      | Evening primrose oil, refined | 1803006-02   | 2       |
| EuRho                      | Evening primrose oil, refined | 901046-011   | 1       |
| EuRho                      | Evening primrose oil, refined | 1901046-01   | 4       |
| EuRho                      | Evening primrose oil, refined | BTR340388-01 | 1       |
| EuRho                      | Evening primrose oil, refined | 2003029-01   | 5       |
| EuRho                      | Evening primrose oil, refined | 1911009-01   | 1       |
| EuRho / Noweda             | Evening primrose oil, refined | 1911009-01   | 2       |
| EuRho- Nowewda             | Evening primrose oil, refined | 1803006-02   | 1       |
| EuRho/ AHD                 | Evening primrose oil, refined | 18009105     | 1       |
| EuRho/ Phönix              | Evening primrose oil, refined | 1901046-01   | 3       |
| EuRho/NO                   | Evening primrose oil, refined | 1901046-01   | 1       |
| EuRho/Phönix               | Evening primrose oil, refined | 1704018-01   | 1       |
| EuRho/Sanacorp             | Evening primrose oil, refined | 1704018-01   | 1       |
| EuRho/Spangro              | Evening primrose oil, refined | 1710011-01   | 1       |
| Euro Gehe                  | Evening primrose oil, refined | 1901046-01   | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1512005-01   | 30      |
| Euro OTC                   | Evening primrose oil, refined | 180300602    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1509005-01   | 24      |
| Euro OTC                   | Evening primrose oil, refined | 1401033-02   | 17      |
| Euro OTC                   | Evening primrose oil, refined | 12112906     | 1       |
| Euro OTC                   | Evening primrose oil, refined | 13040-18-01  | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1304018-02   | 14      |
| Euro OTC                   | Evening primrose oil, refined | 14002503     | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1407002-01   | 14      |
| Euro OTC                   | Evening primrose oil, refined | 140700201    | 2       |
| Euro OTC                   | Evening primrose oil, refined | 140133-01    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 140133-02    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 150303101    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1506001-01   | 25      |

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| Supplier | Substance                     | Batch              | Spectra |
|----------|-------------------------------|--------------------|---------|
| Euro OTC | Evening primrose oil, refined | 1603048-01         | 33      |
| Euro OTC | Evening primrose oil, refined | 1605027-01         | 23      |
| Euro OTC | Evening primrose oil, refined | 15417808           | 1       |
| Euro OTC | Evening primrose oil, refined | 15120005-02        | 1       |
| Euro OTC | Evening primrose oil, refined | 16281318           | 1       |
| Euro OTC | Evening primrose oil, refined | AP141023N          | 1       |
| Euro OTC | Evening primrose oil, refined | 1710011-02         | 68      |
| Euro OTC | Evening primrose oil, refined | 171001102          | 6       |
| Euro OTC | Evening primrose oil, refined | 1803006-01         | 48      |
| Euro OTC | Evening primrose oil, refined | 1710011_01         | 1       |
| Euro OTC | Evening primrose oil, refined | 17110011-02        | 1       |
| Euro OTC | Evening primrose oil, refined | 1710011            | 1       |
| Euro OTC | Evening primrose oil, refined | EP704511-2         | 1       |
| Euro OTC | Evening primrose oil, refined | 1808028-01         | 1       |
| Euro OTC | Evening primrose oil, refined | 20080037-01        | 1       |
| Euro OTC | Evening primrose oil, refined | 2105001-01         | 1       |
| Euro OTC | Evening primrose oil, refined | 1803006-1          | 1       |
| Euro OTC | Evening primrose oil, refined | 1512005            | 1       |
| Euro OTC | Evening primrose oil, refined | 1703020-1710011-02 | 1       |
| Euro OTC | Evening primrose oil, refined | EP713711-1         | 4       |
| Euro OTC | Evening primrose oil, refined | 192982001          | 1       |
| Euro OTC | Evening primrose oil, refined | 150900501          | 1       |
| Euro OTC | Evening primrose oil, refined | 191109-01          | 1       |
| Euro OTC | Evening primrose oil, refined | 1911009-01         | 64      |
| Euro OTC | Evening primrose oil, refined | ep745611-1         | 1       |
| Euro OTC | Evening primrose oil, refined | 190104601          | 3       |
| Euro OTC | Evening primrose oil, refined | 700077             | 1       |
| Euro OTC | Evening primrose oil, refined | 151200501          | 1       |
| Euro OTC | Evening primrose oil, refined | 170408-01          | 2       |
| Euro OTC | Evening primrose oil, refined | 1205023-1          | 1       |
| Euro OTC | Evening primrose oil, refined | 151200             | 1       |
| Euro OTC | Evening primrose oil, refined | 133339             | 1       |
| Euro OTC | Evening primrose oil, refined | 160304801          | 2       |
| Euro OTC | Evening primrose oil, refined | 1608008-01         | 32      |
| Euro OTC | Evening primrose oil, refined | 2008037            | 1       |
| Euro OTC | Evening primrose oil, refined | 1109004-01         | 1       |
| Euro OTC | Evening primrose oil, refined | 1506001            | 1       |
| Euro OTC | Evening primrose oil, refined | 80616-11           | 1       |
| Euro OTC | Evening primrose oil, refined | 1503031-01         | 21      |
| Euro OTC | Evening primrose oil, refined | 160800801          | 1       |
| Euro OTC | Evening primrose oil, refined | 1704018            | 2       |
| Euro OTC | Evening primrose oil, refined | 1803006            | 2       |
| Euro OTC | Evening primrose oil, refined | 16204              | 1       |
| Euro OTC | Evening primrose oil, refined | EP-713-711-1       | 1       |
| Euro OTC | Evening primrose oil, refined | EP868211-1         | 1       |
| Euro OTC | Evening primrose oil, refined | 1710011-01         | 26      |
| Euro OTC | Evening primrose oil, refined | 140103301          | 1       |
| Euro OTC | Evening primrose oil, refined | 1803006-02         | 51      |
| Euro OTC | Evening primrose oil, refined | 1401033-01         | 10      |
| Euro OTC | Evening primrose oil, refined | 1901046            | 2       |
| Euro OTC | Evening primrose oil, refined | 8072002            | 1       |
| Euro OTC | Evening primrose oil, refined | BTR349512-01       | 2       |
| Euro OTC | Evening primrose oil, refined | 1205023-01         | 5       |
| Euro OTC | Evening primrose oil, refined | BTR340388-01       | 4       |
| Euro OTC | Evening primrose oil, refined | 2008037-02         | 4       |
| Euro OTC | Evening primrose oil, refined | 19001046-01        | 1       |
| Euro OTC | Evening primrose oil, refined | 1210012-01         | 13      |
| Euro OTC | Evening primrose oil, refined | 1605027            | 1       |
| Euro OTC | Evening primrose oil, refined | 139798             | 4       |
| Euro OTC | Evening primrose oil, refined | BTR34912-01        | 1       |

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| Supplier         | Substance                     | Batch            | Spectra |
|------------------|-------------------------------|------------------|---------|
| Euro OTC         | Evening primrose oil, refined | 140103302        | 1       |
| Euro OTC         | Evening primrose oil, refined | 171011-01        | 1       |
| Euro OTC         | Evening primrose oil, refined | 180306-02        | 1       |
| Euro OTC         | Evening primrose oil, refined | 1704019-01       | 1       |
| Euro OTC         | Evening primrose oil, refined | 1703020-01       | 37      |
| Euro OTC         | Evening primrose oil, refined | 170011-02        | 1       |
| Euro OTC         | Evening primrose oil, refined | 1503031-0        | 1       |
| Euro OTC         | Evening primrose oil, refined | 171001101        | 4       |
| Euro OTC         | Evening primrose oil, refined | AP147307N        | 1       |
| Euro OTC         | Evening primrose oil, refined | 1210012-02       | 11      |
| Euro/ Phönix     | Evening primrose oil, refined | 1304018-02       | 1       |
| Euro/Gehe        | Evening primrose oil, refined | 1710011-02       | 1       |
| Euro/Gehe        | Evening primrose oil, refined | 1901046-01       | 3       |
| Euro/Gehe        | Evening primrose oil, refined | 1803006-01       | 1       |
| Euro/Noweda      | Evening primrose oil, refined | 1901046-01       | 1       |
| EuRo/Noweda      | Evening primrose oil, refined | 1710011-02       | 1       |
| Euro OTC         | Evening primrose oil, refined | 15171109         | 1       |
| Euro/Phoenix     | Evening primrose oil, refined | 1512005-02       | 2       |
| Euro/Phönix      | Evening primrose oil, refined | 1304018-01       | 2       |
| Euro/Sanacorp    | Evening primrose oil, refined | 1512005-01       | 1       |
| Euro/Sanacorp    | Evening primrose oil, refined | 1803006-02       | 1       |
| EuRoh/ Gehe      | Evening primrose oil, refined | 2003029-01       | 1       |
| Euroo/Gehe       | Evening primrose oil, refined | 1603048-01       | 1       |
| Euro OTC         | Evening primrose oil, refined | 1205023-02       | 6       |
| Euro OTC         | Evening primrose oil, refined | 700775           | 1       |
| Euro OTC         | Evening primrose oil, refined | 1704018-01       | 94      |
| Euro OTC         | Evening primrose oil, refined | EP745611-1       | 9       |
| Euro OTC         | Evening primrose oil, refined | 190146-01        | 2       |
| Euro OTC         | Evening primrose oil, refined | 140700202        | 2       |
| Euro OTC         | Evening primrose oil, refined | 136734           | 1       |
| Euro OTC         | Evening primrose oil, refined | 2008031-01       | 1       |
| Euro OTC         | Evening primrose oil, refined | 17255801         | 1       |
| Euro OTC         | Evening primrose oil, refined | 16281319         | 1       |
| Euro OTC         | Evening primrose oil, refined | 170302001        | 1       |
| Euro OTC         | Evening primrose oil, refined | 130401801        | 1       |
| Euro OTC         | Evening primrose oil, refined | 170401801        | 7       |
| Euro OTC         | Evening primrose oil, refined | 1813M-03075      | 1       |
| Euro OTC         | Evening primrose oil, refined | 14C07-B01-291800 | 1       |
| Euro OTC         | Evening primrose oil, refined | 1901046-01       | 87      |
| Euro OTC         | Evening primrose oil, refined | 183006-01        | 1       |
| Euro OTC         | Evening primrose oil, refined | 2003029-01       | 64      |
| Euro OTC         | Evening primrose oil, refined | 160348-01        | 1       |
| Euro OTC         | Evening primrose oil, refined | 17110011-01      | 1       |
| EuroTOC / Noweda | Evening primrose oil, refined | 140700202        | 1       |
| Evonik/Sanacorp  | Evening primrose oil, refined | 1911009-01       | 1       |
| Fagron           | Evening primrose oil, refined | 13E06-No9        | 1       |
| Fagron           | Evening primrose oil, refined | 12e23-N06        | 1       |
| Fagron           | Evening primrose oil, refined | 14C07-B01-291800 | 1       |
| Fagron           | Evening primrose oil, refined | 14H18-B04-297707 | 3       |
| Fagron           | Evening primrose oil, refined | 15C02-B99-305094 | 1       |
| Fagron           | Evening primrose oil, refined | 15417803         | 3       |
| Fagron           | Evening primrose oil, refined | 17255801         | 2       |
| Fagron           | Evening primrose oil, refined | 145691           | 1       |
| Fagron           | Evening primrose oil, refined | 13E06-N09        | 3       |
| Fagron           | Evening primrose oil, refined | 1803006-02       | 1       |
| Fagron           | Evening primrose oil, refined | 12325101         | 2       |
| Fagron           | Evening primrose oil, refined | 1205023-02       | 1       |
| Fagron           | Evening primrose oil, refined | 18216203         | 2       |
| Fagron           | Evening primrose oil, refined | 1506001-01       | 1       |
| Fagron           | Evening primrose oil, refined | 18009106         | 2       |

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| Supplier                   | Substance                     | Batch            | Spectra |
|----------------------------|-------------------------------|------------------|---------|
| Fagron                     | Evening primrose oil, refined | 14C07-801-291800 | 1       |
| Fargo/Anzag                | Evening primrose oil, refined | 1704018-01       | 3       |
| Fargron                    | Evening primrose oil, refined | 13E06-N09        | 1       |
| Fiebig                     | Evening primrose oil, refined | 1512005-02       | 1       |
| Fiebig                     | Evening primrose oil, refined | 16281301         | 1       |
| Fiebig                     | Evening primrose oil, refined | 17255801         | 2       |
| Fiebig                     | Evening primrose oil, refined | 17255803         | 1       |
| Fiebig                     | Evening primrose oil, refined | 1710011-02       | 4       |
| Fiebig                     | Evening primrose oil, refined | 1803006-01       | 1       |
| Fiebig                     | Evening primrose oil, refined | EP74611-1        | 1       |
| Fiebig                     | Evening primrose oil, refined | 18216206         | 1       |
| Fiebig 12.07.13 EK15,38... | Evening primrose oil, refined | 1210012-02       | 1       |
| FIEBIG/SANMARK LIMITED     | Evening primrose oil, refined | 1803006-01       | 1       |
| Finteler Apotheke          | Evening primrose oil, refined | 1703020-01       | 1       |
| Gatt-Koller                | Evening primrose oil, refined | 1803525          | 2       |
| Gehe                       | Evening primrose oil, refined | 12032908         | 1       |
| Gehe                       | Evening primrose oil, refined | 1109004-02       | 1       |
| Gehe                       | Evening primrose oil, refined | 12112906         | 1       |
| Gehe                       | Evening primrose oil, refined | 1205023-02       | 1       |
| Gehe                       | Evening primrose oil, refined | 121112906        | 1       |
| Gehe                       | Evening primrose oil, refined | 12325106         | 1       |
| Gehe                       | Evening primrose oil, refined | 12325110         | 1       |
| Gehe                       | Evening primrose oil, refined | 12325113         | 1       |
| Gehe                       | Evening primrose oil, refined | 14010904         | 1       |
| Gehe                       | Evening primrose oil, refined | 140002501        | 1       |
| Gehe                       | Evening primrose oil, refined | 14258610         | 1       |
| Gehe                       | Evening primrose oil, refined | 1425617          | 1       |
| Gehe                       | Evening primrose oil, refined | 14258616         | 1       |
| Gehe                       | Evening primrose oil, refined | 15171102         | 1       |
| Gehe                       | Evening primrose oil, refined | 15171110         | 1       |
| Gehe                       | Evening primrose oil, refined | 15417801         | 1       |
| Gehe                       | Evening primrose oil, refined | 15417808         | 1       |
| Gehe                       | Evening primrose oil, refined | 15417805         | 1       |
| Gehe                       | Evening primrose oil, refined | 16281306         | 1       |
| Gehe                       | Evening primrose oil, refined | 16281309         | 3       |
| Gehe                       | Evening primrose oil, refined | 1704018-01       | 3       |
| Gehe                       | Evening primrose oil, refined | EP713711-1       | 1       |
| Gehe                       | Evening primrose oil, refined | 1710011-01       | 2       |
| Gehe                       | Evening primrose oil, refined | 18009102         | 1       |
| Gehe                       | Evening primrose oil, refined | 17255801         | 1       |
| Gehe                       | Evening primrose oil, refined | 18009109         | 2       |
| Gehe                       | Evening primrose oil, refined | 18009115         | 1       |
| Gehe                       | Evening primrose oil, refined | 18009106         | 1       |
| Gehe                       | Evening primrose oil, refined | L416             | 1       |
| Gehe                       | Evening primrose oil, refined | EP745611-1       | 1       |
| Gehe                       | Evening primrose oil, refined | 1901046-01       | 1       |
| Gehe                       | Evening primrose oil, refined | 1803006-02       | 1       |
| Gehe                       | Evening primrose oil, refined | 19164407         | 2       |
| Gehe                       | Evening primrose oil, refined | 192982001        | 2       |
| GEHE                       | Evening primrose oil, refined | 1605027-01       | 1       |
| GEHE                       | Evening primrose oil, refined | 1704018-01       | 1       |
| GEHE                       | Evening primrose oil, refined | 1710011-01       | 1       |
| GEHE                       | Evening primrose oil, refined | 18009111         | 1       |
| GEHE                       | Evening primrose oil, refined | 18216203         | 1       |
| GEHE                       | Evening primrose oil, refined | 18216215         | 1       |
| Gehe 5.03.15               | Evening primrose oil, refined | 1407002-02       | 1       |
| Fagron                     | Evening primrose oil, refined | 18216208         | 2       |
| Caelo                      | Evening primrose oil, refined | 12325106         | 13      |
| Caelo                      | Evening primrose oil, refined | 15417803         | 24      |
| Caelo                      | Evening primrose oil, refined | 1803006-01       | 14      |

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| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| Caelo                      | Evening primrose oil, refined | 192982003    | 8       |
| Caelo                      | Evening primrose oil, refined | 12112903     | 1       |
| Caelo                      | Evening primrose oil, refined | 1205023-02   | 2       |
| Gehe/EuRho                 | Evening primrose oil, refined | 1704018-01   | 5       |
| Gehe28.12..18              | Evening primrose oil, refined | 18216202     | 1       |
| greenvalley                | Evening primrose oil, refined | 4000537      | 1       |
| Hedinger                   | Evening primrose oil, refined | 14010915     | 5       |
| henry lamotte              | Evening primrose oil, refined | 150827       | 3       |
| Henry Lamotte              | Evening primrose oil, refined | 123121       | 1       |
| Henry Lamotte              | Evening primrose oil, refined | 14258616     | 1       |
| Henry Lamotte              | Evening primrose oil, refined | 1000004385   | 3       |
| Henry Lamotte              | Evening primrose oil, refined | 160502701    | 1       |
| Henry Lamotte              | Evening primrose oil, refined | 1000003443   | 1       |
| Henry Lamotte              | Evening primrose oil, refined | 1000005123   | 5       |
| Henry Lamotte              | Evening primrose oil, refined | 100005123    | 1       |
| Henry Lamotte              | Evening primrose oil, refined | 1000007046   | 1       |
| Henry Lamotte /AHD         | Evening primrose oil, refined | 1000001044   | 1       |
| Henry Lamotte /AHD         | Evening primrose oil, refined | 1000005123   | 1       |
| Henry Lamotte/AHD          | Evening primrose oil, refined | 1000005123   | 1       |
| Henry Lamotte/AHD          | Evening primrose oil, refined | 18009109     | 1       |
| Henry Lamotte/Anzag        | Evening primrose oil, refined | 124363       | 2       |
| Henry Lamotte/Noweda       | Evening primrose oil, refined | 1000005123   | 1       |
| Henry Lamotte/Phoenix      | Evening primrose oil, refined | 18009110     | 1       |
| Ichthyl Phönix             | Evening primrose oil, refined | 12112912     | 1       |
| Ichthyl/ AEP               | Evening primrose oil, refined | 18216212     | 1       |
| J.H. Müller                | Evening primrose oil, refined | 140419       | 1       |
| J.H.Müller                 | Evening primrose oil, refined | 170832       | 1       |
| J.H.Müller                 | Evening primrose oil, refined | 171220       | 1       |
| J.H.Müller                 | Evening primrose oil, refined | 180234       | 1       |
| J.H.Müller/direkt/17.05... | Evening primrose oil, refined | 130127       | 1       |
| Jenne                      | Evening primrose oil, refined | 1210012-02   | 1       |
| Jenne                      | Evening primrose oil, refined | 19164401     | 1       |
| Jenne                      | Evening primrose oil, refined | 192982002    | 1       |
| Jenne                      | Evening primrose oil, refined | 2008037-01   | 1       |
| Euro OTC                   | Evening primrose oil, refined | EP848211-1   | 3       |
| Kehr                       | Evening primrose oil, refined | 16281308     | 3       |
| Kehr                       | Evening primrose oil, refined | 16281313     | 1       |
| Kehr                       | Evening primrose oil, refined | 1704018-01   | 4       |
| Kehr                       | Evening primrose oil, refined | 1710011-01   | 1       |
| Kehr                       | Evening primrose oil, refined | 1911009-01   | 1       |
| Caelo                      | Evening primrose oil, refined | 18216206     | 60      |
| Klenk                      | Evening primrose oil, refined | 12112905     | 1       |
| Kögl                       | Evening primrose oil, refined | 446412160317 | 1       |
| Kögl                       | Evening primrose oil, refined | 161805171917 | 2       |
| Kögl                       | Evening primrose oil, refined | 1700100      | 1       |
| Kögl                       | Evening primrose oil, refined | 1702248      | 1       |
| Kögl                       | Evening primrose oil, refined | 1800988      | 1       |
| Kögl                       | Evening primrose oil, refined | 1802062      | 1       |
| L10                        | Evening primrose oil, refined | 1703020-01   | 1       |
| L12                        | Evening primrose oil, refined | 1704018-01   | 2       |
| lamotte                    | Evening primrose oil, refined | 145581       | 3       |
| Lamotte / Gehe             | Evening primrose oil, refined | 145553       | 5       |
| Lamotte / Gehe             | Evening primrose oil, refined | 123121       | 3       |
| Lamotte / Gehe             | Evening primrose oil, refined | 145675       | 4       |
| Lamotte / Gehe             | Evening primrose oil, refined | 123386       | 7       |
| Lamotte / Gehe             | Evening primrose oil, refined | 145802       | 9       |
| Lamotte / Gehe             | Evening primrose oil, refined | 124363       | 4       |
| Lamotte / Gehe             | Evening primrose oil, refined | 150827       | 4       |
| Lamotte / Noweda           | Evening primrose oil, refined | 145581       | 3       |
| Lamotte//AHD               | Evening primrose oil, refined | 145581       | 2       |

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| Supplier                   | Substance                     | Batch          | Spectra |
|----------------------------|-------------------------------|----------------|---------|
| Lamotte/AHD                | Evening primrose oil, refined | 145581         | 2       |
| Lamotte/AHD                | Evening primrose oil, refined | 10000001044    | 1       |
| Lamotte/AHD                | Evening primrose oil, refined | 1000002386     | 1       |
| Lamotte/AHD                | Evening primrose oil, refined | 1000004385     | 1       |
| Lamotte/AHD                | Evening primrose oil, refined | 1000007046     | 1       |
| Lamotte/Alliance           | Evening primrose oil, refined | 1000002386     | 1       |
| Lamotte/Alliance           | Evening primrose oil, refined | 1000008469     | 1       |
| Lamotte/Noweda             | Evening primrose oil, refined | 1000003443     | 1       |
| Medesign                   | Evening primrose oil, refined | 690548         | 1       |
| medesign I.C.GmbH          | Evening primrose oil, refined | 694367         | 1       |
| Medesign/Jenne             | Evening primrose oil, refined | 690548         | 1       |
| müller                     | Evening primrose oil, refined | 1401332X       | 1       |
| noveda                     | Evening primrose oil, refined | 12112901       | 1       |
| Noweda                     | Evening primrose oil, refined | E1106072       | 1       |
| Noweda                     | Evening primrose oil, refined | 1205023-01     | 5       |
| Noweda                     | Evening primrose oil, refined | 13121807       | 1       |
| Noweda                     | Evening primrose oil, refined | 14010904       | 1       |
| Noweda                     | Evening primrose oil, refined | 1407002-02     | 1       |
| Noweda                     | Evening primrose oil, refined | 15171109       | 2       |
| Noweda                     | Evening primrose oil, refined | 1509005-01     | 2       |
| Noweda                     | Evening primrose oil, refined | 1608008-01     | 2       |
| Noweda                     | Evening primrose oil, refined | 1605027-01     | 1       |
| Noweda                     | Evening primrose oil, refined | 16281308       | 1       |
| Noweda                     | Evening primrose oil, refined | 1710011-01     | 2       |
| Noweda                     | Evening primrose oil, refined | 18009101       | 1       |
| Noweda                     | Evening primrose oil, refined | 1755802        | 1       |
| Noweda                     | Evening primrose oil, refined | 1704018        | 1       |
| Noweda                     | Evening primrose oil, refined | 18009110       | 1       |
| Noweda                     | Evening primrose oil, refined | 18216202       | 1       |
| Noweda                     | Evening primrose oil, refined | 1803006-01     | 2       |
| Noweda                     | Evening primrose oil, refined | 1704018-01     | 1       |
| Noweda                     | Evening primrose oil, refined | 1803006-02     | 2       |
| Noweda                     | Evening primrose oil, refined | 18216207       | 1       |
| Noweda                     | Evening primrose oil, refined | 1901046-01     | 1       |
| Noweda                     | Evening primrose oil, refined | 19175401       | 1       |
| Noweda                     | Evening primrose oil, refined | 19164401       | 1       |
| Noweda                     | Evening primrose oil, refined | 19164407       | 2       |
| Noweda                     | Evening primrose oil, refined | 1911009-01     | 2       |
| Noweda                     | Evening primrose oil, refined | 192982001      | 3       |
| Noweda                     | Evening primrose oil, refined | 192982002      | 1       |
| Noweda                     | Evening primrose oil, refined | 192982011      | 1       |
| Noweda                     | Evening primrose oil, refined | 20001052003    | 1       |
| Noweda                     | Evening primrose oil, refined | 2003029-01     | 1       |
| Noweda                     | Evening primrose oil, refined | 20001052009    | 1       |
| Noweda 10.09.2019          | Evening primrose oil, refined | 1901046-01     | 2       |
| Noweda 19.12.2019          | Evening primrose oil, refined | 19164401       | 1       |
| noweda allcura 4.05.18 ... | Evening primrose oil, refined | L404           | 1       |
| noweda am 17.08.2018       | Evening primrose oil, refined | 171001102      | 1       |
| Caelo                      | Evening primrose oil, refined | 16281305       | 11      |
| Caelo                      | Evening primrose oil, refined | 13121809       | 11      |
| Caelo                      | Evening primrose oil, refined | 1401904        | 1       |
| Noweda/EuRho               | Evening primrose oil, refined | BTR340388-01   | 1       |
| Euro OTC                   | Evening primrose oil, refined | 17041018-01    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1901048-01     | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1512005-02     | 27      |
| Euro OTC                   | Evening primrose oil, refined | 1304018-01     | 11      |
| Euro OTC                   | Evening primrose oil, refined | 180300601      | 4       |
| PG-Naturpharma/Sanacorp    | Evening primrose oil, refined | 711-098        | 1       |
| Ph.Eur.8.2                 | Evening primrose oil, refined | 14H18B04297708 | 1       |
| Ph.Eur/AHD                 | Evening primrose oil, refined | 1901046-01     | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Ph/Euro                    | Evening primrose oil, refined | 1710011-01  | 1       |
| Phoenix                    | Evening primrose oil, refined | AP869100N   | 1       |
| Phoenix                    | Evening primrose oil, refined | 14002503    | 1       |
| Phoenix                    | Evening primrose oil, refined | 1401033-01  | 1       |
| Phoenix                    | Evening primrose oil, refined | 14258604    | 1       |
| Phoenix                    | Evening primrose oil, refined | 1407002-02  | 1       |
| Phoenix                    | Evening primrose oil, refined | 15417803    | 1       |
| Phoenix                    | Evening primrose oil, refined | 15417802    | 1       |
| Phoenix                    | Evening primrose oil, refined | 1605027-01  | 1       |
| Phoenix                    | Evening primrose oil, refined | 1703020-01  | 2       |
| Phoenix                    | Evening primrose oil, refined | EP704511-2  | 1       |
| Phoenix                    | Evening primrose oil, refined | 171011-02   | 1       |
| Phoenix                    | Evening primrose oil, refined | 1803006-02  | 1       |
| Phoenix                    | Evening primrose oil, refined | 1901046-01  | 4       |
| Phoenix 04.07.2019 6,71EUR | Evening primrose oil, refined | 18216214    | 1       |
| Phoenix 04.12.14           | Evening primrose oil, refined | 14010905    | 1       |
| PHOENIX 08.05.2014         | Evening primrose oil, refined | 14002501    | 1       |
| Phoenix 25.03.2017 6,79EUR | Evening primrose oil, refined | 16281305    | 1       |
| Caelo                      | Evening primrose oil, refined | 12325107    | 9       |
| phönix                     | Evening primrose oil, refined | 1210012-02  | 1       |
| phönix                     | Evening primrose oil, refined | 14010915    | 1       |
| phönix                     | Evening primrose oil, refined | 139798      | 1       |
| Phönix                     | Evening primrose oil, refined | 150827      | 1       |
| Phönix                     | Evening primrose oil, refined | 1603048-01  | 1       |
| Phönix                     | Evening primrose oil, refined | 1704018-01  | 2       |
| Phönix                     | Evening primrose oil, refined | 17255801    | 1       |
| Phönix                     | Evening primrose oil, refined | 1710011-02  | 2       |
| Phönix                     | Evening primrose oil, refined | 1803006-01  | 2       |
| Phönix                     | Evening primrose oil, refined | 1911009-01  | 2       |
| Phönix                     | Evening primrose oil, refined | 20001052005 | 3       |
| PHÖNIX                     | Evening primrose oil, refined | 18009103    | 1       |
| Euro OTC                   | Evening primrose oil, refined | 18033006-01 | 1       |
| Phönix 18.11.2013          | Evening primrose oil, refined | 13121808    | 1       |
| Phönix 27.01.2014          | Evening primrose oil, refined | 1304018-01  | 1       |
| Caelo                      | Evening primrose oil, refined | 18216208    | 12      |
| Euro OTC                   | Evening primrose oil, refined | 171001-02   | 1       |
| Caelo                      | Evening primrose oil, refined | 1704018-1   | 1       |
| Euro OTC                   | Evening primrose oil, refined | 1911009-1   | 1       |
| Primavera                  | Evening primrose oil, refined | 2611142     | 1       |
| Primavera                  | Evening primrose oil, refined | 225K26      | 1       |
| Primavera 19.10.15         | Evening primrose oil, refined | 774J232     | 1       |
| Primavera/AHD              | Evening primrose oil, refined | 304A27      | 1       |
| Resana GmbH                | Evening primrose oil, refined | 1901046-01  | 2       |
| Rondell Apotheke           | Evening primrose oil, refined | 1506001-01  | 1       |
| Sana/EuRho                 | Evening primrose oil, refined | 1911009-01  | 1       |
| Sanacorp                   | Evening primrose oil, refined | 12325111    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 12325114    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 13121809    | 2       |
| Sanacorp                   | Evening primrose oil, refined | 13121814    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 15171104    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 15171109    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 1517110     | 1       |
| Sanacorp                   | Evening primrose oil, refined | 16281305    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 16281313    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 17255801    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 18009106    | 1       |
| Sanacorp                   | Evening primrose oil, refined | 18009109    | 2       |
| Sanacorp                   | Evening primrose oil, refined | 1710011-01  | 1       |
| Sanacorp                   | Evening primrose oil, refined | 18009114    | 1       |
| Sanacorp                   | Evening primrose oil, refined | Med1001078  | 1       |

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| Supplier                   | Substance                     | Batch          | Spectra |
|----------------------------|-------------------------------|----------------|---------|
| Sanacorp                   | Evening primrose oil, refined | 180300601      | 1       |
| Sanacorp                   | Evening primrose oil, refined | 18216202       | 1       |
| Sanacorp                   | Evening primrose oil, refined | 18216201       | 1       |
| Sanacorp                   | Evening primrose oil, refined | EP745611-1     | 1       |
| Sanacorp                   | Evening primrose oil, refined | AP144174       | 1       |
| Sanacorp                   | Evening primrose oil, refined | EP848211-1     | 1       |
| Sanacorp                   | Evening primrose oil, refined | 1901046-01     | 1       |
| Sanacorp                   | Evening primrose oil, refined | 19164407       | 1       |
| Sanacorp                   | Evening primrose oil, refined | 192982011      | 3       |
| Sanacorp                   | Evening primrose oil, refined | 20001052001    | 1       |
| Sanacorp                   | Evening primrose oil, refined | BTR36050-01    | 1       |
| Caelo                      | Evening primrose oil, refined | 1210012-01     | 2       |
| Caelo                      | Evening primrose oil, refined | 131211807      | 1       |
| Sanacorp 107               | Evening primrose oil, refined | 2003029-01     | 1       |
| Euro OTC                   | Evening primrose oil, refined | 17040118-01    | 1       |
| Caelo                      | Evening primrose oil, refined | 12032901       | 1       |
| Caelo                      | Evening primrose oil, refined | 18003102       | 1       |
| SANMARK Lim./Gehe          | Evening primrose oil, refined | 1901046-01     | 1       |
| Sanmark Limited            | Evening primrose oil, refined | 160800801      | 1       |
| Sanmark Limited            | Evening primrose oil, refined | EP848211-1     | 1       |
| Sanmark Limited            | Evening primrose oil, refined | 1901046-01     | 1       |
| Sanmark Limited            | Evening primrose oil, refined | 1911009-01     | 2       |
| Sanmark Limited            | Evening primrose oil, refined | BTR340388-01   | 1       |
| Sanmark Limited            | Evening primrose oil, refined | BTR360506-01   | 1       |
| SANMARK LIMITED            | Evening primrose oil, refined | 1704018-01     | 1       |
| SANMARK LIMITED            | Evening primrose oil, refined | 1710011-02     | 3       |
| SANMARK LIMITED            | Evening primrose oil, refined | EP713711-1     | 1       |
| Sanmark Limited/ Allian... | Evening primrose oil, refined | 1911009-01     | 1       |
| sanmark limited/gehe       | Evening primrose oil, refined | 2003029-01     | 1       |
| Sanmark Limited/Noweda     | Evening primrose oil, refined | EP848211-1     | 1       |
| Sanmark Limited/Sanacorp   | Evening primrose oil, refined | 2003029        | 1       |
| Sanmark ltd./Sanacorp      | Evening primrose oil, refined | 1608008-01     | 1       |
| Sanmark/AHD                | Evening primrose oil, refined | 1901046-01     | 1       |
| Sanmark/Jenne/11.06.20     | Evening primrose oil, refined | BTR340388-01   | 1       |
| Sanmark/noweda             | Evening primrose oil, refined | 1803006-01     | 1       |
| Sanmark/Noweda             | Evening primrose oil, refined | 1710011-02     | 1       |
| Sanmark/Noweda             | Evening primrose oil, refined | 1901046-01     | 1       |
| Sanmark/Phoenix            | Evening primrose oil, refined | BTR340388-01   | 6       |
| Sanmark/Phoenix            | Evening primrose oil, refined | BTR349512-01   | 3       |
| Sanmark/Phoenix            | Evening primrose oil, refined | BTR360506-01   | 2       |
| Sanmark/Sanacorp           | Evening primrose oil, refined | 1803006-02     | 1       |
| Sanmarkt/Noweda            | Evening primrose oil, refined | 1704018-01     | 4       |
| Sanmarl Limited / Gaibo    | Evening primrose oil, refined | BTR360506-01   | 1       |
| Spangro 03.12.2018         | Evening primrose oil, refined | EP745611-1     | 1       |
| Spinnrad                   | Evening primrose oil, refined | 1116204553     | 1       |
| Spinnrad                   | Evening primrose oil, refined | 1218404553     | 1       |
| Spinnrad                   | Evening primrose oil, refined | 519404551      | 1       |
| Spinnrad / Sanacorp 05...  | Evening primrose oil, refined | 518204551      | 1       |
| Spinnrad / Sanacorp 30...  | Evening primrose oil, refined | 518404552      | 2       |
| Spinnrad GmbH              | Evening primrose oil, refined | 516204552      | 1       |
| Spinnrad/Noweda            | Evening primrose oil, refined | 519404551      | 2       |
| Spirig /Noweda             | Evening primrose oil, refined | 1407002-01     | 1       |
| Caelo                      | Evening primrose oil, refined | 13121808       | 16      |
| Stumpf/Henry Lamotte       | Evening primrose oil, refined | 145691         | 1       |
| Taoasis                    | Evening primrose oil, refined | 12096-99883    | 2       |
| Taoasis                    | Evening primrose oil, refined | 3723-107968    | 1       |
| Taoasis                    | Evening primrose oil, refined | 120161-93968   | 1       |
| Taoasis                    | Evening primrose oil, refined | 3788-116147    | 1       |
| Taoasis                    | Evening primrose oil, refined | 3843-121697    | 2       |
| Taoasis                    | Evening primrose oil, refined | 1707A0307-2507 | 1       |

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| Supplier            | Substance                     | Batch            | Spectra |
|---------------------|-------------------------------|------------------|---------|
| Taoasis             | Evening primrose oil, refined | 1707A307-2506    | 1       |
| Taoasis GmbH        | Evening primrose oil, refined | 1909A1892-9083CN | 1       |
| TAOASIS GmbH        | Evening primrose oil, refined | 1804A0479-6728   | 1       |
| taoasis/Noweda      | Evening primrose oil, refined | 37282-115267     | 1       |
| Taoasis/Phönix      | Evening primrose oil, refined | A128740          | 1       |
| Taoasis/Taoasis     | Evening primrose oil, refined | 16091186-126920  | 1       |
| Taoasis/Taoasis     | Evening primrose oil, refined | 1300866-123338   | 1       |
| Taoasis/Taoasis     | Evening primrose oil, refined | 1707A0307-2507   | 1       |
| Weltecke            | Evening primrose oil, refined | 80011012         | 1       |
| Weltecke GmbH       | Evening primrose oil, refined | 80011115         | 1       |
| weltecke/Noweda     | Evening primrose oil, refined | 80010212         | 1       |
| Wolf-Apotheke       | Evening primrose oil, refined | 15417802         | 2       |
| ACM                 | Flaxseed oil, native          | KNC0446J15       | 1       |
| AHD                 | Flaxseed oil, native          | 17001535         | 1       |
| AHD                 | Flaxseed oil, native          | 18002317         | 1       |
| Alliance Healthcare | Flaxseed oil, native          | 19002739         | 1       |
| Bomb/ Noweda        | Flaxseed oil, native          | 290569           | 1       |
| Bombastus           | Flaxseed oil, native          | 272528           | 1       |
| Bombastus           | Flaxseed oil, native          | 271645           | 2       |
| Bombastus           | Flaxseed oil, native          | 275487           | 2       |
| Bombastus           | Flaxseed oil, native          | 274875           | 1       |
| Bombastus           | Flaxseed oil, native          | 276727           | 2       |
| Bombastus           | Flaxseed oil, native          | 276106           | 1       |
| Bombastus           | Flaxseed oil, native          | 266111           | 1       |
| Bombastus           | Flaxseed oil, native          | 282391           | 1       |
| Bombastus           | Flaxseed oil, native          | 14087903         | 1       |
| Bombastus           | Flaxseed oil, native          | 297286           | 2       |
| Bombastus           | Flaxseed oil, native          | 306179           | 3       |
| Bombastus           | Flaxseed oil, native          | 307988           | 1       |
| Bombastus           | Flaxseed oil, native          | 3079865304       | 1       |
| Bombastus           | Flaxseed oil, native          | 170015335500     | 1       |
| Bombastus           | Flaxseed oil, native          | 17002089         | 3       |
| Bombastus           | Flaxseed oil, native          | 18000694         | 3       |
| Bombastus           | Flaxseed oil, native          | 18001721         | 2       |
| Bombastus           | Flaxseed oil, native          | 18003462         | 1       |
| Bombastus           | Flaxseed oil, native          | 19006028         | 1       |
| Bombastus           | Flaxseed oil, native          | 20003792         | 1       |
| Bombastus           | Flaxseed oil, native          | 180017195740     | 1       |
| Bombastus           | Flaxseed oil, native          | 293950           | 1       |
| Bombastus           | Flaxseed oil, native          | 308634           | 3       |
| Bombastus           | Flaxseed oil, native          | 18003463         | 2       |
| Bombastus           | Flaxseed oil, native          | 19002739         | 1       |
| Bombastus           | Flaxseed oil, native          | 303096           | 3       |
| Bombastus           | Flaxseed oil, native          | 291126           | 1       |
| Bombastus           | Flaxseed oil, native          | 17000381         | 3       |
| Bombastus           | Flaxseed oil, native          | 280711           | 1       |
| Bombastus           | Flaxseed oil, native          | 291900           | 1       |
| Bombastus           | Flaxseed oil, native          | 303440           | 1       |
| Bombastus           | Flaxseed oil, native          | 304454           | 2       |
| Bombastus           | Flaxseed oil, native          | 276105           | 1       |
| Bombastus           | Flaxseed oil, native          | 302269           | 2       |
| Bombastus           | Flaxseed oil, native          | 19004013         | 4       |
| Bombastus           | Flaxseed oil, native          | 288025           | 1       |
| Bombastus           | Flaxseed oil, native          | 305183           | 1       |
| Bombastus           | Flaxseed oil, native          | 307115           | 1       |
| Bombastus           | Flaxseed oil, native          | 14087902         | 1       |
| Bombastus           | Flaxseed oil, native          | 296730           | 1       |
| Caelo               | Flaxseed oil, native          | 263894           | 1       |
| Caelo               | Flaxseed oil, native          | 12217504         | 2       |
| Caelo               | Flaxseed oil, native          | 7111204          | 1       |

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| Supplier                   | Substance            | Batch       | Spectra |
|----------------------------|----------------------|-------------|---------|
| Caelo                      | Flaxseed oil, native | 12274205    | 2       |
| Caelo                      | Flaxseed oil, native | 23021302    | 1       |
| Caelo                      | Flaxseed oil, native | 13178210    | 1       |
| Caelo                      | Flaxseed oil, native | 14087908    | 4       |
| Caelo                      | Flaxseed oil, native | 14087909    | 1       |
| Caelo                      | Flaxseed oil, native | 9062015A    | 1       |
| Caelo                      | Flaxseed oil, native | 15175604    | 2       |
| Caelo                      | Flaxseed oil, native | 15175608    | 5       |
| Caelo                      | Flaxseed oil, native | 15175602    | 1       |
| Caelo                      | Flaxseed oil, native | 15415904    | 2       |
| Caelo                      | Flaxseed oil, native | 15415911    | 1       |
| Caelo                      | Flaxseed oil, native | 16321102    | 2       |
| Caelo                      | Flaxseed oil, native | 16231106    | 1       |
| Caelo                      | Flaxseed oil, native | 310225      | 1       |
| Caelo                      | Flaxseed oil, native | 17236401    | 5       |
| Caelo                      | Flaxseed oil, native | 17236408    | 4       |
| Caelo                      | Flaxseed oil, native | 17236404    | 1       |
| Caelo                      | Flaxseed oil, native | 17236411    | 1       |
| Caelo                      | Flaxseed oil, native | 18002317    | 1       |
| Caelo                      | Flaxseed oil, native | 17314401    | 4       |
| Caelo                      | Flaxseed oil, native | 18120901    | 11      |
| Caelo                      | Flaxseed oil, native | 17314405    | 1       |
| Caelo                      | Flaxseed oil, native | 18252605    | 2       |
| Caelo                      | Flaxseed oil, native | 19164501    | 4       |
| Caelo                      | Flaxseed oil, native | 302269      | 1       |
| Caelo                      | Flaxseed oil, native | 19099401    | 2       |
| Caelo                      | Flaxseed oil, native | 17046711    | 2       |
| Caelo                      | Flaxseed oil, native | 13361202    | 4       |
| Caelo                      | Flaxseed oil, native | 20004433003 | 1       |
| Caelo                      | Flaxseed oil, native | 12217505    | 2       |
| Caelo                      | Flaxseed oil, native | 14306811    | 2       |
| Caelo                      | Flaxseed oil, native | 18252604    | 3       |
| Caelo                      | Flaxseed oil, native | 300983      | 1       |
| Caelo                      | Flaxseed oil, native | 20000372003 | 3       |
| Caelo                      | Flaxseed oil, native | 13361203    | 2       |
| Caelo                      | Flaxseed oil, native | 192554003   | 1       |
| Caelo                      | Flaxseed oil, native | 299565      | 1       |
| Caelo                      | Flaxseed oil, native | 16321106    | 7       |
| Caelo                      | Flaxseed oil, native | 307119      | 1       |
| Caelo                      | Flaxseed oil, native | 180808181   | 1       |
| Caelo                      | Flaxseed oil, native | 18293804    | 2       |
| Caelo                      | Flaxseed oil, native | 14306806    | 2       |
| Caelo                      | Flaxseed oil, native | 15415906    | 10      |
| Caelo                      | Flaxseed oil, native | 15415907    | 1       |
| Caelo                      | Flaxseed oil, native | 12041701    | 1       |
| Caelo                      | Flaxseed oil, native | 13178203    | 4       |
| Caelo                      | Flaxseed oil, native | 13178209    | 3       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 18252605    | 1       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 18120901    | 1       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 18252604    | 1       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 19099401    | 3       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 18120904    | 1       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 19099403    | 1       |
| Caesar & Loretz GmbH       | Flaxseed oil, native | 192554003   | 1       |
| Caesar & Loretz GmbH Hi... | Flaxseed oil, native | 289164      | 1       |
| Caesar & Loretz GmbH/Je... | Flaxseed oil, native | 19099401    | 1       |
| Caesar & Loretz GmbH/Sa... | Flaxseed oil, native | 19164501    | 1       |
| Caesar & Loretz GmbH/Sa... | Flaxseed oil, native | 20000372003 | 1       |
| Euro OTC                   | Flaxseed oil, native | 13058506    | 1       |
| Euro OTC                   | Flaxseed oil, native | 124116      | 1       |

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| Supplier                   | Substance               | Batch          | Spectra |
|----------------------------|-------------------------|----------------|---------|
| Gehe                       | Flaxseed oil, native    | 12041701       | 1       |
| Bombastus                  | Flaxseed oil, native    | 19002738       | 1       |
| Gehe/Vitalhaus             | Flaxseed oil, native    | 160702         | 1       |
| H.Lamotte                  | Flaxseed oil, native    | 1000009024     | 1       |
| Henry Lamotte Oils / No... | Flaxseed oil, native    | 1000000878     | 1       |
| henry                      | Flaxseed oil, native    | 1000006801     | 1       |
| Henry Lamotte              | Flaxseed oil, native    | 1000003255     | 1       |
| Henry Lamotte              | Flaxseed oil, native    | 1000003598     | 1       |
| Henry LAMotte              | Flaxseed oil, native    | 1000013291     | 1       |
| Henry Lamotte Oels GmbH    | Flaxseed oil, native    | 1000005198     | 1       |
| Henry Lamotte Oels GmbH    | Flaxseed oil, native    | 1000006422     | 1       |
| Henry Lamotte Oils GmbH... | Flaxseed oil, native    | 1000002971     | 1       |
| Henry Lamotte Oils GMBH... | Flaxseed oil, native    | 12D05-N02      | 1       |
| Henry Lamotte Oils GmbH... | Flaxseed oil, native    | 1000009915     | 1       |
| Henry Lamotte Oils/Noweda  | Flaxseed oil, native    | 1000002422     | 1       |
| Henry Lamotte/Noweda       | Flaxseed oil, native    | 124116         | 1       |
| Henry Lamotte/Phönix       | Flaxseed oil, native    | 1000009915     | 1       |
| Henry Lamotte Oils GmbH    | Flaxseed oil, native    | 1000005198     | 1       |
| Henry/AHD                  | Flaxseed oil, native    | 124337         | 2       |
| Henry/Jenne                | Flaxseed oil, native    | 103277         | 3       |
| ICRON                      | Flaxseed oil, native    | 170501A        | 1       |
| Krieger/Henry Lamotte      | Flaxseed oil, native    | 1000010463     | 1       |
| Krieger/Lamotte/30.12.13   | Flaxseed oil, native    | 102503         | 1       |
| Lamotte                    | Flaxseed oil, native    | 124116         | 2       |
| Lamotte                    | Flaxseed oil, native    | 10000047735446 | 1       |
| Lamotte/Noweda             | Flaxseed oil, native    | 103229         | 1       |
| Lamotte/Noweda             | Flaxseed oil, native    | 1000011055     | 1       |
| Lamotte/Otto               | Flaxseed oil, native    | 5757301        | 1       |
| Lamotte/Phoenix            | Flaxseed oil, native    | 1000009024     | 1       |
| Noweda / Henry Lamotte     | Flaxseed oil, native    | 119677         | 2       |
| Noweda / Henry Lamotte     | Flaxseed oil, native    | 119529         | 1       |
| Phoenix 14.2.2019          | Flaxseed oil, native    | 18120904       | 1       |
| Bombastus                  | Flaxseed oil, native    | 285121         | 1       |
| Sanacorp                   | Flaxseed oil, native    | 18001720       | 1       |
| Sanacorp                   | Flaxseed oil, native    | 20002883       | 1       |
| Caelo                      | Flaxseed oil, native    | 14306808       | 1       |
| Sanacorp 107               | Flaxseed oil, native    | 19164501       | 1       |
| Caelo                      | Flaxseed oil, native    | 15116702       | 6       |
| Caelo                      | Flaxseed oil, native    | 18120904       | 1       |
| Stumpf/Henry Lamotte       | Flaxseed oil, native    | 124116         | 1       |
| VDL;2.51EUR;22.06.15       | Flaxseed oil, native    | 15116702       | 1       |
| Caelo                      | Grape seed oil, refined | 12149203       | 2       |
| Caelo                      | Grape seed oil, refined | 10222901       | 1       |
| Caelo                      | Grape seed oil, refined | 12149204       | 4       |
| Caelo                      | Grape seed oil, refined | 12149211       | 1       |
| Caelo                      | Grape seed oil, refined | 12149205       | 1       |
| Caelo                      | Grape seed oil, refined | 13065309       | 4       |
| Caelo                      | Grape seed oil, refined | 14127902       | 4       |
| Caelo                      | Grape seed oil, refined | 14127906       | 1       |
| Caelo                      | Grape seed oil, refined | 15144504       | 2       |
| Caelo                      | Grape seed oil, refined | 15144502       | 1       |
| Caelo                      | Grape seed oil, refined | 15294607       | 2       |
| Caelo                      | Grape seed oil, refined | 16092402       | 6       |
| Caelo                      | Grape seed oil, refined | 17206507       | 8       |
| Caelo                      | Grape seed oil, refined | 18065201       | 8       |
| Caelo                      | Grape seed oil, refined | 18085201       | 2       |
| Caelo                      | Grape seed oil, refined | 17206509       | 1       |
| Caelo                      | Grape seed oil, refined | 18224202       | 8       |
| Caelo                      | Grape seed oil, refined | 18224210       | 9       |
| Caelo                      | Grape seed oil, refined | 1822410        | 1       |

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| <b>Supplier</b>            | <b>Substance</b>        | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-------------------------|--------------|----------------|
| Caelo                      | Grape seed oil, refined | 18315906     | 1              |
| Caelo                      | Grape seed oil, refined | 20001744002  | 1              |
| Caelo                      | Grape seed oil, refined | 18065202     | 2              |
| Caelo                      | Grape seed oil, refined | 20000789004  | 1              |
| Caelo                      | Grape seed oil, refined | N0000006050  | 1              |
| Caelo                      | Grape seed oil, refined | 12149210     | 1              |
| Caelo                      | Grape seed oil, refined | 18315903     | 2              |
| Caelo                      | Grape seed oil, refined | 18315914     | 1              |
| Caelo                      | Grape seed oil, refined | 15294608     | 1              |
| Caelo                      | Grape seed oil, refined | 16339703     | 6              |
| Caelo                      | Grape seed oil, refined | 17206501     | 5              |
| Caelo                      | Grape seed oil, refined | 18315910     | 1              |
| Caelo                      | Grape seed oil, refined | 18224203     | 1              |
| Caelo                      | Grape seed oil, refined | 16092410     | 2              |
| Caelo                      | Grape seed oil, refined | 16339705     | 2              |
| Caelo                      | Grape seed oil, refined | 14214606     | 3              |
| Caelo                      | Grape seed oil, refined | 15144505     | 3              |
| Caelo                      | Grape seed oil, refined | 18224207     | 1              |
| Caelo                      | Grape seed oil, refined | 13065304     | 2              |
| Caelo                      | Grape seed oil, refined | 14127903     | 2              |
| Caelo                      | Grape seed oil, refined | 14214607     | 2              |
| Caelo                      | Grape seed oil, refined | 16092409     | 3              |
| Caelo                      | Grape seed oil, refined | 16339706     | 4              |
| Caelo                      | Grape seed oil, refined | 18224211     | 1              |
| Caelo                      | Grape seed oil, refined | 192412001    | 1              |
| Caelo                      | Grape seed oil, refined | 19241203     | 1              |
| Caelo                      | Grape seed oil, refined | 18315909     | 1              |
| Caelo                      | Grape seed oil, refined | 12149212     | 2              |
| Caelo                      | Grape seed oil, refined | 11313605     | 1              |
| Caelo                      | Grape seed oil, refined | 15144506     | 1              |
| Caelo                      | Grape seed oil, refined | 15144510     | 1              |
| Caelo                      | Grape seed oil, refined | 16339707     | 1              |
| Caelo                      | Grape seed oil, refined | 192412005    | 5              |
| Caelo                      | Grape seed oil, refined | 15144509     | 2              |
| Caelo                      | Grape seed oil, refined | 18065207     | 8              |
| Caelo                      | Grape seed oil, refined | 19241204     | 2              |
| Caelo                      | Grape seed oil, refined | 192412002    | 2              |
| Caelo                      | Grape seed oil, refined | 192412006    | 2              |
| Caelo                      | Grape seed oil, refined | 20000789008  | 1              |
| Caelo                      | Grape seed oil, refined | N0000004667  | 1              |
| Caelo                      | Grape seed oil, refined | 13174601     | 2              |
| Caesar & Lorenz            | Grape seed oil, refined | 13065310     | 1              |
| Caesar & Lorenz GmbH       | Grape seed oil, refined | 18224210     | 1              |
| Caesar & Lorenz GmbH       | Grape seed oil, refined | 19241204     | 1              |
| Caesar & Loretz GmbH       | Grape seed oil, refined | 17206502     | 1              |
| Caesar & Loretz GmbH       | Grape seed oil, refined | 18224202     | 1              |
| Caesar & Loretz GmbH       | Grape seed oil, refined | 18315909     | 1              |
| Caesar & Loretz GmbH       | Grape seed oil, refined | 192412005    | 1              |
| Caesar & Loretz GmbH / ... | Grape seed oil, refined | 18224202     | 1              |
| Caesar & Loretz GmbH/ P... | Grape seed oil, refined | 18224210     | 1              |
| Caesar & Loretz GmbH/Gehe  | Grape seed oil, refined | 18315904     | 1              |
| Cealo                      | Grape seed oil, refined | 15144505     | 1              |
| Euro OTC                   | Grape seed oil, refined | 18224202     | 1              |
| Fagron                     | Grape seed oil, refined | N0000006050  | 2              |
| Fagron                     | Grape seed oil, refined | 16092401     | 1              |
| Gehe                       | Grape seed oil, refined | 12149204     | 1              |
| GEHE                       | Grape seed oil, refined | 18065201     | 1              |
| Holdermann                 | Grape seed oil, refined | 12149212     | 1              |
| Idunn                      | Grape seed oil, refined | 20182102     | 1              |
| L12                        | Grape seed oil, refined | 18065207     | 1              |

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| Supplier                   | Substance               | Batch        | Spectra |
|----------------------------|-------------------------|--------------|---------|
| Noweda                     | Grape seed oil, refined | 13065309     | 1       |
| Caelo                      | Grape seed oil, refined | 15294604     | 1       |
| paesel + lorei             | Grape seed oil, refined | N0000006051  | 1       |
| Paesel und Lorei           | Grape seed oil, refined | N0000004666  | 1       |
| Paesel+Lorei GmbH          | Grape seed oil, refined | N0000004667  | 1       |
| Spinnrad/Gehe              | Grape seed oil, refined | 419301551    | 1       |
| Tilary                     | Grape seed oil, refined | N0000002752  | 1       |
| Tilary                     | Grape seed oil, refined | N0000008106  | 1       |
| Tilrag GmbH                | Grape seed oil, refined | N0000008088  | 1       |
| Tilray                     | Grape seed oil, refined | N0000004667  | 1       |
| Tilray                     | Grape seed oil, refined | N0000004666  | 1       |
| Tilray                     | Grape seed oil, refined | N0000006053  | 1       |
| Tilray                     | Grape seed oil, refined | N0000006728  | 1       |
| Tilray                     | Grape seed oil, refined | N0000006115  | 5       |
| Tilray                     | Grape seed oil, refined | N0000006849  | 1       |
| Tilray                     | Grape seed oil, refined | N00000006115 | 1       |
| Tilray                     | Grape seed oil, refined | N0000006850  | 1       |
| Tilray                     | Grape seed oil, refined | N0000006852  | 2       |
| Tilray                     | Grape seed oil, refined | N0000008083  | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N000006119   | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N0000006850  | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N0000008083  | 3       |
| tilray / Sanacorp          | Grape seed oil, refined | N000000413   | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N0000008413  | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N0000008543  | 1       |
| tilray / Sanacorp          | Grape seed oil, refined | N0000008847  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000006852  | 2       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008105  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008106  | 2       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008414  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008398  | 9       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008413  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008548  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008543  | 3       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008849  | 5       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008847  | 1       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008845  | 4       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000008842  | 3       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000009342  | 4       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000009347  | 4       |
| Tilray Deutschland GmbH    | Grape seed oil, refined | N0000009346  | 1       |
| Tilray Deutschland GmbH... | Grape seed oil, refined | N0000008080  | 12      |
| Tilray Deutschland GmbH... | Grape seed oil, refined | N0000007111  | 1       |
| Tilray Gehe                | Grape seed oil, refined | N0000006115  | 1       |
| Tilray Gehe                | Grape seed oil, refined | N0000006850  | 1       |
| Tilray GmbH                | Grape seed oil, refined | N0000007111  | 1       |
| Tilray GmbH                | Grape seed oil, refined | N0000008083  | 2       |
| Tilray GmbH                | Grape seed oil, refined | N0000008105  | 1       |
| Tilray GmbH                | Grape seed oil, refined | N0000008203  | 2       |
| Tilray GmbH                | Grape seed oil, refined | N0000008414  | 1       |
| Tilray GmbH                | Grape seed oil, refined | N0000008413  | 2       |
| Tilray GmbH                | Grape seed oil, refined | N0000008398  | 1       |
| Tilray über Paesel und ... | Grape seed oil, refined | N0000005242  | 2       |
| Tilray über Paesel und ... | Grape seed oil, refined | N0000006051  | 1       |
| Tilray/ Alliance Health... | Grape seed oil, refined | N0000004669  | 2       |
| AHD                        | Jojoba oil, native      | 16070606     | 1       |
| AHD/Lamotte                | Jojoba oil, native      | 8003732001   | 1       |
| Anzag                      | Jojoba oil, native      | 5172601      | 1       |
| Anzag/                     | Jojoba oil, native      | 5115601      | 1       |
| Azett GmbH/AHD             | Jojoba oil, native      | 190217       | 1       |

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| Supplier                   | Substance          | Batch             | Spectra |
|----------------------------|--------------------|-------------------|---------|
| Biofrid/Kehr               | Jojoba oil, native | 1127              | 1       |
| BioPräp/Phoenix 08.03.2... | Jojoba oil, native | 1711193           | 1       |
| Bombastus                  | Jojoba oil, native | 267834            | 1       |
| Bombastus                  | Jojoba oil, native | 297760            | 3       |
| Bombastus                  | Jojoba oil, native | 301651            | 1       |
| Bombastus                  | Jojoba oil, native | 309480            | 1       |
| Bombastus                  | Jojoba oil, native | 276323            | 1       |
| Bombastus                  | Jojoba oil, native | 18003615          | 4       |
| Bombastus                  | Jojoba oil, native | 18003617          | 1       |
| Bombastus                  | Jojoba oil, native | 294112            | 3       |
| Bombastus                  | Jojoba oil, native | 18001734          | 1       |
| Bombastus                  | Jojoba oil, native | 16070610          | 1       |
| Caelo                      | Jojoba oil, native | 13287701          | 2       |
| Caelo                      | Jojoba oil, native | 12114702          | 1       |
| Caelo                      | Jojoba oil, native | 12217009          | 3       |
| Caelo                      | Jojoba oil, native | 11358103          | 1       |
| Caelo                      | Jojoba oil, native | 12217003          | 1       |
| Caelo                      | Jojoba oil, native | 19061307          | 1       |
| Caelo                      | Jojoba oil, native | 12217008          | 2       |
| Caelo                      | Jojoba oil, native | 3071301           | 1       |
| Caelo                      | Jojoba oil, native | 10071307          | 1       |
| Caelo                      | Jojoba oil, native | 13011204          | 4       |
| Caelo                      | Jojoba oil, native | 25101303          | 1       |
| Caelo                      | Jojoba oil, native | 13129005          | 3       |
| Caelo                      | Jojoba oil, native | 17121302          | 1       |
| Caelo                      | Jojoba oil, native | 15011412          | 1       |
| Caelo                      | Jojoba oil, native | 21041504          | 1       |
| Caelo                      | Jojoba oil, native | 15409903          | 16      |
| Caelo                      | Jojoba oil, native | 16070606          | 17      |
| Caelo                      | Jojoba oil, native | 16070609          | 9       |
| Caelo                      | Jojoba oil, native | 14121702          | 1       |
| Caelo                      | Jojoba oil, native | 17073305          | 10      |
| Caelo                      | Jojoba oil, native | 17073310          | 2       |
| Caelo                      | Jojoba oil, native | 23051804          | 1       |
| Caelo                      | Jojoba oil, native | 18097109          | 1       |
| Caelo                      | Jojoba oil, native | 18057103          | 3       |
| Caelo                      | Jojoba oil, native | 6101802           | 1       |
| Caelo                      | Jojoba oil, native | 28111810          | 1       |
| Caelo                      | Jojoba oil, native | 18057107          | 22      |
| Caelo                      | Jojoba oil, native | 18244706          | 1       |
| Caelo                      | Jojoba oil, native | 18244710          | 3       |
| Caelo                      | Jojoba oil, native | 18244715          | 4       |
| Caelo                      | Jojoba oil, native | 18244705          | 1       |
| Caelo                      | Jojoba oil, native | 191529006         | 4       |
| Caelo                      | Jojoba oil, native | 191529002         | 3       |
| Caelo                      | Jojoba oil, native | 20000722003       | 4       |
| Caelo                      | Jojoba oil, native | 191529005         | 3       |
| Caelo                      | Jojoba oil, native | 20000722007       | 2       |
| Caelo                      | Jojoba oil, native | 11078605          | 2       |
| Caelo                      | Jojoba oil, native | 14284207          | 7       |
| Caelo                      | Jojoba oil, native | 14284204          | 7       |
| Caelo                      | Jojoba oil, native | 16070608          | 7       |
| Caelo                      | Jojoba oil, native | 1824407P-191022-7 | 1       |
| Caelo                      | Jojoba oil, native | 14284202          | 4       |
| Caelo                      | Jojoba oil, native | 13011202          | 5       |
| Caelo                      | Jojoba oil, native | 13129004          | 5       |
| Caelo                      | Jojoba oil, native | 17073308          | 4       |
| Caelo                      | Jojoba oil, native | 18244712          | 1       |
| Caelo                      | Jojoba oil, native | 18244707          | 10      |
| Caelo                      | Jojoba oil, native | 11358102          | 1       |

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| Supplier                   | Substance          | Batch       | Spectra |
|----------------------------|--------------------|-------------|---------|
| Caelo                      | Jojoba oil, native | 2613M-01986 | 1       |
| Caelo                      | Jojoba oil, native | 2614A-01986 | 1       |
| Caelo                      | Jojoba oil, native | 15409904    | 4       |
| Caelo                      | Jojoba oil, native | 1515M-01986 | 1       |
| Caelo                      | Jojoba oil, native | 15409902    | 9       |
| Caelo                      | Jojoba oil, native | 15116903    | 12      |
| Caelo                      | Jojoba oil, native | 13129001    | 3       |
| Caelo                      | Jojoba oil, native | 12217010    | 4       |
| Caelo                      | Jojoba oil, native | 13011203    | 2       |
| Caelo                      | Jojoba oil, native | 18244714    | 6       |
| Caelo                      | Jojoba oil, native | 18244711    | 2       |
| Caelo                      | Jojoba oil, native | 11078606    | 1       |
| Caelo                      | Jojoba oil, native | 20000722002 | 1       |
| Caelo                      | Jojoba oil, native | 12114703    | 1       |
| Caelo                      | Jojoba oil, native | 16070601    | 4       |
| Caelo                      | Jojoba oil, native | 16070610    | 9       |
| Caelo                      | Jojoba oil, native | 18057102    | 12      |
| Caelo                      | Jojoba oil, native | 12114708    | 1       |
| Caelo                      | Jojoba oil, native | 12114701    | 1       |
| Caelo                      | Jojoba oil, native | 14052206    | 1       |
| Caelo                      | Jojoba oil, native | 14052201    | 5       |
| Caelo                      | Jojoba oil, native | 17073309    | 14      |
| Caelo                      | Jojoba oil, native | 14284203    | 2       |
| Caelo                      | Jojoba oil, native | 15116904    | 4       |
| Caelo                      | Jojoba oil, native | 16070607    | 3       |
| Caelo                      | Jojoba oil, native | 18057105    | 18      |
| Caelo                      | Jojoba oil, native | 19152901    | 4       |
| Caelo                      | Jojoba oil, native | 191529004   | 17      |
| Caelo                      | Jojoba oil, native | 14284208    | 5       |
| Caelo                      | Jojoba oil, native | 18057108    | 2       |
| Caelo                      | Jojoba oil, native | 185715      | 1       |
| Caecão                     | Jojoba oil, native | 13287702    | 1       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18057107    | 3       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18057108    | 1       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18244707    | 3       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18244711    | 2       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18244715    | 1       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 18244714    | 1       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 191529004   | 1       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 191529006   | 2       |
| Caesar & Loretz GmbH       | Jojoba oil, native | 20000722003 | 1       |
| Caesar & Loretz GmbH/Ph... | Jojoba oil, native | 18057108    | 1       |
| Caesar & Loretz GmbH/Ph... | Jojoba oil, native | 18244715    | 1       |
| Caesar & Loretz GmbH/Sa... | Jojoba oil, native | 18244712    | 1       |
| Caesar & Loretz GmbH/Sa... | Jojoba oil, native | 191529006   | 4       |
| Cealo                      | Jojoba oil, native | 16070609    | 1       |
| DAC                        | Jojoba oil, native | 17073309    | 1       |
| DAC 2006                   | Jojoba oil, native | 11358102    | 1       |
| Euro OTC                   | Jojoba oil, native | 1609003-01  | 1       |
| Euro OTC                   | Jojoba oil, native | 8001330001  | 2       |
| Fagron                     | Jojoba oil, native | 5194301     | 1       |
| Fagron                     | Jojoba oil, native | 14284202    | 1       |
| Fiebig                     | Jojoba oil, native | 15116904    | 2       |
| Fiebig                     | Jojoba oil, native | 16070609    | 3       |
| Fiebig                     | Jojoba oil, native | 17073309    | 2       |
| Fiebig                     | Jojoba oil, native | 18057107    | 3       |
| Fiebig                     | Jojoba oil, native | 8003732001  | 3       |
| FiebigLamotte              | Jojoba oil, native | 1000011858  | 1       |
| Gatt-Koller                | Jojoba oil, native | 1801970     | 4       |
| Gehe                       | Jojoba oil, native | 13287709    | 1       |

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| Supplier                   | Substance          | Batch        | Spectra |
|----------------------------|--------------------|--------------|---------|
| Gehe                       | Jojoba oil, native | 14284208     | 1       |
| Gehe                       | Jojoba oil, native | 15409903     | 1       |
| Gehe                       | Jojoba oil, native | 16070602     | 1       |
| Bombastus                  | Jojoba oil, native | 306279       | 1       |
| Gehe Laborchemie Apolda... | Jojoba oil, native | 13011202     | 1       |
| H.Lamotte/anzag 10.01.20   | Jojoba oil, native | 1000011858   | 1       |
| H.Lamotte/Anzag 16.04.19   | Jojoba oil, native | 8003732001   | 2       |
| H.Lamotte/Anzag 16.10.17   | Jojoba oil, native | 8002391001   | 8       |
| H.Lamotte/Anzag 18.11.16   | Jojoba oil, native | 8000469001   | 3       |
| H.Lamotte/anzag 30.12.16   | Jojoba oil, native | 5913600001   | 2       |
| Hedinger                   | Jojoba oil, native | 15409903     | 1       |
| Henry Lamotte              | Jojoba oil, native | 5194301      | 1       |
| Henry Lamotte              | Jojoba oil, native | 5429201      | 3       |
| Henry Lamotte              | Jojoba oil, native | 5732801      | 1       |
| Henry Lamotte              | Jojoba oil, native | 5404201      | 1       |
| Henry Lamotte              | Jojoba oil, native | 5913600001   | 3       |
| Henry Lamotte / AHD        | Jojoba oil, native | 5756401      | 1       |
| Henry Lamotte GmbH         | Jojoba oil, native | 8000469001   | 3       |
| Henry Lamotte GmbH/ San... | Jojoba oil, native | 80002391001  | 1       |
| henry lamotte oils         | Jojoba oil, native | 5055401      | 1       |
| Henry Lamotte Oils         | Jojoba oil, native | 8003732001   | 1       |
| Henry Lamotte Oils GmbH    | Jojoba oil, native | 5732801      | 1       |
| Henry Lamotte Oils GmbH    | Jojoba oil, native | 5913600001   | 1       |
| Henry Lamotte/ Gehe        | Jojoba oil, native | 5913600001   | 1       |
| Henry Lamotte/Alliance ... | Jojoba oil, native | 5756401      | 1       |
| henry lamotte/Sanacorp     | Jojoba oil, native | 5756401      | 7       |
| HenryLamotte               | Jojoba oil, native | 5172601      | 9       |
| HenryLamotte               | Jojoba oil, native | 4957101      | 1       |
| HenryLamotte               | Jojoba oil, native | 5194301      | 1       |
| HenryLamotte/Sanacorp      | Jojoba oil, native | 8000469001   | 1       |
| Herny Lamotte              | Jojoba oil, native | 5732801      | 1       |
| JENNE                      | Jojoba oil, native | 17073309     | 1       |
| Kehr                       | Jojoba oil, native | 8000469001   | 1       |
| Kögl                       | Jojoba oil, native | 432212165116 | 1       |
| Kögl                       | Jojoba oil, native | 432212160117 | 2       |
| Kögl                       | Jojoba oil, native | 25302170717  | 1       |
| Kögl                       | Jojoba oil, native | 25302171717  | 3       |
| Kögl                       | Jojoba oil, native | 1700876      | 7       |
| Kögl                       | Jojoba oil, native | 1802131      | 1       |
| L12                        | Jojoba oil, native | 18057105     | 1       |
| La Cura Wilco              | Jojoba oil, native | 2481         | 1       |
| Lamotte                    | Jojoba oil, native | 5172601      | 1       |
| Lamotte                    | Jojoba oil, native | 5732801      | 1       |
| Lamotte                    | Jojoba oil, native | 5756401      | 2       |
| Lamotte Sanacorp           | Jojoba oil, native | 8000469001   | 6       |
| Lamotte Sanacorp           | Jojoba oil, native | 5913600001   | 1       |
| Lamotte/AHD                | Jojoba oil, native | 1000011858   | 1       |
| Lamotte/Fiebig             | Jojoba oil, native | 8002391001   | 3       |
| Lamotte/Gehe               | Jojoba oil, native | 5172601      | 1       |
| Lamotte/Gehe               | Jojoba oil, native | 5732801      | 1       |
| Lamotte/Sanacorp           | Jojoba oil, native | 5194301      | 1       |
| Lamotte/Sanacorp           | Jojoba oil, native | 5429201      | 1       |
| Noweda                     | Jojoba oil, native | 18057105     | 1       |
| Noweda                     | Jojoba oil, native | 18057107     | 1       |
| Primavera                  | Jojoba oil, native | 19307131     | 1       |
| Primavera                  | Jojoba oil, native | 17009133     | 1       |
| Primavera                  | Jojoba oil, native | 3009J22      | 1       |
| Primavera                  | Jojoba oil, native | 352F23       | 2       |
| Primavera                  | Jojoba oil, native | 241H23       | 2       |
| Primavera                  | Jojoba oil, native | 717K23       | 1       |

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| Supplier                  | Substance          | Batch            | Spectra |
|---------------------------|--------------------|------------------|---------|
| Primavera                 | Jojoba oil, native | 537F24           | 1       |
| Primavera                 | Jojoba oil, native | 535L24           | 4       |
| Primavera                 | Jojoba oil, native | 427D25           | 2       |
| Primavera                 | Jojoba oil, native | 63J24            | 1       |
| Primavera                 | Jojoba oil, native | 883G25           | 3       |
| Primavera                 | Jojoba oil, native | 361L25           | 1       |
| Primavera                 | Jojoba oil, native | 681A26           | 3       |
| Primavera                 | Jojoba oil, native | 59E26            | 3       |
| Primavera                 | Jojoba oil, native | 218H26           | 1       |
| Primavera                 | Jojoba oil, native | 342L26           | 3       |
| Primavera                 | Jojoba oil, native | 235B27           | 2       |
| Primavera                 | Jojoba oil, native | 300F27           | 1       |
| Primavera                 | Jojoba oil, native | 410M27           | 1       |
| Primavera Wareneingang... | Jojoba oil, native | 747A23           | 1       |
| Primavera (14.06.2018)    | Jojoba oil, native | 59E26            | 1       |
| Primavera/ Primavera      | Jojoba oil, native | 273J27           | 2       |
| Primavera/ Primavera      | Jojoba oil, native | 410M27           | 2       |
| Primavera/ Primavera      | Jojoba oil, native | 728D28(00599H27) | 2       |
| Primavera/Primavera       | Jojoba oil, native | 747A23           | 1       |
| Primavera/Primavera       | Jojoba oil, native | 782B24           | 2       |
| Primavera/Primavera       | Jojoba oil, native | 513M23           | 2       |
| sanacorp                  | Jojoba oil, native | 418601031        | 1       |
| Sanacorp                  | Jojoba oil, native | 16070609         | 1       |
| Sanacorp                  | Jojoba oil, native | 80002391001      | 2       |
| Sanacorp                  | Jojoba oil, native | 30948            | 1       |
| Sanacorp                  | Jojoba oil, native | 8003732001       | 1       |
| Sanacorp                  | Jojoba oil, native | 18057107         | 1       |
| Caelo                     | Jojoba oil, native | 13129006         | 5       |
| Spinnrad                  | Jojoba oil, native | 315601031        | 1       |
| Spinnrad                  | Jojoba oil, native | 416601031        | 1       |
| Spinrad                   | Jojoba oil, native | 617601032        | 1       |
| Bombastus                 | Jojoba oil, native | 281299           | 1       |
| Taoasis                   | Jojoba oil, native | 4674401-67053    | 1       |
| Taoasis                   | Jojoba oil, native | 5225101-108329   | 1       |
| Taoasis                   | Jojoba oil, native | 5336301-109515   | 1       |
| Taoasis                   | Jojoba oil, native | 5336301-111368   | 1       |
| Taoasis                   | Jojoba oil, native | 5406801-111216   | 1       |
| Taoasis                   | Jojoba oil, native | 5406801-111877   | 1       |
| Taoasis                   | Jojoba oil, native | 5445301-112580   | 2       |
| Taoasis                   | Jojoba oil, native | 2A5890402-121152 | 2       |
| Taoasis                   | Jojoba oil, native | 133535-123190    | 2       |
| Taoasis                   | Jojoba oil, native | 133535-123399    | 1       |
| Taoasis                   | Jojoba oil, native | 137640-123934    | 1       |
| Taoasis                   | Jojoba oil, native | 151214-125861    | 4       |
| Taoasis                   | Jojoba oil, native | 151214-127674    | 1       |
| Taoasis                   | Jojoba oil, native | 140545-127891    | 1       |
| Taoasis                   | Jojoba oil, native | 141161-217A      | 1       |
| Taoasis                   | Jojoba oil, native | 141161-347       | 1       |
| Taoasis                   | Jojoba oil, native | 141161-1819      | 2       |
| Taoasis                   | Jojoba oil, native | 143650-1819      | 1       |
| Taoasis                   | Jojoba oil, native | 143650-3436      | 1       |
| Taoasis                   | Jojoba oil, native | 3403UY           | 1       |
| Taoasis                   | Jojoba oil, native | 143650-3342      | 2       |
| Taoasis                   | Jojoba oil, native | 148266-6547      | 1       |
| Taoasis                   | Jojoba oil, native | 150964-8450      | 1       |
| Taoasis                   | Jojoba oil, native | 150964-10281     | 1       |
| Taoasis GmbH              | Jojoba oil, native | 5445301-112580   | 1       |
| Taoasis/Anzag             | Jojoba oil, native | 5815901-118834   | 3       |
| Taoasis/Anzag             | Jojoba oil, native | 5864501-119639   | 1       |
| Taoasis/Anzag             | Jojoba oil, native | 2a5890402        | 1       |

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| Supplier                  | Substance                 | Batch             | Spectra |
|---------------------------|---------------------------|-------------------|---------|
| Taoasis/Anzag             | Jojoba oil, native        | 133535-123190     | 1       |
| Taoasis/Anzag             | Jojoba oil, native        | 2a5890402-121152  | 1       |
| Caelo                     | Jojoba oil, native        | 13129008          | 1       |
| Weltecke /Noweda          | Jojoba oil, native        | 89010416          | 1       |
| wilco                     | Jojoba oil, native        | 2480              | 1       |
| Caelo                     | Laurel oil                | 14176301          | 1       |
| Caelo                     | Laurel oil                | 14176303          | 1       |
| Caelo                     | Laurel oil                | 16355701          | 2       |
| Caelo                     | Laurel oil                | 18028203          | 1       |
| Caelo                     | Laurel oil                | 19091910          | 1       |
| Caelo                     | Laurel oil                | 19091907          | 1       |
| Caelo                     | Laurel oil                | 16355702          | 1       |
| Caelo                     | Laurel oil                | 19236303          | 1       |
| Caelo                     | Laurel oil                | 19000520004       | 1       |
| Caelo                     | Laurel oil                | 20002806001       | 1       |
| Caelo                     | Laurel oil                | 16275702          | 1       |
| Caesar & Loretz GmbH/Gehe | Laurel oil                | 19000520002       | 1       |
| Caesar & Loretz/Noweda    | Laurel oil                | 15216401          | 1       |
| Gehe                      | Laurel oil                | 14196705          | 1       |
| Gehe                      | Laurel oil                | 15097501          | 1       |
| L12                       | Laurel oil                | 16275702          | 1       |
| Caelo                     | Laurel oil                | 18028202          | 1       |
| Caelo                     | Laurel oil                | 19091902          | 4       |
| AHD                       | Oleyl oleate (stabilised) | 14129003          | 1       |
| Alliance Healthcare       | Oleyl oleate (stabilised) | 18272011          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 17358110          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 17013008          | 11      |
| Cae                       | Oleyl oleate (stabilised) | 15321701          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 26071210          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 12067701          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 11292610          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 12067705          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 13096401          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 12220204          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 12220201          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 12220210          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 122220210         | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 21061302          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 13144401          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 13291607          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 14129007          | 11      |
| Caelo                     | Oleyl oleate (stabilised) | 25062015A         | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 15321702          | 5       |
| Caelo                     | Oleyl oleate (stabilised) | 15321706          | 8       |
| Caelo                     | Oleyl oleate (stabilised) | 153217            | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 15410204          | 10      |
| Caelo                     | Oleyl oleate (stabilised) | 15298004          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 23021714          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 16104904          | 2       |
| Caelo                     | Oleyl oleate (stabilised) | 16104907          | 11      |
| Caelo                     | Oleyl oleate (stabilised) | 4170717           | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 28111710          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 17013009          | 3       |
| Caelo                     | Oleyl oleate (stabilised) | 17358101          | 5       |
| Caelo                     | Oleyl oleate (stabilised) | 5121808           | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 18272003          | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 20002648002       | 8       |
| Caelo                     | Oleyl oleate (stabilised) | 20000495005       | 4       |
| Caelo                     | Oleyl oleate (stabilised) | 17121500/17013008 | 1       |
| Caelo                     | Oleyl oleate (stabilised) | 13096801          | 1       |

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| Supplier                   | Substance                 | Batch             | Spectra |
|----------------------------|---------------------------|-------------------|---------|
| Caelo                      | Oleyl oleate (stabilised) | 18272005          | 13      |
| Caelo                      | Oleyl oleate (stabilised) | 14B14-B03-292195  | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 13167109          | 4       |
| Caelo                      | Oleyl oleate (stabilised) | 18272002          | 17      |
| Caelo                      | Oleyl oleate (stabilised) | 18272007          | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 17013014          | 13      |
| Caelo                      | Oleyl oleate (stabilised) | 17358103          | 17      |
| Caelo                      | Oleyl oleate (stabilised) | 17013005          | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 15322703          | 2       |
| Caelo                      | Oleyl oleate (stabilised) | 13167107          | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 14129007(2mal)    | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 15321701          | 13      |
| Caelo                      | Oleyl oleate (stabilised) | 18272015          | 17      |
| Caelo                      | Oleyl oleate (stabilised) | 17358109          | 23      |
| Caelo                      | Oleyl oleate (stabilised) | 18272016          | 2       |
| Caelo                      | Oleyl oleate (stabilised) | 17051700/15410207 | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 1614907           | 2       |
| Caelo                      | Oleyl oleate (stabilised) | 170105181         | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 20000495002       | 6       |
| Caelo                      | Oleyl oleate (stabilised) | 17358104          | 4       |
| Caelo                      | Oleyl oleate (stabilised) | 1703014           | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 18272011          | 9       |
| Caelo                      | Oleyl oleate (stabilised) | 13291602          | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 14254603          | 8       |
| Caelo                      | Oleyl oleate (stabilised) | 191191003         | 8       |
| Caesar & Loretz            | Oleyl oleate (stabilised) | 16104907          | 1       |
| Caesar & Loretz            | Oleyl oleate (stabilised) | 17358103          | 2       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 17358109          | 1       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 18272005          | 2       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 18272002          | 2       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 18272015          | 5       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 191191003         | 4       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 20000495005       | 2       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 20000495002       | 1       |
| Caesar & Loretz GmbH       | Oleyl oleate (stabilised) | 20002648002       | 1       |
| Caesar & Loretz GmbH / ... | Oleyl oleate (stabilised) | 18272002          | 1       |
| Caesar&Loretz GmbH         | Oleyl oleate (stabilised) | 15410204          | 1       |
| Caesar&Loretz/Noweda       | Oleyl oleate (stabilised) | 15321702          | 1       |
| Ebert & Jacobi             | Oleyl oleate (stabilised) | 17358103          | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 11108-N03         | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 7858448           | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 14B14-B03-29295   | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 14B14-B03-29219   | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 725016            | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 15410204          | 1       |
| Fagron                     | Oleyl oleate (stabilised) | 11108-N03         | 1       |
| Gehe                       | Oleyl oleate (stabilised) | 12220207          | 1       |
| Gehe                       | Oleyl oleate (stabilised) | 14254503          | 1       |
| Gehe                       | Oleyl oleate (stabilised) | 17358103          | 1       |
| Gehe                       | Oleyl oleate (stabilised) | 18272005          | 1       |
| Hubertus Apotheke          | Oleyl oleate (stabilised) | 15410207          | 1       |
| L12                        | Oleyl oleate (stabilised) | 17358103          | 1       |
| Caelo                      | Oleyl oleate (stabilised) | 15410207          | 10      |
| Noweda                     | Oleyl oleate (stabilised) | 12067704          | 3       |
| Noweda                     | Oleyl oleate (stabilised) | 15321706          | 1       |
| Noweda                     | Oleyl oleate (stabilised) | 17013008          | 1       |
| Noweda                     | Oleyl oleate (stabilised) | 17358103          | 2       |
| Caelo                      | Oleyl oleate (stabilised) | 20004076004       | 1       |
| Phoenix                    | Oleyl oleate (stabilised) | 14129007          | 1       |
| Phoenix                    | Oleyl oleate (stabilised) | 17013014          | 2       |

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| Supplier                   | Substance                 | Batch        | Spectra |
|----------------------------|---------------------------|--------------|---------|
| Phoenix                    | Oleyl oleate (stabilised) | 17358101     | 1       |
| Phonix                     | Oleyl oleate (stabilised) | 17358103     | 1       |
| Phönix                     | Oleyl oleate (stabilised) | 14005001     | 1       |
| Phönix                     | Oleyl oleate (stabilised) | 15410207     | 1       |
| Phönix                     | Oleyl oleate (stabilised) | 17013014     | 1       |
| Phönix                     | Oleyl oleate (stabilised) | 17358109     | 3       |
| Caelo                      | Oleyl oleate (stabilised) | 13291605     | 1       |
| Sanacorp                   | Oleyl oleate (stabilised) | 12067705     | 1       |
| Sanacorp                   | Oleyl oleate (stabilised) | 12220208     | 1       |
| Sanacorp                   | Oleyl oleate (stabilised) | 13096402     | 1       |
| Sanacorp                   | Oleyl oleate (stabilised) | 13378403     | 2       |
| Caelo                      | Oleyl oleate (stabilised) | 12067704     | 4       |
| SysKem Chemie              | Oleyl oleate (stabilised) | 35885        | 1       |
| SysKem Chemie              | Oleyl oleate (stabilised) | 8002060413   | 1       |
| VDL                        | Oleyl oleate (stabilised) | 12220205     | 2       |
| Caelo                      | Olive oil, native         | 1410001      | 1       |
| 290924                     | Olive oil, native         | 290924       | 2       |
| ACM                        | Olive oil, native         | KNC2225J14   | 1       |
| AHD Lamotte GmbH           | Olive oil, native         | 1000010861   | 2       |
| AHD Lamotte GmbH           | Olive oil, native         | 1000014032   | 1       |
| AHD, 03.08.2011            | Olive oil, native         | 5372701      | 1       |
| Caelo                      | Olive oil, native         | 15216309     | 9       |
| AHL                        | Olive oil, native         | 8003420001   | 1       |
| Caelo                      | Olive oil, native         | 8002366001   | 1       |
| Allianc. Health. /bo       | Olive oil, native         | 302523       | 1       |
| Alliance                   | Olive oil, native         | 277050       | 1       |
| Alliance Healthcare        | Olive oil, native         | 12274108     | 1       |
| Alliance Healthcare        | Olive oil, native         | 13224703     | 1       |
| Alliance Healthcare        | Olive oil, native         | 8004067001   | 1       |
| Alliance Healthcare        | Olive oil, native         | 8004499001   | 1       |
| Alliance Healthcare        | Olive oil, native         | 1000012617   | 1       |
| Alliance/Henry Lamotte     | Olive oil, native         | 1000012617   | 1       |
| Allianz                    | Olive oil, native         | 17361108     | 1       |
| Allianz Healthcare         | Olive oil, native         | 16327402     | 1       |
| AMH Niemann GmbH/Noweda    | Olive oil, native         | 8002366001   | 1       |
| anzag                      | Olive oil, native         | 15216308     | 1       |
| Anzag                      | Olive oil, native         | 12077701     | 1       |
| Anzag                      | Olive oil, native         | 12274104     | 1       |
| Anzag                      | Olive oil, native         | 297565       | 1       |
| Anzag                      | Olive oil, native         | 15399706     | 1       |
| Anzag                      | Olive oil, native         | 16327403     | 1       |
| Anzag                      | Olive oil, native         | 17121604     | 1       |
| Anzag                      | Olive oil, native         | 18002118     | 1       |
| Anzag 30.04.18             | Olive oil, native         | 17361101     | 1       |
| Anzag 31.10.12 ek: 2,78EUR | Olive oil, native         | 12077701     | 1       |
| Caelo                      | Olive oil, native         | 200034009003 | 1       |
| Anzag/Lamotte              | Olive oil, native         | 5623601      | 1       |
| Apomix                     | Olive oil, native         | 17236508     | 1       |
| Beiersdorf AG/Geilenkir... | Olive oil, native         | 291374       | 1       |
| Bionorica ethics/Allian... | Olive oil, native         | 18005453     | 1       |
| Bomastus                   | Olive oil, native         | 17001926     | 1       |
| Bomastus/Phönix            | Olive oil, native         | 302523       | 1       |
| Bomastus-Werke AG          | Olive oil, native         | 308230       | 1       |
| Bomba/Phönix               | Olive oil, native         | 18003205     | 1       |
| Bomba/Phönix               | Olive oil, native         | 19006021     | 1       |
| Bombast/Noweda             | Olive oil, native         | 289095       | 1       |
| Bombastus                  | Olive oil, native         | 267376       | 3       |
| Bombastus                  | Olive oil, native         | 273659       | 3       |
| Bombastus                  | Olive oil, native         | 274236       | 7       |
| Bombastus                  | Olive oil, native         | oo270970     | 1       |

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| Supplier  | Substance         | Batch          | Spectra |
|-----------|-------------------|----------------|---------|
| Bombastus | Olive oil, native | 277050         | 9       |
| Bombastus | Olive oil, native | 276542         | 2       |
| Bombastus | Olive oil, native | 277049         | 1       |
| Bombastus | Olive oil, native | 12274106       | 1       |
| Bombastus | Olive oil, native | 279609         | 7       |
| Bombastus | Olive oil, native | 284144         | 7       |
| Bombastus | Olive oil, native | 4328413        | 1       |
| Bombastus | Olive oil, native | 14118604       | 1       |
| Bombastus | Olive oil, native | 6861571        | 5       |
| Bombastus | Olive oil, native | 292369         | 23      |
| Bombastus | Olive oil, native | 294034         | 19      |
| Bombastus | Olive oil, native | 294035         | 2       |
| Bombastus | Olive oil, native | 296259         | 3       |
| Bombastus | Olive oil, native | 297565         | 7       |
| Bombastus | Olive oil, native | 298007         | 6       |
| Bombastus | Olive oil, native | 110816-1       | 1       |
| Bombastus | Olive oil, native | 16212801       | 1       |
| Bombastus | Olive oil, native | 305003         | 24      |
| Bombastus | Olive oil, native | 305002         | 9       |
| Bombastus | Olive oil, native | 304112         | 1       |
| Bombastus | Olive oil, native | 111405         | 1       |
| Bombastus | Olive oil, native | 108230         | 1       |
| Bombastus | Olive oil, native | 30820          | 1       |
| Bombastus | Olive oil, native | 310868x2       | 1       |
| Bombastus | Olive oil, native | 17001926       | 46      |
| Bombastus | Olive oil, native | 18000212       | 2       |
| Bombastus | Olive oil, native | 18208106       | 1       |
| Bombastus | Olive oil, native | 19000227       | 37      |
| Bombastus | Olive oil, native | 19002973       | 12      |
| Bombastus | Olive oil, native | 19006021       | 30      |
| Bombastus | Olive oil, native | 20000171       | 16      |
| Bombastus | Olive oil, native | 20000170       | 13      |
| Bombastus | Olive oil, native | 19000226       | 6       |
| Bombastus | Olive oil, native | 20004726       | 4       |
| Bombastus | Olive oil, native | 20004027       | 1       |
| Bombastus | Olive oil, native | 20005317       | 1       |
| Bombastus | Olive oil, native | 19005404       | 3       |
| Bombastus | Olive oil, native | 187 (18005452) | 1       |
| Bombastus | Olive oil, native | 18002119       | 48      |
| Bombastus | Olive oil, native | 190000227      | 1       |
| Bombastus | Olive oil, native | 18005452       | 11      |
| Bombastus | Olive oil, native | 273871         | 5       |
| Bombastus | Olive oil, native | 291374         | 10      |
| Bombastus | Olive oil, native | 287259Noweda   | 1       |
| Bombastus | Olive oil, native | 270971         | 2       |
| Bombastus | Olive oil, native | 272270         | 2       |
| Bombastus | Olive oil, native | 283762         | 3       |
| Bombastus | Olive oil, native | 286533         | 8       |
| Bombastus | Olive oil, native | 289094         | 5       |
| Bombastus | Olive oil, native | 290403         | 10      |
| Bombastus | Olive oil, native | 68615710       | 1       |
| Bombastus | Olive oil, native | 20002915       | 10      |
| Bombastus | Olive oil, native | 288752         | 6       |
| Bombastus | Olive oil, native | 60081503       | 12      |
| Bombastus | Olive oil, native | 278583         | 10      |
| Bombastus | Olive oil, native | 279608         | 5       |
| Bombastus | Olive oil, native | 17121604       | 1       |
| Bombastus | Olive oil, native | 310868         | 46      |
| Bombastus | Olive oil, native | 20003374       | 1       |
| Bombastus | Olive oil, native | 20002914       | 2       |

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| Supplier  | Substance         | Batch               | Spectra |
|-----------|-------------------|---------------------|---------|
| Bombastus | Olive oil, native | 297227              | 5       |
| Bombastus | Olive oil, native | 281209              | 4       |
| Bombastus | Olive oil, native | 282963              | 9       |
| Bombastus | Olive oil, native | 18003205            | 62      |
| Bombastus | Olive oil, native | 28963               | 1       |
| Bombastus | Olive oil, native | 20003375            | 13      |
| Bombastus | Olive oil, native | 289095              | 6       |
| Bombastus | Olive oil, native | 295282              | 7       |
| Bombastus | Olive oil, native | 185(308229)         | 1       |
| Bombastus | Olive oil, native | 17001888            | 7       |
| Bombastus | Olive oil, native | 20005601            | 4       |
| Bombastus | Olive oil, native | 4812A-02000         | 1       |
| Bombastus | Olive oil, native | 287259              | 8       |
| Bombastus | Olive oil, native | 297564              | 4       |
| Bombastus | Olive oil, native | 300220              | 18      |
| Bombastus | Olive oil, native | 19006020            | 6       |
| Bombastus | Olive oil, native | 307103              | 18      |
| Bombastus | Olive oil, native | 290924              | 15      |
| Bombastus | Olive oil, native | 285942              | 10      |
| Bombastus | Olive oil, native | 275757              | 2       |
| Bombastus | Olive oil, native | 4613M-02000         | 1       |
| Bombastus | Olive oil, native | 296260              | 17      |
| Bombastus | Olive oil, native | 15399702            | 1       |
| Bombastus | Olive oil, native | 308230-20171106Ma7  | 1       |
| Bombastus | Olive oil, native | 308230-20170704Ma13 | 1       |
| Bombastus | Olive oil, native | 19001847            | 2       |
| Bombastus | Olive oil, native | 2519I-02000         | 1       |
| Bombastus | Olive oil, native | 9005020             | 1       |
| Bombastus | Olive oil, native | 304113              | 15      |
| Bombastus | Olive oil, native | 186(17001888)       | 1       |
| Bombastus | Olive oil, native | 266513              | 1       |
| Bombastus | Olive oil, native | 310866              | 4       |
| Bombastus | Olive oil, native | 18003204            | 12      |
| Bombastus | Olive oil, native | 2003375             | 1       |
| Bombastus | Olive oil, native | 265359              | 1       |
| Bombastus | Olive oil, native | 298008              | 10      |
| Bombastus | Olive oil, native | 300219              | 5       |
| Bombastus | Olive oil, native | 302522              | 4       |
| Bombastus | Olive oil, native | 20001867            | 15      |
| Bombastus | Olive oil, native | 20004028            | 1       |
| Bombastus | Olive oil, native | 281898              | 5       |
| Bombastus | Olive oil, native | 305001              | 81      |
| Bombastus | Olive oil, native | 302521              | 1       |
| Bombastus | Olive oil, native | 306948              | 23      |
| Bombastus | Olive oil, native | 8004251002          | 1       |
| Bombastus | Olive oil, native | 190451504           | 1       |
| Bombastus | Olive oil, native | 190692406           | 1       |
| Bombastus | Olive oil, native | 6861565             | 1       |
| Bombastus | Olive oil, native | 295283              | 24      |
| Bombastus | Olive oil, native | 18002118            | 3       |
| Bombastus | Olive oil, native | 18005453            | 56      |
| Bombastus | Olive oil, native | 1900621             | 1       |
| Bombastus | Olive oil, native | 29992915            | 1       |
| Bombastus | Olive oil, native | 3011000             | 2       |
| Bombastus | Olive oil, native | 8022014A            | 1       |
| Bombastus | Olive oil, native | 308230              | 73      |
| Bombastus | Olive oil, native | 268118              | 1       |
| Bombastus | Olive oil, native | 269674              | 1       |
| Bombastus | Olive oil, native | 270970              | 4       |
| Bombastus | Olive oil, native | 284143              | 2       |

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| Supplier         | Substance         | Batch        | Spectra |
|------------------|-------------------|--------------|---------|
| Bombastus        | Olive oil, native | 301100       | 27      |
| Bombastus        | Olive oil, native | 302523       | 17      |
| Bombastus        | Olive oil, native | 20001864     | 2       |
| Bombastus        | Olive oil, native | 20005318     | 2       |
| Bombastus        | Olive oil, native | 308229       | 9       |
| Bombastus        | Olive oil, native | 14306904     | 1       |
| Bombastus        | Olive oil, native | 285160       | 1       |
| Bombastus        | Olive oil, native | 301099       | 10      |
| Bombstus         | Olive oil, native | 308230       | 2       |
| Bombstus         | Olive oil, native | 18005453     | 1       |
| Bombstus/Phönix  | Olive oil, native | 18002119     | 1       |
| Boombastus       | Olive oil, native | 19002974     | 1       |
| Brücken-Apotheke | Olive oil, native | 288752       | 2       |
| Cae              | Olive oil, native | 12141309     | 1       |
| Caeleo/ Krieger  | Olive oil, native | 18121101     | 1       |
| Caelo            | Olive oil, native | 20061207     | 1       |
| Caelo            | Olive oil, native | 288752       | 2       |
| Caelo            | Olive oil, native | 8003420001   | 1       |
| Caelo            | Olive oil, native | 19000452002  | 2       |
| Caelo            | Olive oil, native | 11063906     | 1       |
| Caelo            | Olive oil, native | 15311408     | 6       |
| Caelo            | Olive oil, native | 11227011     | 1       |
| Caelo            | Olive oil, native | 11063901     | 1       |
| Caelo            | Olive oil, native | 11376905     | 3       |
| Caelo            | Olive oil, native | 406212000    | 1       |
| Caelo            | Olive oil, native | 7071206      | 1       |
| Caelo            | Olive oil, native | 1207771      | 1       |
| Caelo            | Olive oil, native | 13081204     | 1       |
| Caelo            | Olive oil, native | 31081206     | 1       |
| Caelo            | Olive oil, native | 12077702     | 2       |
| Caelo            | Olive oil, native | 1509212000   | 1       |
| Caelo            | Olive oil, native | 120777027-13 | 1       |
| Caelo            | Olive oil, native | 6111208      | 1       |
| Caelo            | Olive oil, native | 10111201     | 1       |
| Caelo            | Olive oil, native | 3212I-02000  | 1       |
| Caelo            | Olive oil, native | 12141309     | 5       |
| Caelo            | Olive oil, native | 12141305     | 3       |
| Caelo            | Olive oil, native | 28121202     | 1       |
| Caelo            | Olive oil, native | 12141310     | 1       |
| Caelo            | Olive oil, native | 20270912-4   | 1       |
| Caelo            | Olive oil, native | 24011303     | 1       |
| Caelo            | Olive oil, native | 11227001     | 1       |
| Caelo            | Olive oil, native | 12274106     | 11      |
| Caelo            | Olive oil, native | 12041801     | 10      |
| Caelo            | Olive oil, native | 713I-02000   | 1       |
| Caelo            | Olive oil, native | 1031302      | 1       |
| Caelo            | Olive oil, native | 5272401      | 4       |
| Caelo            | Olive oil, native | 503312000    | 1       |
| Caelo            | Olive oil, native | 4041303      | 1       |
| Caelo            | Olive oil, native | 29041301     | 1       |
| Caelo            | Olive oil, native | 2113Q02000   | 1       |
| Caelo            | Olive oil, native | 13010911     | 19      |
| Caelo            | Olive oil, native | 3071302      | 1       |
| Caelo            | Olive oil, native | 30071305     | 1       |
| Caelo            | Olive oil, native | 13147004     | 19      |
| Caelo            | Olive oil, native | 4101312      | 1       |
| Caelo            | Olive oil, native | 14111306     | 1       |
| Caelo            | Olive oil, native | 16121306     | 1       |
| Caelo            | Olive oil, native | 13350101     | 4       |
| Caelo            | Olive oil, native | 16011404     | 1       |

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| Supplier | Substance         | Batch             | Spectra |
|----------|-------------------|-------------------|---------|
| Caelo    | Olive oil, native | 24011408          | 1       |
| Caelo    | Olive oil, native | 13306103          | 26      |
| Caelo    | Olive oil, native | 13021410          | 1       |
| Caelo    | Olive oil, native | 25021404          | 1       |
| Caelo    | Olive oil, native | 17041404          | 1       |
| Caelo    | Olive oil, native | 13051402          | 1       |
| Caelo    | Olive oil, native | 14024408          | 16      |
| Caelo    | Olive oil, native | 17051403          | 1       |
| Caelo    | Olive oil, native | 28051405          | 1       |
| Caelo    | Olive oil, native | 14070802          | 1       |
| Caelo    | Olive oil, native | 26071403          | 1       |
| Caelo    | Olive oil, native | 1081402           | 1       |
| Caelo    | Olive oil, native | 14118604          | 14      |
| Caelo    | Olive oil, native | 14182302          | 17      |
| Caelo    | Olive oil, native | 26091403          | 1       |
| Caelo    | Olive oil, native | 141182303         | 1       |
| Caelo    | Olive oil, native | 8121404           | 1       |
| Caelo    | Olive oil, native | 23121413          | 1       |
| Caelo    | Olive oil, native | 5011503           | 1       |
| Caelo    | Olive oil, native | 14118606          | 2       |
| Caelo    | Olive oil, native | 14306904          | 9       |
| Caelo    | Olive oil, native | 2021501           | 1       |
| Caelo    | Olive oil, native | 2021502           | 1       |
| Caelo    | Olive oil, native | 5734701           | 1       |
| Caelo    | Olive oil, native | 7031501           | 1       |
| Caelo    | Olive oil, native | 18031506          | 1       |
| Caelo    | Olive oil, native | 24031502          | 1       |
| Caelo    | Olive oil, native | 14306913          | 2       |
| Caelo    | Olive oil, native | 18041502          | 1       |
| Caelo    | Olive oil, native | 7051507           | 1       |
| Caelo    | Olive oil, native | 290403            | 2       |
| Caelo    | Olive oil, native | 2061503           | 1       |
| Caelo    | Olive oil, native | 20061502          | 1       |
| Caelo    | Olive oil, native | 1406914           | 1       |
| Caelo    | Olive oil, native | 14306914          | 1       |
| Caelo    | Olive oil, native | 14071504          | 1       |
| Caelo    | Olive oil, native | 15112706          | 16      |
| Caelo    | Olive oil, native | 24081507          | 1       |
| Caelo    | Olive oil, native | 294034            | 1       |
| Caelo    | Olive oil, native | 295283            | 2       |
| Caelo    | Olive oil, native | 90417099          | 1       |
| Caelo    | Olive oil, native | 297564            | 1       |
| Caelo    | Olive oil, native | 12388             | 1       |
| Caelo    | Olive oil, native | 2792              | 1       |
| Caelo    | Olive oil, native | 301100            | 2       |
| Caelo    | Olive oil, native | 16035311          | 14      |
| Caelo    | Olive oil, native | 16144605          | 5       |
| Caelo    | Olive oil, native | 16212806          | 37      |
| Caelo    | Olive oil, native | 1621806           | 2       |
| Caelo    | Olive oil, native | 16278806          | 1       |
| Caelo    | Olive oil, native | 16212805          | 1       |
| Caelo    | Olive oil, native | 17020700/16212806 | 1       |
| Caelo    | Olive oil, native | 25021708          | 1       |
| Caelo    | Olive oil, native | 17038703          | 10      |
| Caelo    | Olive oil, native | 9031707           | 1       |
| Caelo    | Olive oil, native | 11031706          | 1       |
| Caelo    | Olive oil, native | 16327406          | 15      |
| Caelo    | Olive oil, native | 8041709           | 1       |
| Caelo    | Olive oil, native | 20041701          | 1       |
| Caelo    | Olive oil, native | 21041714          | 1       |

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| Supplier | Substance         | Batch         | Spectra |
|----------|-------------------|---------------|---------|
| Caelo    | Olive oil, native | 8061712       | 1       |
| Caelo    | Olive oil, native | 27061703      | 1       |
| Caelo    | Olive oil, native | 3071714       | 1       |
| Caelo    | Olive oil, native | 17121603      | 4       |
| Caelo    | Olive oil, native | 14071704      | 1       |
| Caelo    | Olive oil, native | 17121604      | 9       |
| Caelo    | Olive oil, native | 8002656001    | 1       |
| Caelo    | Olive oil, native | 12081701      | 1       |
| Caelo    | Olive oil, native | 8002868001    | 1       |
| Caelo    | Olive oil, native | 17121606      | 32      |
| Caelo    | Olive oil, native | 26081709      | 1       |
| Caelo    | Olive oil, native | 7091703       | 1       |
| Caelo    | Olive oil, native | 308229        | 1       |
| Caelo    | Olive oil, native | 17121608      | 9       |
| Caelo    | Olive oil, native | 6101706       | 1       |
| Caelo    | Olive oil, native | 14101709      | 1       |
| Caelo    | Olive oil, native | 23101704      | 1       |
| Caelo    | Olive oil, native | 17121610      | 17      |
| Caelo    | Olive oil, native | 17121607      | 4       |
| Caelo    | Olive oil, native | 28111704      | 1       |
| Caelo    | Olive oil, native | 17236501      | 39      |
| Caelo    | Olive oil, native | 310866        | 3       |
| Caelo    | Olive oil, native | 17236502      | 4       |
| Caelo    | Olive oil, native | 11121701      | 1       |
| Caelo    | Olive oil, native | 17236506      | 2       |
| Caelo    | Olive oil, native | 172236501     | 1       |
| Caelo    | Olive oil, native | 17236505      | 44      |
| Caelo    | Olive oil, native | 310868        | 2       |
| Caelo    | Olive oil, native | 1723605       | 1       |
| Caelo    | Olive oil, native | 12021822      | 1       |
| Caelo    | Olive oil, native | 17062007      | 1       |
| Caelo    | Olive oil, native | 17001926      | 1       |
| Caelo    | Olive oil, native | 23041802      | 1       |
| Caelo    | Olive oil, native | 3051807       | 1       |
| Caelo    | Olive oil, native | 19051806leber | 1       |
| Caelo    | Olive oil, native | 9061810       | 1       |
| Caelo    | Olive oil, native | 1802011-01    | 1       |
| Caelo    | Olive oil, native | 16081803      | 1       |
| Caelo    | Olive oil, native | 210818B       | 1       |
| Caelo    | Olive oil, native | 18121101      | 45      |
| Caelo    | Olive oil, native | 12091803      | 1       |
| Caelo    | Olive oil, native | 18003205      | 7       |
| Caelo    | Olive oil, native | 17361107      | 9       |
| Caelo    | Olive oil, native | 29091802      | 1       |
| Caelo    | Olive oil, native | 18208102      | 17      |
| Caelo    | Olive oil, native | 20101801      | 1       |
| Caelo    | Olive oil, native | 18121106      | 1       |
| Caelo    | Olive oil, native | 18208101      | 75      |
| Caelo    | Olive oil, native | 15121802      | 1       |
| Caelo    | Olive oil, native | 18208107      | 5       |
| Caelo    | Olive oil, native | 18208108      | 1       |
| Caelo    | Olive oil, native | 18206101      | 1       |
| Caelo    | Olive oil, native | 8004499001    | 1       |
| Caelo    | Olive oil, native | 18311903      | 4       |
| Caelo    | Olive oil, native | 18311901      | 15      |
| Caelo    | Olive oil, native | 18311906      | 17      |
| Caelo    | Olive oil, native | 19076111      | 1       |
| Caelo    | Olive oil, native | 19002974      | 1       |
| Caelo    | Olive oil, native | 19212003      | 1       |
| Caelo    | Olive oil, native | 19000452006   | 1       |

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| Supplier | Substance         | Batch             | Spectra |
|----------|-------------------|-------------------|---------|
| Caelo    | Olive oil, native | 20001410002       | 37      |
| Caelo    | Olive oil, native | 2000141003        | 1       |
| Caelo    | Olive oil, native | 21000836006       | 1       |
| Caelo    | Olive oil, native | 11376906          | 3       |
| Caelo    | Olive oil, native | 11227002          | 2       |
| Caelo    | Olive oil, native | 12141306          | 9       |
| Caelo    | Olive oil, native | 16K24-B01_329002  | 1       |
| Caelo    | Olive oil, native | 8002827001        | 1       |
| Caelo    | Olive oil, native | 16035308          | 7       |
| Caelo    | Olive oil, native | 123773            | 1       |
| Caelo    | Olive oil, native | 5464901           | 2       |
| Caelo    | Olive oil, native | 1912005           | 2       |
| Caelo    | Olive oil, native | 19212001          | 10      |
| Caelo    | Olive oil, native | 19076109          | 38      |
| Caelo    | Olive oil, native | 13224703          | 17      |
| Caelo    | Olive oil, native | 14182305          | 2       |
| Caelo    | Olive oil, native | 15112707          | 5       |
| Caelo    | Olive oil, native | 15311403          | 22      |
| Caelo    | Olive oil, native | 15399704          | 23      |
| Caelo    | Olive oil, native | 300117/A          | 1       |
| Caelo    | Olive oil, native | 17121900/17121610 | 1       |
| Caelo    | Olive oil, native | 8004194001        | 1       |
| Caelo    | Olive oil, native | 14306905          | 14      |
| Caelo    | Olive oil, native | 15216305          | 1       |
| Caelo    | Olive oil, native | 14306915          | 8       |
| Caelo    | Olive oil, native | 15399703          | 24      |
| Caelo    | Olive oil, native | 16035309          | 5       |
| Caelo    | Olive oil, native | 16212803          | 4       |
| Caelo    | Olive oil, native | 265359            | 1       |
| Caelo    | Olive oil, native | 306949            | 1       |
| Caelo    | Olive oil, native | 17001888          | 1       |
| Caelo    | Olive oil, native | 13350102          | 16      |
| Caelo    | Olive oil, native | 5891202           | 1       |
| Caelo    | Olive oil, native | 190000452003      | 1       |
| Caelo    | Olive oil, native | 15216307          | 13      |
| Caelo    | Olive oil, native | 20006049003       | 1       |
| Caelo    | Olive oil, native | 19076102          | 1       |
| Caelo    | Olive oil, native | 2001410001        | 1       |
| Caelo    | Olive oil, native | 8001560001        | 1       |
| Caelo    | Olive oil, native | 306950            | 5       |
| Caelo    | Olive oil, native | p070106118        | 1       |
| Caelo    | Olive oil, native | 19311901          | 1       |
| Caelo    | Olive oil, native | 15399702          | 18      |
| Caelo    | Olive oil, native | 17038702          | 53      |
| Caelo    | Olive oil, native | 13224701          | 7       |
| Caelo    | Olive oil, native | 14182304          | 3       |
| Caelo    | Olive oil, native | 16035310          | 20      |
| Caelo    | Olive oil, native | 123465            | 1       |
| Caelo    | Olive oil, native | 17361104          | 28      |
| Caelo    | Olive oil, native | 18311908          | 2       |
| Caelo    | Olive oil, native | 22042001          | 1       |
| Caelo    | Olive oil, native | 20003049004       | 4       |
| Caelo    | Olive oil, native | 1612803           | 1       |
| Caelo    | Olive oil, native | 13010904          | 22      |
| Caelo    | Olive oil, native | 3319              | 1       |
| Caelo    | Olive oil, native | 1214306           | 1       |
| Caelo    | Olive oil, native | 290924            | 1       |
| Caelo    | Olive oil, native | 307103            | 1       |
| Caelo    | Olive oil, native | 8003801001        | 2       |
| Caelo    | Olive oil, native | 172365025615      | 1       |

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| Supplier | Substance         | Batch       | Spectra |
|----------|-------------------|-------------|---------|
| Caelo    | Olive oil, native | 15112705    | 8       |
| Caelo    | Olive oil, native | 15399706    | 1       |
| Caelo    | Olive oil, native | 2915A-02000 | 1       |
| Caelo    | Olive oil, native | 3916I-02000 | 1       |
| Caelo    | Olive oil, native | 4616U-02000 | 1       |
| Caelo    | Olive oil, native | 318A-02000  | 1       |
| Caelo    | Olive oil, native | 18208106    | 36      |
| Caelo    | Olive oil, native | 5218Q-02000 | 1       |
| Caelo    | Olive oil, native | 19000452003 | 34      |
| Caelo    | Olive oil, native | 18311902    | 17      |
| Caelo    | Olive oil, native | 18311907    | 1       |
| Caelo    | Olive oil, native | 19000452005 | 1       |
| Caelo    | Olive oil, native | 20001410004 | 2       |
| Caelo    | Olive oil, native | 21000836008 | 1       |
| Caelo    | Olive oil, native | 13224702    | 4       |
| Caelo    | Olive oil, native | 5623601     | 1       |
| Caelo    | Olive oil, native | 3313I-02000 | 1       |
| Caelo    | Olive oil, native | 13224704    | 15      |
| Caelo    | Olive oil, native | 114Q-02000  | 1       |
| Caelo    | Olive oil, native | 13350105    | 3       |
| Caelo    | Olive oil, native | 14306902    | 1       |
| Caelo    | Olive oil, native | 15363302    | 1       |
| Caelo    | Olive oil, native | 297565      | 1       |
| Caelo    | Olive oil, native | 1100616     | 1       |
| Caelo    | Olive oil, native | 16327402    | 49      |
| Caelo    | Olive oil, native | 17121605    | 1       |
| Caelo    | Olive oil, native | 18121102    | 14      |
| Caelo    | Olive oil, native | 19076105    | 7       |
| Caelo    | Olive oil, native | 19076110    | 6       |
| Caelo    | Olive oil, native | 19212002    | 5       |
| Caelo    | Olive oil, native | 20001410001 | 5       |
| Caelo    | Olive oil, native | 18005452    | 2       |
| Caelo    | Olive oil, native | 19002973    | 1       |
| Caelo    | Olive oil, native | 18003204    | 1       |
| Caelo    | Olive oil, native | 297227      | 1       |
| Caelo    | Olive oil, native | 1001848     | 1       |
| Caelo    | Olive oil, native | 17361101    | 59      |
| Caelo    | Olive oil, native | 20001410003 | 14      |
| Caelo    | Olive oil, native | 130109062x  | 1       |
| Caelo    | Olive oil, native | 14024407    | 11      |
| Caelo    | Olive oil, native | 13350104    | 7       |
| Caelo    | Olive oil, native | 800067001   | 1       |
| Caelo    | Olive oil, native | 279609      | 1       |
| Caelo    | Olive oil, native | 15311404    | 13      |
| Caelo    | Olive oil, native | 1324704     | 1       |
| Caelo    | Olive oil, native | 289095      | 1       |
| Caelo    | Olive oil, native | 292369      | 2       |
| Caelo    | Olive oil, native | 15216310    | 4       |
| Caelo    | Olive oil, native | 1511403     | 1       |
| Caelo    | Olive oil, native | 298008      | 2       |
| Caelo    | Olive oil, native | 17121602    | 30      |
| Caelo    | Olive oil, native | 60081503    | 2       |
| Caelo    | Olive oil, native | 17236508    | 8       |
| Caelo    | Olive oil, native | 18912182    | 1       |
| Caelo    | Olive oil, native | 17361108    | 5       |
| Caelo    | Olive oil, native | 18208105    | 1       |
| Caelo    | Olive oil, native | 3445        | 1       |
| Caelo    | Olive oil, native | 19000227    | 5       |
| Caelo    | Olive oil, native | 12274104    | 7       |
| Caelo    | Olive oil, native | 13350103    | 13      |

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| <b>Supplier</b>      | <b>Substance</b>  | <b>Batch</b> | <b>Spectra</b> |
|----------------------|-------------------|--------------|----------------|
| Caelo                | Olive oil, native | 14306916     | 9              |
| Caelo                | Olive oil, native | 300220       | 1              |
| Caelo                | Olive oil, native | 8003580002   | 1              |
| Caelo                | Olive oil, native | 18005453     | 2              |
| Caelo                | Olive oil, native | 18216902     | 1              |
| Caelo                | Olive oil, native | 800449001    | 1              |
| Caelo                | Olive oil, native | 19212005     | 28             |
| Caelo                | Olive oil, native | 17361106     | 51             |
| Caelo                | Olive oil, native | 305003       | 3              |
| Caelo                | Olive oil, native | 123test      | 2              |
| Caelo                | Olive oil, native | 1521309      | 1              |
| Caelo                | Olive oil, native | 16212802     | 4              |
| Caelo                | Olive oil, native | 8001854001   | 1              |
| Caelo                | Olive oil, native | 16327403     | 11             |
| Caelo                | Olive oil, native | 132656       | 1              |
| Caelo                | Olive oil, native | 1812101      | 1              |
| Caelo                | Olive oil, native | 3418a-02000  | 1              |
| Caelo                | Olive oil, native | 18002118     | 1              |
| Caelo                | Olive oil, native | 1828110      | 1              |
| Caelo                | Olive oil, native | 19076104     | 20             |
| Caelo                | Olive oil, native | 190004520003 | 1              |
| Caelo                | Olive oil, native | 16144218     | 1              |
| Caelo                | Olive oil, native | 18311910     | 26             |
| Caelo                | Olive oil, native | 14024406     | 5              |
| Caelo                | Olive oil, native | 14118603     | 24             |
| Caelo                | Olive oil, native | 15216308     | 13             |
| Caelo                | Olive oil, native | 6/AKD15      | 1              |
| Caelo                | Olive oil, native | 304113       | 1              |
| Caelo                | Olive oil, native | 308230       | 9              |
| Caelo                | Olive oil, native | 17121611     | 1              |
| Caelo                | Olive oil, native | 18208111     | 1              |
| Caelo                | Olive oil, native | 171216       | 1              |
| Caelo                | Olive oil, native | 19076101     | 3              |
| Caelo                | Olive oil, native | 21000836002  | 3              |
| Caelo                | Olive oil, native | 14182303     | 19             |
| Caelo                | Olive oil, native | 12077701     | 12             |
| Caelo                | Olive oil, native | 160353010    | 1              |
| Caelo                | Olive oil, native | 20003049003  | 17             |
| Caeol / Gehe         | Olive oil, native | 15311401     | 1              |
| Caeol/Phönix         | Olive oil, native | 17361101     | 1              |
| Caeolo/Ahd           | Olive oil, native | 18208106     | 1              |
| Caeolo/Krieger       | Olive oil, native | 17121606     | 1              |
| Caeolo/Phönix        | Olive oil, native | 15311401     | 2              |
| Caeolo/Phönix        | Olive oil, native | 15311402     | 1              |
| Caesar & Loretz      | Olive oil, native | 160327402    | 1              |
| Caesar & Loretz      | Olive oil, native | 17121602     | 1              |
| Caesar & Loretz      | Olive oil, native | 18208101     | 1              |
| Caesar & Loretz GmbH | Olive oil, native | 13350101     | 1              |
| Caesar & Loretz GmbH | Olive oil, native | 14306904     | 1              |
| Caesar & Loretz GmbH | Olive oil, native | 18208106     | 4              |
| Caesar & Loretz GmbH | Olive oil, native | 18208110     | 8              |
| Caesar & Loretz GmbH | Olive oil, native | 18003205     | 1              |
| Caesar & Loretz GmbH | Olive oil, native | 1900227      | 1              |
| Caesar & Loretz GmbH | Olive oil, native | 18311901     | 5              |
| Caesar & Loretz GmbH | Olive oil, native | 18311902     | 4              |
| Caesar & Loretz GmbH | Olive oil, native | 18311906     | 6              |
| Caesar & Loretz GmbH | Olive oil, native | 18311910     | 7              |
| Caesar & Loretz GmbH | Olive oil, native | 18311907     | 2              |
| Caesar & Loretz GmbH | Olive oil, native | 18208107     | 2              |
| Caesar & Loretz GmbH | Olive oil, native | 18208101     | 1              |

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| Supplier                    | Substance         | Batch       | Spectra |
|-----------------------------|-------------------|-------------|---------|
| Caesar & Loretz GmbH        | Olive oil, native | 19076105    | 3       |
| Caesar & Loretz GmbH        | Olive oil, native | 19076104    | 4       |
| Caesar & Loretz GmbH        | Olive oil, native | 19076109    | 13      |
| Caesar & Loretz GmbH        | Olive oil, native | 19076110    | 3       |
| Caesar & Loretz GmbH        | Olive oil, native | 1000010861  | 2       |
| Caesar & Loretz GmbH        | Olive oil, native | 19212001    | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 19212005    | 10      |
| Caesar & Loretz GmbH        | Olive oil, native | 19212002    | 5       |
| Caesar & Loretz GmbH        | Olive oil, native | 19002974    | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 19212006    | 3       |
| Caesar & Loretz GmbH        | Olive oil, native | 19000452003 | 11      |
| Caesar & Loretz GmbH        | Olive oil, native | 19000452002 | 3       |
| Caesar & Loretz GmbH        | Olive oil, native | 19000452005 | 3       |
| Caesar & Loretz GmbH        | Olive oil, native | 20001410002 | 12      |
| Caesar & Loretz GmbH        | Olive oil, native | 20001410001 | 11      |
| Caesar & Loretz GmbH        | Olive oil, native | 2000141000  | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 2000140002  | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 20001410003 | 7       |
| Caesar & Loretz GmbH        | Olive oil, native | 20001410004 | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 20003049003 | 7       |
| Caesar & Loretz GmbH        | Olive oil, native | 21000836005 | 1       |
| Caesar & Loretz GmbH        | Olive oil, native | 21000836006 | 1       |
| Caesar & Loretz GmbH / ...  | Olive oil, native | 19000452002 | 2       |
| Caesar & Loretz GmbH / ...  | Olive oil, native | 19001848    | 1       |
| Caesar & Loretz GmbH / ...  | Olive oil, native | 18311910    | 1       |
| Caesar & Loretz GmbH / ...  | Olive oil, native | 19212005    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 13350102    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 14182302    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 15216309    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 15311404    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 16212801    | 1       |
| Caesar & Loretz GmbH Hi...  | Olive oil, native | 16212806    | 1       |
| Caesar & Loretz GmbH No...  | Olive oil, native | 18208110    | 1       |
| Caesar & Loretz GmbH, 4...  | Olive oil, native | 12141306    | 1       |
| Caesar & Loretz GmbH, P...  | Olive oil, native | 17361106    | 2       |
| Caesar & Loretz GmbH, 20... | Olive oil, native | 17121602    | 2       |
| Caesar & Loretz GmbH/ G...  | Olive oil, native | 18208101    | 1       |
| Caesar & Loretz GmbH/ P...  | Olive oil, native | 19076104    | 1       |
| Caesar & Loretz GmbH/ S...  | Olive oil, native | 20001410002 | 1       |
| Caesar & Loretz GmbH/AHD    | Olive oil, native | 19076110    | 1       |
| Caesar & Loretz GmbH/AHD    | Olive oil, native | 19212005    | 1       |
| Caesar & Loretz GmbH/Gehe   | Olive oil, native | 19000452002 | 1       |
| Caesar & Loretz GmbH/Gehe   | Olive oil, native | 20001410004 | 1       |
| Caesar & Loretz GmbH/GEHE   | Olive oil, native | 20001410001 | 3       |
| Caesar & Loretz GmbH/Go...  | Olive oil, native | 19212005    | 1       |
| Caesar & Loretz GmbH/Gö...  | Olive oil, native | 19076104    | 2       |
| Caesar & Loretz GmbH/Je...  | Olive oil, native | 19000452002 | 1       |
| Caesar & Loretz GmbH/Je...  | Olive oil, native | 19000452003 | 1       |
| Caesar & Loretz GmbH/Je...  | Olive oil, native | 20001410001 | 1       |
| Caesar & Loretz GmbH/Mi...  | Olive oil, native | 19076104    | 1       |
| Caesar & Loretz GmbH/No...  | Olive oil, native | 19212002    | 3       |
| Caesar & Loretz GmbH/No...  | Olive oil, native | 19212005    | 1       |
| Caesar & Loretz GmbH/Ph...  | Olive oil, native | 19076109    | 1       |
| Caesar & Loretz GmbH/Ph...  | Olive oil, native | 19212002    | 1       |
| Caesar & Loretz GmbH/Ph...  | Olive oil, native | 20001410003 | 1       |
| Caesar & Loretz GmbH/Sa...  | Olive oil, native | 19076109    | 2       |
| Caesar & Loretz GmbH/Sa...  | Olive oil, native | 19076110    | 1       |
| Caesar & Loretz Hilden      | Olive oil, native | 18311906    | 1       |
| Caesar & Loretz Hilden      | Olive oil, native | 20001410002 | 1       |
| Caesar 6 Loretz GmbH        | Olive oil, native | 16327402    | 1       |

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| Supplier                   | Substance         | Batch      | Spectra |
|----------------------------|-------------------|------------|---------|
| Caesar&Lorenz/Phoenix      | Olive oil, native | 17121604   | 4       |
| Caesar&Loretz              | Olive oil, native | 17038702   | 2       |
| Caesar&Loretz GmbH, AHC... | Olive oil, native | 17038702   | 1       |
| Caesar&Loretz GmbH/ San... | Olive oil, native | 17361106   | 1       |
| Caesar&Loretz,Phoenix,1... | Olive oil, native | 15399703   | 1       |
| Caesar&LoretzGmbH,07,03... | Olive oil, native | 16327402   | 1       |
| Calo                       | Olive oil, native | 18311906   | 1       |
| Cealo/Gehe                 | Olive oil, native | 12141306   | 3       |
| Cealo/Gehe                 | Olive oil, native | 12077701   | 1       |
| Cealo/Gehe                 | Olive oil, native | 17361106   | 1       |
| celo/Jenne                 | Olive oil, native | 13010904   | 1       |
| Delta                      | Olive oil, native | 17236505   | 1       |
| E PLUS                     | Olive oil, native | 17038702   | 1       |
| Ebert & Jacobi             | Olive oil, native | 296260     | 1       |
| Ebert & Jacobi 02.08...    | Olive oil, native | 15399704   | 1       |
| Eimermacher                | Olive oil, native | 8002868001 | 1       |
| EuRho                      | Olive oil, native | 13010911   | 1       |
| EuRho                      | Olive oil, native | 1501023-01 | 1       |
| EuRho                      | Olive oil, native | 1503047-01 | 1       |
| EuRho/ NOWEDA              | Olive oil, native | 18208106   | 1       |
| EuRho/Noweda               | Olive oil, native | 308230     | 1       |
| Euro OTC                   | Olive oil, native | 1212022-01 | 2       |
| Euro OTC                   | Olive oil, native | 13224704   | 1       |
| Euro OTC                   | Olive oil, native | 1406009-01 | 1       |
| Euro OTC                   | Olive oil, native | 308228     | 11      |
| Euro OTC                   | Olive oil, native | 1802011-01 | 70      |
| Euro OTC                   | Olive oil, native | 1805023-01 | 45      |
| Euro OTC                   | Olive oil, native | 1808026-01 | 151     |
| Euro OTC                   | Olive oil, native | 1822011-01 | 1       |
| Euro OTC                   | Olive oil, native | 17236501   | 1       |
| Euro OTC                   | Olive oil, native | 19000226   | 1       |
| Euro OTC                   | Olive oil, native | 1903013-01 | 1       |
| Euro OTC                   | Olive oil, native | 200305001  | 1       |
| Euro OTC                   | Olive oil, native | 1000013127 | 1       |
| Euro OTC                   | Olive oil, native | 1808026-02 | 1       |
| Euro OTC                   | Olive oil, native | 1503047-02 | 1       |
| Euro OTC                   | Olive oil, native | 1602022-01 | 1       |
| Euro OTC                   | Olive oil, native | 1602022-02 | 1       |
| Euro OTC                   | Olive oil, native | 1608006-02 | 88      |
| Euro OTC                   | Olive oil, native | 1807019-01 | 1       |
| Euro OTC                   | Olive oil, native | 1809017-01 | 1       |
| Euro OTC                   | Olive oil, native | 17001926   | 1       |
| Euro OTC                   | Olive oil, native | 1910015-01 | 2       |
| Euro OTC                   | Olive oil, native | 2001005-01 | 1       |
| Euro OTC                   | Olive oil, native | 18208101   | 1       |
| Euro OTC                   | Olive oil, native | 14182303   | 1       |
| Euro OTC                   | Olive oil, native | 1905018-01 | 3       |
| Euro OTC                   | Olive oil, native | 17391101   | 1       |
| Euro OTC                   | Olive oil, native | 18002119   | 1       |
| Euro OTC                   | Olive oil, native | 307103     | 2       |
| Euro OTC                   | Olive oil, native | 21001644   | 1       |
| Euro OTC                   | Olive oil, native | 200603401  | 1       |
| euro-oct                   | Olive oil, native | 1503047-02 | 1       |
| Euro OTC                   | Olive oil, native | 14306903   | 1       |
| Euro OTC                   | Olive oil, native | 12356      | 1       |
| Euro OTC                   | Olive oil, native | 16327406   | 3       |
| Euro OTC                   | Olive oil, native | 152834     | 1       |
| Euro OTC                   | Olive oil, native | 19000227   | 1       |
| Fagron                     | Olive oil, native | 12A18-N08  | 2       |
| Fagron                     | Olive oil, native | 12I07-N07  | 2       |

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| Supplier     | Substance         | Batch            | Spectra |
|--------------|-------------------|------------------|---------|
| Fagron       | Olive oil, native | 12107-N07        | 1       |
| Fagron       | Olive oil, native | 13010904         | 1       |
| Fagron       | Olive oil, native | 13C08-N06        | 5       |
| Fagron       | Olive oil, native | 13c08-N06        | 1       |
| Fagron       | Olive oil, native | 13J25-B04-289441 | 3       |
| Fagron       | Olive oil, native | 14G08-B02-300074 | 5       |
| Fagron       | Olive oil, native | 15A27-B03        | 1       |
| Fagron       | Olive oil, native | 15216309         | 1       |
| Fagron       | Olive oil, native | 329002           | 1       |
| Fagron       | Olive oil, native | 8004194001       | 1       |
| Fagron       | Olive oil, native | 19001848         | 1       |
| Fagron       | Olive oil, native | 284144           | 2       |
| Fagron       | Olive oil, native | 130190           | 2       |
| Fagron       | Olive oil, native | 13G18-B08-286424 | 3       |
| Fagron       | Olive oil, native | 129189           | 1       |
| Fagron       | Olive oil, native | 13J25-B04        | 1       |
| Fagron       | Olive oil, native | 16K24-B01-329002 | 2       |
| Fagron       | Olive oil, native | 18003205         | 2       |
| Fagron       | Olive oil, native | 14B12-B06        | 1       |
| Fagron       | Olive oil, native | 133026           | 2       |
| Fagron       | Olive oil, native | 15A27-B03-304709 | 6       |
| Fagron       | Olive oil, native | 139812           | 1       |
| Fagron       | Olive oil, native | 13G18-B08        | 1       |
| Fagron       | Olive oil, native | 15216308         | 1       |
| Fagron       | Olive oil, native | 16K24-01-329002  | 1       |
| Fagron       | Olive oil, native | 15399702         | 1       |
| Fargon       | Olive oil, native | 17236501         | 1       |
| Fiebig       | Olive oil, native | 12077702         | 1       |
| Fiebig       | Olive oil, native | 15399704         | 1       |
| Fiebig       | Olive oil, native | 8001431001       | 1       |
| Fiebig       | Olive oil, native | 8001948002       | 1       |
| Fiebig       | Olive oil, native | 8002656001       | 1       |
| Fiebig       | Olive oil, native | 1608006-02       | 1       |
| Fiebig       | Olive oil, native | 17236501         | 2       |
| Fiebig       | Olive oil, native | 8003420001       | 1       |
| Fiebig       | Olive oil, native | 17236502         | 1       |
| Fiebig       | Olive oil, native | 310866           | 1       |
| Fiebig       | Olive oil, native | 18208101         | 1       |
| Fiebig       | Olive oil, native | 8004251002       | 2       |
| Fiebig       | Olive oil, native | 18208106         | 1       |
| Fiebig       | Olive oil, native | 20003049003      | 1       |
| Frago/Gehe   | Olive oil, native | 16K24-B01-329002 | 2       |
| Frago/Noweda | Olive oil, native | 16K24-B01        | 1       |
| Gatt-Koller  | Olive oil, native | 1900963          | 1       |
| Gehe         | Olive oil, native | 11C16-N08        | 1       |
| Gehe         | Olive oil, native | 267376           | 1       |
| Gehe         | Olive oil, native | 5107101          | 1       |
| Gehe         | Olive oil, native | 269674           | 2       |
| Gehe         | Olive oil, native | 265359           | 1       |
| Gehe         | Olive oil, native | 12I07-N07        | 1       |
| Gehe         | Olive oil, native | 277050           | 2       |
| Gehe         | Olive oil, native | 13010911         | 1       |
| Gehe         | Olive oil, native | 279609           | 1       |
| Gehe         | Olive oil, native | 278583           | 1       |
| Gehe         | Olive oil, native | 281209           | 2       |
| Gehe         | Olive oil, native | 5470202          | 1       |
| Gehe         | Olive oil, native | 282963           | 2       |
| Gehe         | Olive oil, native | 284144           | 1       |
| Gehe         | Olive oil, native | 288752           | 1       |
| Gehe         | Olive oil, native | 289094           | 1       |

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| Supplier          | Substance         | Batch      | Spectra |
|-------------------|-------------------|------------|---------|
| Gehe              | Olive oil, native | 297565     | 1       |
| Gehe              | Olive oil, native | 298007     | 1       |
| Gehe              | Olive oil, native | 298008     | 1       |
| Gehe              | Olive oil, native | 305003     | 2       |
| Gehe              | Olive oil, native | 306950     | 1       |
| Gehe              | Olive oil, native | 305002     | 1       |
| Gehe              | Olive oil, native | 16212801   | 1       |
| Gehe              | Olive oil, native | 8002366001 | 1       |
| Gehe              | Olive oil, native | 310868     | 1       |
| Gehe              | Olive oil, native | 17361101   | 1       |
| Gehe              | Olive oil, native | 18003205   | 1       |
| Gehe              | Olive oil, native | 18005453   | 1       |
| Gehe              | Olive oil, native | 18208101   | 1       |
| Gehe              | Olive oil, native | 18208102   | 1       |
| Gehe              | Olive oil, native | 18208106   | 1       |
| Gehe              | Olive oil, native | 19001848   | 1       |
| Gehe              | Olive oil, native | 19000227   | 2       |
| Gehe              | Olive oil, native | 18311906   | 1       |
| Gehe              | Olive oil, native | 19002974   | 1       |
| Gehe              | Olive oil, native | 19212005   | 1       |
| GEHE              | Olive oil, native | 305002     | 1       |
| GEHE              | Olive oil, native | 308229     | 1       |
| GEHE              | Olive oil, native | 17361101   | 1       |
| GEHE              | Olive oil, native | 18002118   | 1       |
| Gehe - Lamotte    | Olive oil, native | 5271504    | 1       |
| Gehe - Lamotte    | Olive oil, native | 5470202    | 1       |
| Gehe - Lamotte    | Olive oil, native | 5623601    | 1       |
| Gehe - Lamotte    | Olive oil, native | 5671601    | 2       |
| Caelo             | Olive oil, native | 171211610  | 1       |
| Gehe amax         | Olive oil, native | 294034     | 1       |
| Gehe amax         | Olive oil, native | 304113     | 1       |
| Gehe amax         | Olive oil, native | 308230     | 1       |
| Gehe amax         | Olive oil, native | 20180713   | 1       |
| Gehe amax         | Olive oil, native | 310868     | 1       |
| Gehe amax         | Olive oil, native | 18003205   | 2       |
| Gehe amax         | Olive oil, native | 19002974   | 2       |
| Gehe amax         | Olive oil, native | 19000227   | 1       |
| Bombastus         | Olive oil, native | 306950     | 20      |
| Bombastus         | Olive oil, native | 19002974   | 50      |
| Caelo             | Olive oil, native | 800236001  | 1       |
| Gehe/Hedinger     | Olive oil, native | 306950     | 1       |
| Gehe/henry        | Olive oil, native | 8001431001 | 1       |
| Gehe-Henry        | Olive oil, native | 8002026001 | 1       |
| Gehe-Henry        | Olive oil, native | 8002366001 | 1       |
| Th. Geyer         | Olive oil, native | 17038702   | 2       |
| Gumo              | Olive oil, native | 17001926   | 1       |
| H. Lamotte/ Gehe  | Olive oil, native | 8003801001 | 1       |
| H. Lamotte/Noweda | Olive oil, native | 5671901    | 1       |
| H.Lamotte         | Olive oil, native | 1000010861 | 1       |
| H.Lamotte/Noweda  | Olive oil, native | 5232201    | 1       |
| H.Lamotte/Noweda  | Olive oil, native | 5470202    | 1       |
| hen               | Olive oil, native | 8001648001 | 1       |
| Henry L/Spangro   | Olive oil, native | 8003420001 | 1       |
| Henry Lamotte     | Olive oil, native | 1000011651 | 1       |
| henry Lamotte     | Olive oil, native | 1000012617 | 1       |
| Henry Lamotte     | Olive oil, native | 5107101    | 1       |
| Henry Lamotte     | Olive oil, native | 5232201    | 1       |
| Henry Lamotte     | Olive oil, native | 5272401    | 3       |
| Henry Lamotte     | Olive oil, native | 5271504    | 1       |
| Henry Lamotte     | Olive oil, native | 5671601    | 1       |

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| Supplier                   | Substance         | Batch        | Spectra |
|----------------------------|-------------------|--------------|---------|
| Henry Lamotte              | Olive oil, native | 5671901      | 3       |
| Henry Lamotte              | Olive oil, native | 5813601      | 2       |
| Henry Lamotte              | Olive oil, native | 5734701      | 1       |
| Henry Lamotte              | Olive oil, native | 8000652001   | 1       |
| Henry Lamotte              | Olive oil, native | 5921100001   | 1       |
| Henry Lamotte              | Olive oil, native | 8000821001   | 2       |
| Henry Lamotte              | Olive oil, native | 5891202      | 1       |
| Henry Lamotte              | Olive oil, native | 8001648001   | 1       |
| Henry Lamotte              | Olive oil, native | 8001560001   | 2       |
| Henry Lamotte              | Olive oil, native | 16327402     | 1       |
| Henry Lamotte              | Olive oil, native | 8002656001   | 1       |
| Henry Lamotte              | Olive oil, native | 8003801001   | 1       |
| Henry Lamotte              | Olive oil, native | 8003580002   | 1       |
| Henry Lamotte              | Olive oil, native | 8004067001   | 3       |
| Henry Lamotte              | Olive oil, native | 8004499001   | 4       |
| Henry Lamotte              | Olive oil, native | 8004251002   | 1       |
| Henry Lamotte              | Olive oil, native | 8004827001   | 2       |
| Henry Lamotte              | Olive oil, native | 1000010090   | 2       |
| Henry Lamotte              | Olive oil, native | 1000010861   | 4       |
| Henry Lamotte              | Olive oil, native | 1000010808   | 1       |
| Henry Lamotte              | Olive oil, native | 1000011651   | 1       |
| Henry Lamotte              | Olive oil, native | 191015090511 | 2       |
| Henry Lamotte              | Olive oil, native | 1000012341   | 1       |
| Henry Lamotte              | Olive oil, native | 1000012617   | 2       |
| Henry Lamotte              | Olive oil, native | 1000014032   | 1       |
| HENRY LAMOTTE              | Olive oil, native | 8004067001   | 1       |
| HENRY LAMOTTE              | Olive oil, native | 1000010861   | 1       |
| Henry Lamotte / 107        | Olive oil, native | 1000012341   | 1       |
| Henry Lamotte / Gehe       | Olive oil, native | 8004067001   | 1       |
| Henry Lamotte / Gehe       | Olive oil, native | 1000010861   | 1       |
| Henry Lamotte / Gehe12     | Olive oil, native | 8004499001   | 1       |
| Henry Lamotte / Noweda     | Olive oil, native | 123773       | 1       |
| Henry Lamotte / Noweda     | Olive oil, native | 8004194001   | 1       |
| Henry Lamotte / Noweda     | Olive oil, native | 1000010861   | 1       |
| Henry Lamotte / Noweda     | Olive oil, native | 1000012617   | 1       |
| Henry Lamotte / Phoenix    | Olive oil, native | 1000010861   | 1       |
| Henry Lamotte / Phönix     | Olive oil, native | 8004827001   | 1       |
| Henry Lamotte GmbH Brem... | Olive oil, native | 8003420001   | 1       |
| Henry Lamotte oils         | Olive oil, native | 8004499001   | 3       |
| Henry Lamotte oils         | Olive oil, native | 1000010861   | 1       |
| Henry Lamotte Oils         | Olive oil, native | 5903400003   | 2       |
| Henry Lamotte Oils         | Olive oil, native | 8000821001   | 1       |
| Henry Lamotte Oils         | Olive oil, native | 8001648001   | 1       |
| Henry Lamotte Oils         | Olive oil, native | 8022366001   | 1       |
| Henry Lamotte Oils         | Olive oil, native | 8003420001   | 1       |
| henry lamotte oils / Al... | Olive oil, native | 1000012617   | 1       |
| henry lamotte oils gmbh    | Olive oil, native | 5464901      | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8001560001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 5372701      | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 124392       | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 5671901      | 2       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 5921100001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 5813601      | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8000652001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 5921100001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8001560001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8002026001   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8003420001   | 2       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8003580002   | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8003801001   | 1       |

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| Supplier                   | Substance         | Batch      | Spectra |
|----------------------------|-------------------|------------|---------|
| Henry Lamotte Oils GmbH    | Olive oil, native | 1000004908 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8004067001 | 2       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8004194001 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8004251002 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8004499001 | 3       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 1000010090 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 8004827001 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 1000010808 | 1       |
| Henry Lamotte Oils GmbH    | Olive oil, native | 1000012341 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004827001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 1000011651 | 2       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004251002 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8001854001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 1000012617 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004067001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004499001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8001854001 | 2       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 124392     | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8003801001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004827001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8002868001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8003580002 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004067001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 5470202    | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 1000010861 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8003580002 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 8004251002 | 1       |
| henry lamotte oils gmbh... | Olive oil, native | 8003580002 | 2       |
| henry lamotte oils gmbh... | Olive oil, native | 8002366001 | 1       |
| Henry Lamotte Oils GmbH... | Olive oil, native | 5734701    | 1       |
| Henry Lamotte Oils/GEHE    | Olive oil, native | 1000010861 | 1       |
| Henry Lamotte Oils/Phoe... | Olive oil, native | 1000010861 | 3       |
| Henry Lamotte, Noweda      | Olive oil, native | 5372701    | 1       |
| Henry Lamotte/ Alliance    | Olive oil, native | 8001854001 | 1       |
| Henry Lamotte/ Alliance... | Olive oil, native | 8002868001 | 1       |
| Henry Lamotte/ Nowed       | Olive oil, native | 1000004908 | 1       |
| Henry Lamotte/ Noweda      | Olive oil, native | 124392     | 1       |
| Henry Lamotte/ Noweda      | Olive oil, native | 1000004908 | 1       |
| Henry Lamotte/ Sana        | Olive oil, native | 8002827001 | 1       |
| Henry Lamotte/ Sanacorp    | Olive oil, native | 8004067001 | 1       |
| Henry Lamotte/AHC          | Olive oil, native | 800156001  | 1       |
| Henry Lamotte/AHC          | Olive oil, native | 8002366001 | 1       |
| Henry Lamotte/AHD          | Olive oil, native | 8000821001 | 1       |
| Henry Lamotte/AHD          | Olive oil, native | 17631101   | 1       |
| Henry Lamotte/Alliance     | Olive oil, native | 8003801001 | 2       |
| Henry Lamotte/Alliance     | Olive oil, native | 1000010861 | 2       |
| Henry Lamotte/Alliance     | Olive oil, native | 1000013127 | 1       |
| Henry Lamotte/Alliance ... | Olive oil, native | 1000014032 | 1       |
| Henry Lamotte/Anzag        | Olive oil, native | 5272401    | 1       |
| Henry Lamotte/Anzag        | Olive oil, native | 123773     | 1       |
| Henry Lamotte/Anzag        | Olive oil, native | 590340003  | 1       |
| Henry Lamotte/Anzag        | Olive oil, native | 8000821001 | 1       |
| Henry Lamotte/Anzag        | Olive oil, native | 8001648001 | 1       |
| Henry Lamotte/Gehe         | Olive oil, native | 5903400003 | 1       |
| Henry Lamotte/Gehe         | Olive oil, native | 8004067001 | 1       |
| Henry Lamotte/Gehe         | Olive oil, native | 1000010861 | 1       |
| Henry Lamotte/Kehr         | Olive oil, native | 8000652001 | 1       |
| Henry Lamotte/Kehr         | Olive oil, native | 1000010861 | 1       |
| Henry lamotte/N/PZN:004... | Olive oil, native | 5372701    | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8000821001 | 1       |

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| Supplier                   | Substance         | Batch      | Spectra |
|----------------------------|-------------------|------------|---------|
| Henry Lamotte/Noweda       | Olive oil, native | 8001854001 | 2       |
| Henry Lamotte/Noweda       | Olive oil, native | 8002366001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8003580002 | 2       |
| Henry Lamotte/Noweda       | Olive oil, native | 8002827001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8002656001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8003420001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8004251002 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8004827001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 1000010090 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 8004499001 | 1       |
| Henry Lamotte/Noweda       | Olive oil, native | 1000010808 | 2       |
| Henry Lamotte/Noweda       | Olive oil, native | 1000010861 | 1       |
| Henry Lamotte/Phoenix      | Olive oil, native | 8001431001 | 1       |
| Henry Lamotte/Phoenix      | Olive oil, native | 8001948002 | 1       |
| Henry Lamotte/Phoenix      | Olive oil, native | 8004499001 | 1       |
| Henry Lamotte/Phönix       | Olive oil, native | 8001648001 | 1       |
| Henry Lamotte/Phönix       | Olive oil, native | 8001948002 | 1       |
| Henry Lamotte/Phönix       | Olive oil, native | 8003420001 | 2       |
| Henry Lamotte/Phönix       | Olive oil, native | 1000004908 | 1       |
| Henry Lamotte/Phönix       | Olive oil, native | 8004499001 | 1       |
| Henry Lamotte/Pönix        | Olive oil, native | 1000012341 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 8000652001 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 8003801001 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 8004499001 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 1000010808 | 2       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 1000011651 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 1000012341 | 3       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 100013127  | 2       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 1000013127 | 1       |
| Henry Lamotte/Sanacorp     | Olive oil, native | 1000014704 | 1       |
| Henry Laotte/Anzag         | Olive oil, native | 8004499001 | 1       |
| Henry Laotte/Phönix        | Olive oil, native | 20001867   | 1       |
| Henry Lomoote/Gehe         | Olive oil, native | 8004067001 | 1       |
| Henry Lomoote/Noweda       | Olive oil, native | 1000010861 | 1       |
| Henry, Noweda              | Olive oil, native | 5232201    | 1       |
| Henry/Gehe                 | Olive oil, native | 8001854001 | 1       |
| Henry/Phönix               | Olive oil, native | 8004067001 | 1       |
| Henry/Phönix               | Olive oil, native | 1000010090 | 1       |
| HenryLamotte               | Olive oil, native | 5232201    | 2       |
| HenryLamotte/AHD           | Olive oil, native | 8002821001 | 1       |
| HenryLamotte/AHD           | Olive oil, native | 8003801001 | 1       |
| HenryLamotte/AHD           | Olive oil, native | 8004499001 | 1       |
| HenryLamotte/AHD           | Olive oil, native | 1000010861 | 1       |
| HenryLamotte/AHD           | Olive oil, native | 1000012617 | 1       |
| HenryLamotte/Alliance H... | Olive oil, native | 8003580002 | 1       |
| Henrylamotte/Noweda        | Olive oil, native | 1000010090 | 1       |
| HenryLamotte/Noweda        | Olive oil, native | 1000004908 | 3       |
| HenryLamotte/Noweda        | Olive oil, native | 8002827001 | 1       |
| HenryLamotte/Noweda        | Olive oil, native | 8004067001 | 1       |
| HenryLamotte/Noweda        | Olive oil, native | 8004499001 | 2       |
| HenryLamotte/Phoenix       | Olive oil, native | 5272401    | 4       |
| HenryLamotte/Phönix        | Olive oil, native | 8002827001 | 1       |
| HenryLamotte/Phönix        | Olive oil, native | 8004499001 | 1       |
| HerryLamotte GmbH          | Olive oil, native | 1000010861 | 1       |
| HL/N/25.02.13 PZN:3649899  | Olive oil, native | 5283901    | 1       |
| Ichthyol/Phönix            | Olive oil, native | 274236     | 1       |
| J.H. Müller                | Olive oil, native | 140115     | 1       |
| Jenne                      | Olive oil, native | 18208101   | 1       |
| Jenne                      | Olive oil, native | 18208106   | 1       |
| JENNE                      | Olive oil, native | 17361108   | 1       |

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| Supplier               | Substance         | Batch        | Spectra |
|------------------------|-------------------|--------------|---------|
| Kehr                   | Olive oil, native | 308229       | 1       |
| Kehr/Henry Lamotte     | Olive oil, native | 8003801001   | 1       |
| Kögl                   | Olive oil, native | 300609164116 | 1       |
| Kögl                   | Olive oil, native | 300609163816 | 1       |
| Kögl                   | Olive oil, native | 44102170917  | 2       |
| Kögl                   | Olive oil, native | 44102171417  | 1       |
| Kögl                   | Olive oil, native | 20172174     | 2       |
| Kögl                   | Olive oil, native | 1700561      | 1       |
| Kögl                   | Olive oil, native | 1702444      | 2       |
| Kögl                   | Olive oil, native | 1803441      | 1       |
| Krieger                | Olive oil, native | 17361101     | 1       |
| L12                    | Olive oil, native | 1637402      | 1       |
| L12                    | Olive oil, native | 16327402     | 1       |
| lamotte                | Olive oil, native | 1000004908   | 2       |
| Lamotte                | Olive oil, native | 5232201      | 3       |
| Lamotte                | Olive oil, native | 5272401      | 4       |
| Lamotte                | Olive oil, native | 123773       | 2       |
| Lamotte                | Olive oil, native | 5372701      | 1       |
| Lamotte                | Olive oil, native | 5464901      | 2       |
| Lamotte                | Olive oil, native | 5470202      | 3       |
| Lamotte                | Olive oil, native | 5903400003   | 1       |
| Lamotte                | Olive oil, native | 8000821001   | 1       |
| Lamotte                | Olive oil, native | 8003801001   | 1       |
| Lamotte                | Olive oil, native | 8004194001   | 2       |
| Lamotte                | Olive oil, native | 8004067001   | 1       |
| Lamotte                | Olive oil, native | 8004499001   | 1       |
| Lamotte                | Olive oil, native | 800449901    | 1       |
| Lamotte                | Olive oil, native | 1000010861   | 5       |
| Lamotte / 2            | Olive oil, native | 1000013127   | 1       |
| Lamotte / AHC          | Olive oil, native | 1000010808   | 1       |
| Lamotte / Gehe         | Olive oil, native | 5127501      | 1       |
| Lamotte / Gehe         | Olive oil, native | 5283901      | 2       |
| Lamotte / Gehe         | Olive oil, native | 5372701      | 2       |
| Lamotte / Gehe         | Olive oil, native | L901         | 1       |
| Lamotte / Gehe         | Olive oil, native | 5470202      | 1       |
| Lamotte / Gehe         | Olive oil, native | 5734701      | 1       |
| Lamotte / Gehe         | Olive oil, native | 8003420001   | 1       |
| Lamotte / Gehe         | Olive oil, native | 8004251002   | 2       |
| Lamotte / Noweda       | Olive oil, native | 124392       | 1       |
| Lamotte / Noweda       | Olive oil, native | 1000010808   | 4       |
| Lamotte / Phönix       | Olive oil, native | 8001431001   | 1       |
| Lamotte / Sanacorp     | Olive oil, native | 5283901      | 1       |
| Lamotte Gmbh           | Olive oil, native | 8001948002   | 1       |
| Lamotte Noweda         | Olive oil, native | 8004499001   | 1       |
| Lamotte Phönix         | Olive oil, native | 5272401      | 2       |
| Lamotte Phönix         | Olive oil, native | 5271504      | 1       |
| Lamotte/ Anzag         | Olive oil, native | 5271504      | 1       |
| Lamotte/ Anzag         | Olive oil, native | 5470202      | 2       |
| Lamotte/ Gehe          | Olive oil, native | 1000011651   | 1       |
| Lamotte/ Noweda        | Olive oil, native | 8004067001   | 1       |
| Lamotte/ Noweda        | Olive oil, native | 1000010861   | 1       |
| Lamotte/AHD/28.01.2020 | Olive oil, native | 1000010861   | 1       |
| Lamotte/Alliance       | Olive oil, native | 5623601      | 1       |
| Lamotte/Alliance       | Olive oil, native | 5891202      | 1       |
| Lamotte/Alliance       | Olive oil, native | 8003420001   | 1       |
| Lamotte/Alliance       | Olive oil, native | 8004827001   | 1       |
| Lamotte/Alliance       | Olive oil, native | 8004499001   | 1       |
| Lamotte/Alliance       | Olive oil, native | 1000010861   | 1       |
| Lamotte/Alliance       | Olive oil, native | 1000014032   | 1       |
| Lamotte/Anzag          | Olive oil, native | 5734701      | 1       |

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| Supplier                | Substance         | Batch      | Spectra |
|-------------------------|-------------------|------------|---------|
| Lamotte/Anzag           | Olive oil, native | 5671901    | 1       |
| Lamotte/Anzag           | Olive oil, native | 5813601    | 1       |
| Caelo                   | Olive oil, native | 5470202    | 1       |
| Lamotte/Ebert           | Olive oil, native | 8003420001 | 1       |
| Lamotte/Ebert           | Olive oil, native | 8003580002 | 1       |
| lamotte/Gehe            | Olive oil, native | 5271504    | 1       |
| Lamotte/GH/11.09.13     | Olive oil, native | 5271504    | 1       |
| Lamotte/Kehr            | Olive oil, native | 8000821001 | 1       |
| Lamotte/Kehr            | Olive oil, native | 8003580002 | 1       |
| lamotte/noweda          | Olive oil, native | 8001854001 | 1       |
| lamotte/noweda          | Olive oil, native | 8002827001 | 1       |
| lamotte/noweda          | Olive oil, native | 1000004908 | 1       |
| Lamotte/Noweda          | Olive oil, native | 5464901    | 1       |
| Lamotte/Noweda          | Olive oil, native | 8002656001 | 1       |
| Lamotte/Noweda          | Olive oil, native | 8003580002 | 1       |
| Lamotte/Noweda          | Olive oil, native | 8003801001 | 1       |
| Lamotte/Noweda          | Olive oil, native | 1000012617 | 1       |
| LAMOTTE/NOWEDA          | Olive oil, native | 5470202    | 1       |
| Lamotte/Noweda 19.02.21 | Olive oil, native | 1000014032 | 1       |
| Lamotte/Phoenix         | Olive oil, native | 8002868001 | 1       |
| Lamotte/Phoenix         | Olive oil, native | 8002827001 | 2       |
| Lamotte/Phoenix         | Olive oil, native | 8003580002 | 1       |
| Lamotte/Phoenix         | Olive oil, native | 8003801001 | 2       |
| Lamotte/Phoenix         | Olive oil, native | 8004251002 | 2       |
| Lamotte/Phoenix         | Olive oil, native | 8004499001 | 1       |
| Lamotte/Phönix          | Olive oil, native | 1000004908 | 1       |
| Lamotte/Phönix          | Olive oil, native | 1000013127 | 1       |
| Lamotte/Sanacorp        | Olive oil, native | 5271504    | 2       |
| Lamotte/Sanacorp        | Olive oil, native | 5470202    | 1       |
| Lamotte/Sanacorp        | Olive oil, native | 5671901    | 1       |
| Lamotte/Sanacorp        | Olive oil, native | 8000652001 | 1       |
| Lamotte/Sanacorp        | Olive oil, native | 8002827001 | 1       |
| Lamotte/Sanacorp        | Olive oil, native | 1000010861 | 1       |
| Lamotte/Spangro         | Olive oil, native | 5671901    | 1       |
| Lamotte/Spangro         | Olive oil, native | 5891202    | 1       |
| Lamotte/Spangro         | Olive oil, native | 8000652001 | 1       |
| Lamotte/Spangro         | Olive oil, native | 5903400003 | 1       |
| Lamotte/Spangro         | Olive oil, native | 8001648001 | 1       |
| Lamotte/Spangro         | Olive oil, native | 8002366001 | 2       |
| Lamotte/Spangro         | Olive oil, native | 8004194001 | 1       |
| Lamotte/Spangro         | Olive oil, native | 8004251002 | 1       |
| Lamotte/V.d.L.          | Olive oil, native | 5464901    | 1       |
| Midas                   | Olive oil, native | 17121602   | 1       |
| Midas                   | Olive oil, native | 17236501   | 1       |
| Midas                   | Olive oil, native | 17361106   | 1       |
| Midas                   | Olive oil, native | 17361107   | 1       |
| Midas                   | Olive oil, native | 18121101   | 1       |
| Midas                   | Olive oil, native | 18208101   | 1       |
| Noweda                  | Olive oil, native | 267376     | 1       |
| Noweda                  | Olive oil, native | 268118     | 1       |
| Noweda                  | Olive oil, native | 12077702   | 2       |
| Noweda                  | Olive oil, native | 272270     | 2       |
| Noweda                  | Olive oil, native | 12141309   | 1       |
| Noweda                  | Olive oil, native | 277050     | 2       |
| Noweda                  | Olive oil, native | 13350102   | 1       |
| Noweda                  | Olive oil, native | 284143     | 1       |
| Noweda                  | Olive oil, native | 5813601    | 1       |
| Noweda                  | Olive oil, native | 295282     | 1       |
| Noweda                  | Olive oil, native | 15399702   | 1       |
| Noweda                  | Olive oil, native | 17121610   | 1       |

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| Supplier                  | Substance         | Batch       | Spectra |
|---------------------------|-------------------|-------------|---------|
| Noweda                    | Olive oil, native | 17236505    | 1       |
| Noweda                    | Olive oil, native | 18003205    | 1       |
| Noweda                    | Olive oil, native | 18208107    | 1       |
| Noweda                    | Olive oil, native | 18208106    | 1       |
| Noweda                    | Olive oil, native | 19001848    | 2       |
| Noweda                    | Olive oil, native | 1000010861  | 1       |
| Noweda                    | Olive oil, native | 19212001    | 1       |
| Noweda                    | Olive oil, native | 20001867    | 1       |
| Noweda                    | Olive oil, native | 20001410002 | 1       |
| Caelo                     | Olive oil, native | 13010906    | 6       |
| Caelo                     | Olive oil, native | 13147001    | 9       |
| Noweda 14.6.2019          | Olive oil, native | 18311906    | 1       |
| Noweda 21.02.2015         | Olive oil, native | 14182302    | 1       |
| Noweda am 28.09.2017      | Olive oil, native | 17121602    | 1       |
| Bombastus                 | Olive oil, native | 285642      | 1       |
| Caelo                     | Olive oil, native | 15112704    | 3       |
| Caelo                     | Olive oil, native | 8004067001  | 2       |
| Caelo                     | Olive oil, native | 15311401    | 4       |
| Caelo                     | Olive oil, native | 15311402    | 8       |
| Caelo                     | Olive oil, native | 18208110    | 30      |
| Noweda/Henry              | Olive oil, native | 8004499001  | 1       |
| Noweda/Henry Lamotte      | Olive oil, native | 1000010861  | 1       |
| Noweda/Lamotte            | Olive oil, native | 5813601     | 1       |
| Noweda/Lamotte 28.07.2... | Olive oil, native | 1000016418  | 1       |
| Noweda/pharmachem         | Olive oil, native | 18208106    | 1       |
| Noweda-Henry              | Olive oil, native | 5891202     | 1       |
| Caelo                     | Olive oil, native | 19212006    | 2       |
| Pharmachem/AHD            | Olive oil, native | 13324703    | 1       |
| phoenix                   | Olive oil, native | 17361101    | 1       |
| phoenix                   | Olive oil, native | 17121602    | 1       |
| phoenix                   | Olive oil, native | 19076109    | 1       |
| Phoenix                   | Olive oil, native | 5470202     | 1       |
| Phoenix                   | Olive oil, native | 13350103    | 1       |
| Phoenix                   | Olive oil, native | 1406009-01  | 1       |
| Phoenix                   | Olive oil, native | 14118603    | 1       |
| Phoenix                   | Olive oil, native | 16035310    | 1       |
| Phoenix                   | Olive oil, native | 16035311    | 1       |
| Phoenix                   | Olive oil, native | 17121606    | 1       |
| Phoenix                   | Olive oil, native | 3101        | 1       |
| Phoenix                   | Olive oil, native | 3203        | 1       |
| Phoenix                   | Olive oil, native | 8004067001  | 1       |
| Phoenix                   | Olive oil, native | 18208101    | 1       |
| Phoenix                   | Olive oil, native | 18311910    | 1       |
| Phoenix                   | Olive oil, native | 19076105    | 1       |
| Phoenix                   | Olive oil, native | 19076109    | 1       |
| Phoenix                   | Olive oil, native | 191370512   | 1       |
| PHOENIX 03.03.2014        | Olive oil, native | 1305014-01  | 1       |
| Phoenix 3.08.18           | Olive oil, native | 17361106    | 1       |
| Phoenix 3.2.2014          | Olive oil, native | 13350102    | 1       |
| Caelo                     | Olive oil, native | 5271504     | 2       |
| Caelo                     | Olive oil, native | CE834/ES    | 1       |
| Phonix                    | Olive oil, native | 17361107    | 1       |
| phönix                    | Olive oil, native | 13010904    | 1       |
| phönix                    | Olive oil, native | 17361101    | 1       |
| Phönix                    | Olive oil, native | 12274106    | 1       |
| Phönix                    | Olive oil, native | 20032       | 1       |
| Phönix                    | Olive oil, native | 14118606    | 1       |
| Phönix                    | Olive oil, native | 15216308    | 1       |
| Phönix                    | Olive oil, native | 15399702    | 1       |
| Phönix                    | Olive oil, native | 16212803    | 1       |

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| Supplier                | Substance         | Batch          | Spectra |
|-------------------------|-------------------|----------------|---------|
| Phönix                  | Olive oil, native | 8002026001     | 1       |
| Phönix                  | Olive oil, native | 16327402       | 1       |
| Phönix                  | Olive oil, native | 16327406       | 1       |
| Phönix                  | Olive oil, native | 17038702       | 1       |
| Phönix                  | Olive oil, native | 8002366001     | 1       |
| Phönix                  | Olive oil, native | 8002656001     | 1       |
| Phönix                  | Olive oil, native | 17121610       | 1       |
| Phönix                  | Olive oil, native | 8003420001     | 1       |
| Phönix                  | Olive oil, native | 17001926       | 1       |
| Phönix                  | Olive oil, native | 8003580002     | 2       |
| Phönix                  | Olive oil, native | 18002119       | 1       |
| Phönix                  | Olive oil, native | 18003205       | 4       |
| Phönix                  | Olive oil, native | 17361107       | 1       |
| Phönix                  | Olive oil, native | 18208101       | 1       |
| Phönix                  | Olive oil, native | 8004251002     | 1       |
| Phönix                  | Olive oil, native | 18208110       | 1       |
| Phönix                  | Olive oil, native | 1000010090     | 2       |
| Phönix                  | Olive oil, native | 1000010808     | 1       |
| Phönix                  | Olive oil, native | 19076104       | 1       |
| Phönix                  | Olive oil, native | 1000011651     | 2       |
| Phönix                  | Olive oil, native | 200371604      | 1       |
| Phönix                  | Olive oil, native | 19006021       | 1       |
| Phönix                  | Olive oil, native | 20000171       | 2       |
| PHÖNIX                  | Olive oil, native | 16327402       | 1       |
| PHÖNIX                  | Olive oil, native | 17236501       | 1       |
| PHÖNIX                  | Olive oil, native | 17361106       | 1       |
| PHÖNIX                  | Olive oil, native | 18208101       | 2       |
| Phönix 09.11.12         | Olive oil, native | 272270         | 1       |
| Phönix 11.02.2019       | Olive oil, native | 19076109       | 1       |
| Phönix Gotha            | Olive oil, native | 277049         | 1       |
| Phönix Gotha            | Olive oil, native | 15216308       | 1       |
| Phönix Gotha            | Olive oil, native | 17001926       | 1       |
| Phönix Gotha            | Olive oil, native | 19002974       | 1       |
| Phönix, 07.11.2011      | Olive oil, native | 278583         | 1       |
| Caelo                   | Olive oil, native | 46646018208101 | 1       |
| Bombastus               | Olive oil, native | 303449         | 2       |
| Caelo                   | Olive oil, native | 16212801       | 19      |
| Phönix/Lamotte          | Olive oil, native | 5272401        | 1       |
| Raben-Apotheke Mildenau | Olive oil, native | 5623601        | 1       |
| Raben-Apotheke Mildenau | Olive oil, native | 5891202        | 3       |
| Resana                  | Olive oil, native | 1806-5973      | 1       |
| Resana GmbH             | Olive oil, native | 1811-6110      | 1       |
| Resana GmbH             | Olive oil, native | 1905-6233      | 1       |
| S.Binder                | Olive oil, native | 284144         | 1       |
| sanacorp                | Olive oil, native | 13147004       | 1       |
| sanacorp                | Olive oil, native | 14306904       | 1       |
| sanacorp                | Olive oil, native | 15112706       | 1       |
| Sanacorp                | Olive oil, native | 273659         | 1       |
| Sanacorp                | Olive oil, native | 12141306       | 2       |
| Sanacorp                | Olive oil, native | 12274108       | 1       |
| Sanacorp                | Olive oil, native | 277050         | 1       |
| Sanacorp                | Olive oil, native | 13C08-N06      | 1       |
| Sanacorp                | Olive oil, native | 279609         | 1       |
| Sanacorp                | Olive oil, native | 14306903       | 1       |
| Sanacorp                | Olive oil, native | 1/AKD4         | 2       |
| Sanacorp                | Olive oil, native | 15112705       | 1       |
| Sanacorp                | Olive oil, native | 5/AKD13        | 1       |
| Sanacorp                | Olive oil, native | 308229         | 1       |
| Sanacorp                | Olive oil, native | 17236501       | 2       |

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| Supplier                   | Substance           | Batch            | Spectra |
|----------------------------|---------------------|------------------|---------|
| Sanacorp                   | Olive oil, native   | 18002119         | 2       |
| Sanacorp                   | Olive oil, native   | 18005453         | 2       |
| Sanacorp                   | Olive oil, native   | 18121101         | 1       |
| Sanacorp                   | Olive oil, native   | 18311901         | 1       |
| Sanacorp                   | Olive oil, native   | 19001848         | 1       |
| Sanacorp                   | Olive oil, native   | 18311906         | 1       |
| Sanacorp                   | Olive oil, native   | 20001410002      | 1       |
| Caelo                      | Olive oil, native   | 18002119         | 3       |
| Sanacorp 18.03.14 EK 10... | Olive oil, native   | 13G18-B08-286423 | 1       |
| Sanacorp 21.01.15 EK 10... | Olive oil, native   | 14G08-B02-300073 | 1       |
| Sanacorp/ Lamotte          | Olive oil, native   | 8004194001       | 1       |
| Sanacorp/ Lamotte          | Olive oil, native   | 8004251002       | 6       |
| Sanacorp/ Lamotte          | Olive oil, native   | 1000010090       | 3       |
| Caelo                      | Olive oil, native   | 14306903         | 4       |
| Spangro                    | Olive oil, native   | 5107101          | 1       |
| Spangro 15.3.2019          | Olive oil, native   | 18208110         | 2       |
| Spangro 24.03.2014         | Olive oil, native   | 13350104         | 1       |
| Spinnrad/Sanacorp          | Olive oil, native   | 18208110         | 1       |
| Caelo                      | Olive oil, native   | 12274108         | 1       |
| Caelo                      | Olive oil, native   | 15112703         | 3       |
| Taoasis                    | Olive oil, native   | 17236501         | 1       |
| Caelo                      | Olive oil, native   | 1301094          | 1       |
| VDL Nachliefer; 10.7.15... | Olive oil, native   | 291374           | 2       |
| Wolf Handelsgesellschaft   | Olive oil, native   | 128972ES         | 1       |
| Wolfvital                  | Olive oil, native   | W48B041          | 1       |
| Euro OTC                   | Omega-3-fish oil    | 1807006-03       | 1       |
| Euro OTC                   | Omega-3-fish oil    | 1603021-01       | 1       |
| Euro OTC                   | Omega-3-fish oil    | 1311028-01       | 1       |
| Henry Lamotte              | Omega-3-fish oil    | 1000002451       | 1       |
| Henry Lamotte Oils         | Omega-3-fish oil    | 123305           | 1       |
| Henry Lamotte Oils/Sana... | Omega-3-fish oil    | 123780           | 1       |
| Lamotte/Gehe               | Omega-3-fish oil    | 124247           | 3       |
| Lamotte/Sanacorp           | Omega-3-fish oil    | 123883           | 1       |
| AHD                        | Peanut oil, refined | 14246901         | 1       |
| AHD                        | Peanut oil, refined | 17169001         | 2       |
| AHD, 06.05.2013            | Peanut oil, refined | 12323204         | 1       |
| Caelo                      | Peanut oil, refined | 17014402         | 1       |
| Caelo                      | Peanut oil, refined | 192485011        | 14      |
| Alliance Healthcare        | Peanut oil, refined | 13129203         | 1       |
| Anzag                      | Peanut oil, refined | 12c30n02         | 1       |
| Anzag                      | Peanut oil, refined | 12H31N05         | 1       |
| Anzag                      | Peanut oil, refined | 12323204         | 1       |
| Anzag                      | Peanut oil, refined | 13358804         | 1       |
| Anzag                      | Peanut oil, refined | 15015103         | 1       |
| Anzag                      | Peanut oil, refined | 18208207         | 1       |
| Anzag 07.12.12             | Peanut oil, refined | 12203803         | 1       |
| Anzag 16.01.13 ek.5.13     | Peanut oil, refined | 5204402          | 2       |
| Bombastus                  | Peanut oil, refined | 8273799          | 1       |
| Fagron                     | Peanut oil, refined | 12C30-N02        | 1       |
| Caelo                      | Peanut oil, refined | 12203806         | 3       |
| Fagron                     | Peanut oil, refined | 14033601         | 1       |
| apomix                     | Peanut oil, refined | 17169001         | 1       |
| Aponorm/Wepa               | Peanut oil, refined | 17169018         | 1       |
| Bambastus/ Anzag           | Peanut oil, refined | 19005220         | 3       |
| Bombastus                  | Peanut oil, refined | 18004538         | 1       |
| Bombastus                  | Peanut oil, refined | 267966           | 4       |
| Bombastus                  | Peanut oil, refined | 276103           | 2       |
| Bombastus                  | Peanut oil, refined | 263129           | 1       |
| Bombastus                  | Peanut oil, refined | 286393           | 5       |
| Bombastus                  | Peanut oil, refined | 283866           | 1       |

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| Supplier  | Substance           | Batch       | Spectra |
|-----------|---------------------|-------------|---------|
| Bombastus | Peanut oil, refined | 288510      | 3       |
| Bombastus | Peanut oil, refined | 291671      | 4       |
| Bombastus | Peanut oil, refined | 295272      | 10      |
| Bombastus | Peanut oil, refined | 299136      | 7       |
| Bombastus | Peanut oil, refined | 302017      | 5       |
| Bombastus | Peanut oil, refined | 303460      | 5       |
| Bombastus | Peanut oil, refined | 16071104    | 1       |
| Bombastus | Peanut oil, refined | 305319      | 3       |
| Bombastus | Peanut oil, refined | 310008      | 2       |
| Bombastus | Peanut oil, refined | 18002249    | 10      |
| Bombastus | Peanut oil, refined | 18005645    | 6       |
| Bombastus | Peanut oil, refined | 19001936    | 2       |
| Bombastus | Peanut oil, refined | 20001707    | 2       |
| Bombastus | Peanut oil, refined | 19000224    | 7       |
| Bombastus | Peanut oil, refined | 19005220    | 3       |
| Bombastus | Peanut oil, refined | 20001708    | 2       |
| Bombastus | Peanut oil, refined | 29527       | 1       |
| Bombastus | Peanut oil, refined | 20003735    | 1       |
| Bombastus | Peanut oil, refined | 21000287    | 1       |
| Bombastus | Peanut oil, refined | 271512      | 3       |
| Bombastus | Peanut oil, refined | 297242      | 3       |
| Bombastus | Peanut oil, refined | 284286      | 5       |
| Bombastus | Peanut oil, refined | 80370408    | 2       |
| Bombastus | Peanut oil, refined | 307541      | 7       |
| Bombastus | Peanut oil, refined | 310007      | 6       |
| Bombastus | Peanut oil, refined | 17169010    | 1       |
| Bombastus | Peanut oil, refined | 18014402    | 1       |
| Bombastus | Peanut oil, refined | 18014405    | 1       |
| Bombastus | Peanut oil, refined | 17001078    | 3       |
| Bombastus | Peanut oil, refined | 30100       | 1       |
| Bombastus | Peanut oil, refined | 307254      | 1       |
| Bombastus | Peanut oil, refined | 264328      | 1       |
| Bombastus | Peanut oil, refined | 18002250    | 1       |
| Bombastus | Peanut oil, refined | 17001078    | 1       |
| Caelo     | Peanut oil, refined | 16071104    | 14      |
| Caelo     | Peanut oil, refined | 11100201    | 2       |
| Caelo     | Peanut oil, refined | 11313905    | 4       |
| Caelo     | Peanut oil, refined | 11163201    | 1       |
| Caelo     | Peanut oil, refined | 11254503    | 1       |
| Caelo     | Peanut oil, refined | 6061202     | 1       |
| Caelo     | Peanut oil, refined | 26061203    | 1       |
| Caelo     | Peanut oil, refined | 1207211954  | 1       |
| Caelo     | Peanut oil, refined | 12101503    | 8       |
| Caelo     | Peanut oil, refined | 24081208    | 1       |
| Caelo     | Peanut oil, refined | 12101502    | 3       |
| Caelo     | Peanut oil, refined | 9101201     | 1       |
| Caelo     | Peanut oil, refined | 3112M-01954 | 1       |
| Caelo     | Peanut oil, refined | 12203803    | 15      |
| Caelo     | Peanut oil, refined | 10208605    | 1       |
| Caelo     | Peanut oil, refined | 1211503     | 1       |
| Caelo     | Peanut oil, refined | 21121205    | 1       |
| Caelo     | Peanut oil, refined | 12274302    | 22      |
| Caelo     | Peanut oil, refined | 12041092    | 1       |
| Caelo     | Peanut oil, refined | 7031307     | 1       |
| Caelo     | Peanut oil, refined | 28031304    | 1       |
| Caelo     | Peanut oil, refined | 3061303     | 1       |
| Caelo     | Peanut oil, refined | 8061303     | 1       |
| Caelo     | Peanut oil, refined | 12323205    | 3       |
| Caelo     | Peanut oil, refined | 9091303     | 1       |
| Caelo     | Peanut oil, refined | 30101312    | 1       |

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| <b>Supplier</b> | <b>Substance</b>    | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------|--------------|----------------|
| Caelo           | Peanut oil, refined | 5314601      | 1              |
| Caelo           | Peanut oil, refined | 16011403     | 1              |
| Caelo           | Peanut oil, refined | 13358804     | 23             |
| Caelo           | Peanut oil, refined | 28021406     | 1              |
| Caelo           | Peanut oil, refined | 14033601     | 17             |
| Caelo           | Peanut oil, refined | 13051403     | 1              |
| Caelo           | Peanut oil, refined | 1358804      | 1              |
| Caelo           | Peanut oil, refined | 23051406     | 1              |
| Caelo           | Peanut oil, refined | 5592601      | 3              |
| Caelo           | Peanut oil, refined | 25091405     | 1              |
| Caelo           | Peanut oil, refined | 14246901     | 15             |
| Caelo           | Peanut oil, refined | 14115403     | 5              |
| Caelo           | Peanut oil, refined | 14111401     | 1              |
| Caelo           | Peanut oil, refined | 30121415     | 1              |
| Caelo           | Peanut oil, refined | 14246902     | 5              |
| Caelo           | Peanut oil, refined | 20021502     | 1              |
| Caelo           | Peanut oil, refined | 14355903     | 6              |
| Caelo           | Peanut oil, refined | 14355905     | 14             |
| Caelo           | Peanut oil, refined | 15015104     | 14             |
| Caelo           | Peanut oil, refined | 15208506     | 20             |
| Caelo           | Peanut oil, refined | 15208501     | 3              |
| Caelo           | Peanut oil, refined | 2742         | 1              |
| Caelo           | Peanut oil, refined | 15012016     | 1              |
| Caelo           | Peanut oil, refined | 15331506     | 1              |
| Caelo           | Peanut oil, refined | 16071101     | 20             |
| Caelo           | Peanut oil, refined | 2813         | 1              |
| Caelo           | Peanut oil, refined | 16071105     | 19             |
| Caelo           | Peanut oil, refined | 8000666005   | 1              |
| Caelo           | Peanut oil, refined | 16071106     | 2              |
| Caelo           | Peanut oil, refined | 16071103     | 22             |
| Caelo           | Peanut oil, refined | 16259502     | 1              |
| Caelo           | Peanut oil, refined | 160711       | 1              |
| Caelo           | Peanut oil, refined | 301000       | 1              |
| Caelo           | Peanut oil, refined | 1624502      | 1              |
| Caelo           | Peanut oil, refined | 16355302     | 3              |
| Caelo           | Peanut oil, refined | 170420802    | 1              |
| Caelo           | Peanut oil, refined | 19081707     | 1              |
| Caelo           | Peanut oil, refined | 17169001     | 35             |
| Caelo           | Peanut oil, refined | 305319       | 2              |
| Caelo           | Peanut oil, refined | 171690015409 | 1              |
| Caelo           | Peanut oil, refined | 17169018     | 38             |
| Caelo           | Peanut oil, refined | 17328601     | 91             |
| Caelo           | Peanut oil, refined | 1769018      | 1              |
| Caelo           | Peanut oil, refined | 18014402     | 64             |
| Caelo           | Peanut oil, refined | 16071804     | 1              |
| Caelo           | Peanut oil, refined | 18014405     | 28             |
| Caelo           | Peanut oil, refined | 22091807     | 1              |
| Caelo           | Peanut oil, refined | 18014        | 1              |
| Caelo           | Peanut oil, refined | 18296001     | 35             |
| Caelo           | Peanut oil, refined | 18926002     | 1              |
| Caelo           | Peanut oil, refined | 18296006     | 1              |
| Caelo           | Peanut oil, refined | 18196007     | 1              |
| Caelo           | Peanut oil, refined | 1829009      | 1              |
| Caelo           | Peanut oil, refined | 20001473004  | 27             |
| Caelo           | Peanut oil, refined | 192485001    | 1              |
| Caelo           | Peanut oil, refined | CHB192485006 | 1              |
| Caelo           | Peanut oil, refined | 12041902     | 10             |
| Caelo           | Peanut oil, refined | 20001473010  | 1              |
| Caelo           | Peanut oil, refined | 20001473008  | 11             |
| Caelo           | Peanut oil, refined | 20003610006  | 6              |

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| Supplier | Substance           | Batch            | Spectra |
|----------|---------------------|------------------|---------|
| Caelo    | Peanut oil, refined | 18208202         | 93      |
| Caelo    | Peanut oil, refined | 1416A-01954      | 1       |
| Caelo    | Peanut oil, refined | 17A10-B01-335073 | 1       |
| Caelo    | Peanut oil, refined | 190592008        | 1       |
| Caelo    | Peanut oil, refined | 160711104        | 1       |
| Caelo    | Peanut oil, refined | 3614M-01954      | 1       |
| Caelo    | Peanut oil, refined | 1232304          | 1       |
| Caelo    | Peanut oil, refined | 5204402          | 1       |
| Caelo    | Peanut oil, refined | 13306102         | 8       |
| Caelo    | Peanut oil, refined | 1224302          | 1       |
| Caelo    | Peanut oil, refined | 18296002         | 72      |
| Caelo    | Peanut oil, refined | 103(18296001)    | 1       |
| Caelo    | Peanut oil, refined | 15015103         | 15      |
| Caelo    | Peanut oil, refined | 22092003         | 1       |
| Caelo    | Peanut oil, refined | 3318             | 1       |
| Caelo    | Peanut oil, refined | 13358801         | 10      |
| Caelo    | Peanut oil, refined | 171699010        | 1       |
| Caelo    | Peanut oil, refined | 12274305         | 3       |
| Caelo    | Peanut oil, refined | 180208202        | 2       |
| Caelo    | Peanut oil, refined | 17169002         | 2       |
| Caelo    | Peanut oil, refined | 13129203         | 34      |
| Caelo    | Peanut oil, refined | 1531502          | 1       |
| Caelo    | Peanut oil, refined | 302017           | 2       |
| Caelo    | Peanut oil, refined | 920Q-01954       | 1       |
| Caelo    | Peanut oil, refined | 12080802         | 4       |
| Caelo    | Peanut oil, refined | 13129202         | 1       |
| Caelo    | Peanut oil, refined | 14115405         | 15      |
| Caelo    | Peanut oil, refined | 13J25-B06-291838 | 1       |
| Caelo    | Peanut oil, refined | 14246903         | 19      |
| Caelo    | Peanut oil, refined | 17042802         | 56      |
| Caelo    | Peanut oil, refined | 4617M-01954      | 1       |
| Caelo    | Peanut oil, refined | 17328602         | 2       |
| Caelo    | Peanut oil, refined | 1829600002       | 1       |
| Caelo    | Peanut oil, refined | 19059212         | 1       |
| Caelo    | Peanut oil, refined | 107063           | 1       |
| Caelo    | Peanut oil, refined | 102(17169001)    | 1       |
| Caelo    | Peanut oil, refined | 18296007         | 26      |
| Caelo    | Peanut oil, refined | 13306101         | 2       |
| Caelo    | Peanut oil, refined | 15208505         | 16      |
| Caelo    | Peanut oil, refined | 15273402         | 18      |
| Caelo    | Peanut oil, refined | 15273403         | 17      |
| Caelo    | Peanut oil, refined | 15331502         | 28      |
| Caelo    | Peanut oil, refined | 15331501         | 20      |
| Caelo    | Peanut oil, refined | 15331503         | 20      |
| Caelo    | Peanut oil, refined | 16071102         | 28      |
| Caelo    | Peanut oil, refined | 18208207         | 19      |
| Caelo    | Peanut oil, refined | 18296009         | 31      |
| Caelo    | Peanut oil, refined | 19187101         | 43      |
| Caelo    | Peanut oil, refined | 192485006        | 43      |
| Caelo    | Peanut oil, refined | 12274032         | 1       |
| Caelo    | Peanut oil, refined | 3444             | 1       |
| Caelo    | Peanut oil, refined | 3813E1954        | 1       |
| Caelo    | Peanut oil, refined | 13358803         | 14      |
| Caelo    | Peanut oil, refined | 16348001         | 55      |
| Caelo    | Peanut oil, refined | 18208204         | 3       |
| Caelo    | Peanut oil, refined | 19059208         | 9       |
| Caelo    | Peanut oil, refined | 190631806        | 1       |
| Caelo    | Peanut oil, refined | 20003610014      | 4       |
| Caelo    | Peanut oil, refined | 13358803klare    | 1       |
| Caelo    | Peanut oil, refined | 173286015616     | 1       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Caelo                      | Peanut oil, refined | 14115406    | 14      |
| Caelo                      | Peanut oil, refined | 13173003    | 1       |
| Caelo                      | Peanut oil, refined | 15015106    | 4       |
| Caelo                      | Peanut oil, refined | 17169010    | 39      |
| Caelo                      | Peanut oil, refined | 17169020    | 1       |
| Caelo                      | Peanut oil, refined | 17169011    | 2       |
| Caelo                      | Peanut oil, refined | 19059214    | 10      |
| Caelo                      | Peanut oil, refined | 1013A-01954 | 2       |
| Caelo                      | Peanut oil, refined | 1671101     | 1       |
| Caesaer/Jenne              | Peanut oil, refined | 18208202    | 1       |
| Caesar & Loretz            | Peanut oil, refined | 16071103    | 1       |
| Caesar & Loretz            | Peanut oil, refined | 17169001    | 2       |
| Caesar & Loretz            | Peanut oil, refined | 17169018    | 1       |
| Caesar & Loretz            | Peanut oil, refined | 18208202    | 1       |
| Caesar & Loretz            | Peanut oil, refined | 192485006   | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 13358803    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 14115404    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 15208506    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 16249502    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18208207    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18296002    | 10      |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18296001    | 4       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18296007    | 7       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18296003    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18208204    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 18296009    | 8       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 19059205    | 10      |
| Caesar & Loretz GmbH       | Peanut oil, refined | 19059206    | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 19059209    | 2       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 19059214    | 3       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 192485006   | 9       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 192485011   | 6       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 1000013880  | 1       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 20001473008 | 10      |
| Caesar & Loretz GmbH       | Peanut oil, refined | 20001473004 | 3       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 20003610006 | 6       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 20003610014 | 2       |
| Caesar & Loretz GmbH       | Peanut oil, refined | 21001091003 | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 17169018    | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 18208202    | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 192485006   | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 18296009    | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 20001473008 | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 18296001    | 1       |
| Caesar & Loretz GmbH / ... | Peanut oil, refined | 18296009    | 1       |
| Caesar & Loretz GmbH Hi... | Peanut oil, refined | 14115404    | 1       |
| Caesar & Loretz GmbH Hi... | Peanut oil, refined | 15331502    | 1       |
| Caesar & Loretz GmbH, P... | Peanut oil, refined | 17328601    | 1       |
| Caesar & Loretz GmbH/ K... | Peanut oil, refined | 18296002    | 1       |
| Caesar & Loretz GmbH/AEP   | Peanut oil, refined | 192485011   | 1       |
| Caesar & Loretz GmbH/all   | Peanut oil, refined | 20001473008 | 1       |
| Caesar & Loretz GmbH/Gehe  | Peanut oil, refined | 1000012961  | 1       |
| Caesar & Loretz GmbH/Gehe  | Peanut oil, refined | 192485011   | 1       |
| Caesar & Loretz GmbH/Gehe  | Peanut oil, refined | 20003610006 | 1       |
| Caesar & Loretz GmbH/Je... | Peanut oil, refined | 192485006   | 1       |
| Caesar & Loretz GmbH/Kr... | Peanut oil, refined | 19059208    | 1       |
| Caesar & Loretz GmbH/No... | Peanut oil, refined | 192485006   | 1       |
| Caesar & Loretz GmbH/No... | Peanut oil, refined | 192485011   | 1       |
| Caesar & Loretz GmbH/No... | Peanut oil, refined | 20001473004 | 1       |
| Caesar & Loretz GmbH/ph... | Peanut oil, refined | 18208202    | 1       |

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| <b>Supplier</b>              | <b>Substance</b>    | <b>Batch</b>     | <b>Spectra</b> |
|------------------------------|---------------------|------------------|----------------|
| Caesar & Loretz GmbH/Ph...   | Peanut oil, refined | 19059214         | 1              |
| Caesar & Loretz GmbH/Ph...   | Peanut oil, refined | 19059205         | 1              |
| Caesar & Loretz Hilden       | Peanut oil, refined | 18208207         | 1              |
| Caesar & Loretz Hilden       | Peanut oil, refined | 18296002         | 2              |
| Caesar & Loretz Hilden       | Peanut oil, refined | 19059205         | 2              |
| Caesar & Loretz Hilden       | Peanut oil, refined | 20001473004      | 1              |
| Caesar & Loretz Hilden/...   | Peanut oil, refined | 19059208         | 1              |
| Caesar & Loretz Hilden/...   | Peanut oil, refined | 192485006        | 3              |
| Caesar & Loretz/ Caesar...   | Peanut oil, refined | 17328601         | 1              |
| Caesar & Loretz/AHC          | Peanut oil, refined | 16071104         | 1              |
| Caesar & Loretz/Noweda       | Peanut oil, refined | 15273402         | 1              |
| Caesar & Loretz/Noweda       | Peanut oil, refined | 16249502         | 1              |
| caesar & loretz GmbH, Phö... | Peanut oil, refined | 16071101         | 1              |
| Caesar&Loretz GmbH           | Peanut oil, refined | 18296001         | 1              |
| Caesar&Loretz GmbH, PHön...  | Peanut oil, refined | 16348001         | 1              |
| Caesar&Loretz GmbH/Anzag     | Peanut oil, refined | 12323204         | 1              |
| Caesar&Loretz GmbH/Anzag     | Peanut oil, refined | 13306106         | 1              |
| Caesar&Loretz GmbH/Anzag     | Peanut oil, refined | 14355905         | 1              |
| Caesar&lorenz,Phoenix        | Peanut oil, refined | 14033601         | 1              |
| Caesar&lorenz,Phoenix        | Peanut oil, refined | 14246903         | 1              |
| caesar&lorenz,phönix         | Peanut oil, refined | 1508506          | 1              |
| Caesar&LoretzGmbH, Phoe...   | Peanut oil, refined | 18296002         | 2              |
| Caesar/Lorenz                | Peanut oil, refined | 12274302         | 1              |
| Caleo                        | Peanut oil, refined | 14/10-B07        | 1              |
| Caleo/ Noweda                | Peanut oil, refined | 18014405         | 1              |
| Caleo/Phönix                 | Peanut oil, refined | 15015103         | 1              |
| Carelo                       | Peanut oil, refined | 192485006        | 1              |
| Cealo                        | Peanut oil, refined | 16071104         | 1              |
| Cealo/AHD                    | Peanut oil, refined | 16071101         | 1              |
| Cealo/Noweda                 | Peanut oil, refined | 17169010         | 1              |
| Cealo/Phoenix                | Peanut oil, refined | 14115405         | 1              |
| Ebert & Jacobi               | Peanut oil, refined | 18014402         | 1              |
| Ebert & Jacobi               | Peanut oil, refined | 18296002         | 1              |
| Ebert KKH 20.09.16           | Peanut oil, refined | 8001417003       | 2              |
| Ebert und Jacobi             | Peanut oil, refined | 18296002         | 1              |
| EuRho                        | Peanut oil, refined | 1204018-01       | 1              |
| Euro OTC                     | Peanut oil, refined | 17169018         | 1              |
| Euro OTC                     | Peanut oil, refined | 1301015          | 1              |
| Euro OTC                     | Peanut oil, refined | 17328601         | 1              |
| Euro OTC                     | Peanut oil, refined | 5592601          | 1              |
| Euro OTC                     | Peanut oil, refined | 17042802         | 1              |
| Euro OTC                     | Peanut oil, refined | 192485006        | 1              |
| Fagron                       | Peanut oil, refined | 16A27-B04-322519 | 2              |
| Fagron                       | Peanut oil, refined | 5012A-01954      | 1              |
| Fagron                       | Peanut oil, refined | 12J23-N01        | 2              |
| Fagron                       | Peanut oil, refined | 12c30-n02        | 1              |
| Fagron                       | Peanut oil, refined | 12A05-N05        | 1              |
| Fagron                       | Peanut oil, refined | 5314601          | 1              |
| Fagron                       | Peanut oil, refined | 12J23-N01        | 1              |
| Fagron                       | Peanut oil, refined | 13g30-n05        | 1              |
| Fagron                       | Peanut oil, refined | 14D11-B05-294677 | 5              |
| Fagron                       | Peanut oil, refined | 13J25B06291837   | 1              |
| Fagron                       | Peanut oil, refined | 13j25b06291837   | 1              |
| Fagron                       | Peanut oil, refined | P101P102P103     | 1              |
| Fagron                       | Peanut oil, refined | 14246901         | 1              |
| Fagron                       | Peanut oil, refined | 14D11-B05-294672 | 2              |
| Fagron                       | Peanut oil, refined | 14355904         | 2              |
| Fagron                       | Peanut oil, refined | 130723           | 1              |
| Fagron                       | Peanut oil, refined | 15B11B02304989   | 2              |
| Fagron                       | Peanut oil, refined | 15E07-B04        | 1              |

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| Supplier                    | Substance           | Batch            | Spectra |
|-----------------------------|---------------------|------------------|---------|
| Fagron                      | Peanut oil, refined | 14/10-B07-300426 | 1       |
| Fagron                      | Peanut oil, refined | 15E07-B04-308779 | 2       |
| Fagron                      | Peanut oil, refined | 14/10-B07-300438 | 1       |
| Fagron                      | Peanut oil, refined | 16A27B04322519   | 1       |
| Fagron                      | Peanut oil, refined | 17169018         | 1       |
| Fagron                      | Peanut oil, refined | 17A10-B01-335073 | 1       |
| Fagron                      | Peanut oil, refined | 18G28-B01-354810 | 2       |
| Fagron                      | Peanut oil, refined | 18D13-B01-352516 | 3       |
| Fagron                      | Peanut oil, refined | 13G30-N05        | 7       |
| Fagron                      | Peanut oil, refined | 13G30-N05        | 1       |
| Fagron                      | Peanut oil, refined | 12H31-N05        | 4       |
| Fagron                      | Peanut oil, refined | 17K16-B07-344245 | 4       |
| Fagron                      | Peanut oil, refined | 20G28-F07-373623 | 1       |
| Fagron                      | Peanut oil, refined | 17A10-B01-332760 | 2       |
| Fagron                      | Peanut oil, refined | 19E17-B01        | 1       |
| Fagron                      | Peanut oil, refined | 17K16-B07-347994 | 1       |
| Fagron                      | Peanut oil, refined | 18G28B01354810   | 2       |
| Fagron                      | Peanut oil, refined | 16071105         | 2       |
| Fagron                      | Peanut oil, refined | 15331506         | 1       |
| Fagron                      | Peanut oil, refined | 19E17-B01-362264 | 1       |
| Fagron                      | Peanut oil, refined | 19J18-F01-365916 | 5       |
| Fagron                      | Peanut oil, refined | 13J25-B06-291838 | 4       |
| Fagron                      | Peanut oil, refined | 131943           | 2       |
| Fagron                      | Peanut oil, refined | 18208202         | 1       |
| Fagron                      | Peanut oil, refined | 14I-10B07-300438 | 1       |
| Fagron                      | Peanut oil, refined | 14I10-B07-300438 | 2       |
| Fagron                      | Peanut oil, refined | 1410-B07-300438  | 1       |
| Fagron                      | Peanut oil, refined | 133498           | 1       |
| Fargon/Phoenix              | Peanut oil, refined | 12A05-N05        | 1       |
| Fiebig                      | Peanut oil, refined | 800143002        | 1       |
| Fiebig                      | Peanut oil, refined | 18014405         | 1       |
| Fiebig                      | Peanut oil, refined | 18208202         | 1       |
| Fiebig                      | Peanut oil, refined | 18296002         | 1       |
| Fiebig 02.10.12 ek: 5,13EUR | Peanut oil, refined | 5231601          | 1       |
| Fischar                     | Peanut oil, refined | 5904100001       | 2       |
| Gatt-Koller                 | Peanut oil, refined | 1900111          | 1       |
| gehe                        | Peanut oil, refined | 310007           | 1       |
| Gehe                        | Peanut oil, refined | 12041902         | 1       |
| Gehe                        | Peanut oil, refined | 13306103         | 1       |
| Gehe                        | Peanut oil, refined | 13306106         | 1       |
| Gehe                        | Peanut oil, refined | 14115405         | 1       |
| Gehe                        | Peanut oil, refined | 14355904         | 1       |
| Gehe                        | Peanut oil, refined | 15015104         | 2       |
| Gehe                        | Peanut oil, refined | 15015103         | 1       |
| Gehe                        | Peanut oil, refined | 15273402         | 1       |
| Gehe                        | Peanut oil, refined | 15331503         | 1       |
| Gehe                        | Peanut oil, refined | 16071101         | 1       |
| Gehe                        | Peanut oil, refined | 16071102         | 1       |
| Gehe                        | Peanut oil, refined | 16071103         | 1       |
| Gehe                        | Peanut oil, refined | 16249502         | 3       |
| Gehe                        | Peanut oil, refined | 17042802         | 1       |
| Gehe                        | Peanut oil, refined | 17328601         | 1       |
| Gehe                        | Peanut oil, refined | 18014405         | 1       |
| Gehe                        | Peanut oil, refined | 18208202         | 1       |
| Gehe                        | Peanut oil, refined | 18296001         | 1       |
| Gehe                        | Peanut oil, refined | 18296002         | 1       |
| Gehe                        | Peanut oil, refined | 18296007         | 1       |
| Gehe                        | Peanut oil, refined | 19245006         | 1       |
| GEHE                        | Peanut oil, refined | 17042802         | 2       |
| GEHE                        | Peanut oil, refined | 18296002         | 1       |

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| Supplier                   | Substance           | Batch            | Spectra |
|----------------------------|---------------------|------------------|---------|
| Bombastus                  | Peanut oil, refined | 301000           | 1       |
| Gehe amax                  | Peanut oil, refined | 15331503         | 1       |
| gehe/ cealo                | Peanut oil, refined | 15015104         | 1       |
| Gehe/ EuRho                | Peanut oil, refined | 192485006        | 1       |
| Caelo                      | Peanut oil, refined | 16071103/1160117 | 1       |
| Fagron                     | Peanut oil, refined | 17042802         | 1       |
| H. Lamotte/Sanacorp        | Peanut oil, refined | 1000012961       | 1       |
| H.Lamotte Oils/Gehe/05...  | Peanut oil, refined | 1000014700       | 1       |
| H.Lamotte/Noweda           | Peanut oil, refined | 5231601          | 1       |
| H.Lamotte/Noweda           | Peanut oil, refined | 1034             | 1       |
| H.Lamotte/Noweda           | Peanut oil, refined | 5473601          | 1       |
| H.Lamotte/Noweda           | Peanut oil, refined | 5699601          | 1       |
| H.Lamotte/Noweda           | Peanut oil, refined | 5904100001       | 1       |
| Hanry Lamotte Oils GmbH    | Peanut oil, refined | 1000010888       | 1       |
| Hedinger                   | Peanut oil, refined | 14355903         | 1       |
| Hedinger                   | Peanut oil, refined | 18296002         | 1       |
| Henry Lamotte              | Peanut oil, refined | 520442           | 1       |
| Henry Lamotte              | Peanut oil, refined | 611Erdnuss       | 1       |
| Henry Lamotte              | Peanut oil, refined | 5204402          | 1       |
| Henry Lamotte              | Peanut oil, refined | 5699601          | 2       |
| Henry Lamotte              | Peanut oil, refined | 5473601          | 1       |
| Henry Lamotte              | Peanut oil, refined | 5592601          | 1       |
| Henry Lamotte              | Peanut oil, refined | 5697901          | 2       |
| Henry Lamotte              | Peanut oil, refined | 5904100001       | 2       |
| Henry Lamotte              | Peanut oil, refined | 8000666005       | 3       |
| Henry Lamotte              | Peanut oil, refined | 1000012961       | 4       |
| Henry Lamotte              | Peanut oil, refined | 1000010888       | 2       |
| Henry LAmotte              | Peanut oil, refined | 1000010888       | 1       |
| henry lamotte / Gehe       | Peanut oil, refined | 1000010888       | 1       |
| Henry Lamotte / GEHE       | Peanut oil, refined | 1000010888       | 1       |
| Henry Lamotte / Noweda     | Peanut oil, refined | 1000012961       | 1       |
| Henry Lamotte / Sanacorp   | Peanut oil, refined | 1000010888       | 1       |
| Henry Lamotte / Sanacorp   | Peanut oil, refined | 1000013880       | 1       |
| Henry Lamotte /Gehe        | Peanut oil, refined | 1000014700       | 1       |
| Henry Lamotte GmbH/Hold... | Peanut oil, refined | 5231601          | 1       |
| Henry Lamotte Oil / Gehe   | Peanut oil, refined | 8004235001       | 1       |
| Henry Lamotte Oils         | Peanut oil, refined | 1000010888       | 1       |
| Henry Lamotte Oils         | Peanut oil, refined | 1000012961       | 1       |
| Henry Lamotte oils GmbH    | Peanut oil, refined | 5204402          | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 16071105         | 1       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 5473601          | 1       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 5699601          | 1       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 5697901          | 4       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 5904100091       | 1       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8000666005       | 3       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8001417003       | 3       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8001959001       | 3       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8001943002       | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8003146001       | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8004235001       | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 8004304002       | 5       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 1000010888       | 4       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 1000012961       | 1       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 1000011859       | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 1000013128       | 2       |
| Henry Lamotte Oils GmbH    | Peanut oil, refined | 1000014700       | 1       |
| Henry Lamotte oils GmbH... | Peanut oil, refined | 1000013880       | 1       |
| Henry Lamotte Oils GmbH... | Peanut oil, refined | 1000013880       | 1       |
| Henry Lamotte Oils GmbH... | Peanut oil, refined | 1000010888       | 1       |
| Henry Lamotte oils GmbH... | Peanut oil, refined | 5699601          | 2       |

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| Supplier                   | Substance           | Batch        | Spectra |
|----------------------------|---------------------|--------------|---------|
| Henry Lamotte Oils GmbH... | Peanut oil, refined | 5473601      | 2       |
| Henry Lamotte Oils GmbH... | Peanut oil, refined | 1000010888   | 1       |
| Henry Lamotte Oils GmbH... | Peanut oil, refined | 1000012961   | 1       |
| Henry Lamotte Oils/Gehe    | Peanut oil, refined | 1000010888   | 1       |
| Henry Lamotte Oils/Noweda  | Peanut oil, refined | 1000014700   | 1       |
| Henry Lamotte Oils/Phönix  | Peanut oil, refined | 1000012961   | 1       |
| Henry Lamotte Oils/Phönix  | Peanut oil, refined | 1000014700   | 1       |
| Henry Lamotte Olis GmbH... | Peanut oil, refined | 1000013880   | 1       |
| Henry Lamotte/             | Peanut oil, refined | 1000010888   | 1       |
| Henry Lamotte/Gehe         | Peanut oil, refined | 1000010888   | 1       |
| Henry Lamotte/Gehe         | Peanut oil, refined | 1000012961   | 1       |
| Henry Lamotte/Jenne        | Peanut oil, refined | 5204402      | 1       |
| Henry Lamotte/Noweda       | Peanut oil, refined | 1000012961   | 1       |
| Henry Lamotte/Noweda       | Peanut oil, refined | 1000013880   | 1       |
| Henry Lamotte/Noweda       | Peanut oil, refined | 1000014700   | 2       |
| Henry Lamotte/Phoenix      | Peanut oil, refined | 1000012961   | 2       |
| Henry Lamotte/Phönix       | Peanut oil, refined | 8001959001   | 1       |
| Henry Lamotte/Phönix       | Peanut oil, refined | 17169001     | 1       |
| Henry Lamotte/Phönix       | Peanut oil, refined | 1000012961   | 1       |
| Henry Lamotte/Phönix       | Peanut oil, refined | 1000013112   | 1       |
| Henry Lamotte/Sanacorp     | Peanut oil, refined | 1000010888   | 1       |
| Henry/phönix               | Peanut oil, refined | 8003146001   | 1       |
| Henry/sana                 | Peanut oil, refined | 65295        | 1       |
| HenryLamotte/Phoenix       | Peanut oil, refined | 5231601      | 1       |
| Jenne                      | Peanut oil, refined | 16071104     | 1       |
| Kastner                    | Peanut oil, refined | 5592601      | 2       |
| Klenk                      | Peanut oil, refined | 18296009     | 1       |
| Kögl                       | Peanut oil, refined | 425612165116 | 3       |
| Kögl                       | Peanut oil, refined | 393021711179 | 1       |
| Kögl                       | Peanut oil, refined | 39302171717  | 1       |
| Kögl                       | Peanut oil, refined | 216906172917 | 1       |
| Kögl                       | Peanut oil, refined | 1701232      | 1       |
| Kögl                       | Peanut oil, refined | 1800078      | 1       |
| Kögl                       | Peanut oil, refined | 1801368      | 1       |
| Kögl                       | Peanut oil, refined | 1801916      | 2       |
| L12                        | Peanut oil, refined | 18208202     | 2       |
| L12                        | Peanut oil, refined | 18208207     | 2       |
| Lamolle/Phoenix            | Peanut oil, refined | 10000012961  | 1       |
| Lamotte                    | Peanut oil, refined | 5204402      | 2       |
| Lamotte                    | Peanut oil, refined | 5473601      | 3       |
| Lamotte                    | Peanut oil, refined | 5592601      | 1       |
| Lamotte                    | Peanut oil, refined | 5699501      | 1       |
| Lamotte                    | Peanut oil, refined | 5699601      | 3       |
| Lamotte                    | Peanut oil, refined | 5697901      | 2       |
| Lamotte                    | Peanut oil, refined | 1000010888   | 2       |
| Lamotte                    | Peanut oil, refined | 1000012961   | 1       |
| Lamotte                    | Peanut oil, refined | 1000013880   | 1       |
| Lamotte / Gehe             | Peanut oil, refined | 5404101      | 1       |
| lamotte oils GmbH /Gehe    | Peanut oil, refined | 1000010888   | 1       |
| Lamotte/Alliance Health... | Peanut oil, refined | 1000010888   | 1       |
| Lamotte/Anzag              | Peanut oil, refined | 1000010888   | 1       |
| lamotte/Gehe               | Peanut oil, refined | 5592601      | 3       |
| Lamotte/GEHE               | Peanut oil, refined | 5204402      | 1       |
| Lamotte/gehe/03.02.21      | Peanut oil, refined | 1000012961   | 1       |
| lamotte/Jenne              | Peanut oil, refined | 5404101      | 1       |
| Lamotte/Noweda             | Peanut oil, refined | 1000014700   | 1       |
| Lamotte/Phoenix            | Peanut oil, refined | 5592601      | 1       |
| Lamotte/Phoenix            | Peanut oil, refined | 5699601      | 2       |
| Lamotte/Phoenix            | Peanut oil, refined | 5904100001   | 1       |
| lamotte/Phönix             | Peanut oil, refined | 5697901      | 1       |

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| Supplier                   | Substance           | Batch            | Spectra |
|----------------------------|---------------------|------------------|---------|
| Lamotte/Phönix             | Peanut oil, refined | 16071102         | 1       |
| Lamotte/Phönix             | Peanut oil, refined | 8003146001       | 1       |
| Lamotte/sanacorp           | Peanut oil, refined | 1000012961       | 1       |
| LaMotte/Spangro            | Peanut oil, refined | 1000012961       | 1       |
| Marktapotheke              | Peanut oil, refined | 16071101         | 1       |
| Midas                      | Peanut oil, refined | 16348001         | 2       |
| Midas                      | Peanut oil, refined | 17169001         | 1       |
| Midas                      | Peanut oil, refined | 17169010         | 1       |
| Caelo                      | Peanut oil, refined | 16249502         | 75      |
| Nachprüfung                | Peanut oil, refined | 1426903          | 1       |
| Nachprüfung                | Peanut oil, refined | 123456           | 1       |
| Noweda                     | Peanut oil, refined | 11B16-N02        | 2       |
| Noweda                     | Peanut oil, refined | 5103001          | 1       |
| Noweda                     | Peanut oil, refined | 123508           | 1       |
| Noweda                     | Peanut oil, refined | 12C30-N02        | 1       |
| Noweda                     | Peanut oil, refined | 12274302         | 1       |
| Noweda                     | Peanut oil, refined | 11313905         | 1       |
| Noweda                     | Peanut oil, refined | 13358804         | 1       |
| Noweda                     | Peanut oil, refined | 1410B07300438    | 1       |
| Noweda                     | Peanut oil, refined | 16071104         | 1       |
| Noweda                     | Peanut oil, refined | 17328601         | 1       |
| Noweda                     | Peanut oil, refined | 18014405         | 1       |
| Noweda                     | Peanut oil, refined | 18208202         | 2       |
| Noweda                     | Peanut oil, refined | 20003610006      | 1       |
| Fagron                     | Peanut oil, refined | 8004597002       | 2       |
| Pala                       | Peanut oil, refined | 18296007         | 1       |
| Phoenix                    | Peanut oil, refined | 13306106         | 1       |
| Phoenix                    | Peanut oil, refined | 13358803         | 1       |
| Phoenix                    | Peanut oil, refined | 14115405         | 1       |
| Phoenix                    | Peanut oil, refined | 14355905         | 1       |
| Phoenix                    | Peanut oil, refined | 16348001         | 1       |
| Phoenix                    | Peanut oil, refined | 17042802         | 1       |
| Phoenix                    | Peanut oil, refined | 3100             | 1       |
| Phoenix                    | Peanut oil, refined | 17328601         | 1       |
| Phoenix                    | Peanut oil, refined | 17169010         | 1       |
| Phoenix                    | Peanut oil, refined | 3189             | 1       |
| Phoenix                    | Peanut oil, refined | 18014402         | 1       |
| Phoenix                    | Peanut oil, refined | 18296002         | 2       |
| Phoenix                    | Peanut oil, refined | 18296009         | 1       |
| Phoenix                    | Peanut oil, refined | 1000010888       | 1       |
| Phönix                     | Peanut oil, refined | 5204402          | 1       |
| Phönix                     | Peanut oil, refined | 12274302         | 2       |
| Phönix                     | Peanut oil, refined | 5404101          | 1       |
| Phönix                     | Peanut oil, refined | 5473601          | 1       |
| Phönix                     | Peanut oil, refined | 13358801         | 1       |
| Phönix                     | Peanut oil, refined | 17042802         | 1       |
| Phönix                     | Peanut oil, refined | 18014405         | 1       |
| Phönix                     | Peanut oil, refined | 18208202         | 2       |
| Phönix / Henry Lamotte ... | Peanut oil, refined | 1000010888       | 1       |
| Phönix 25.09.2019          | Peanut oil, refined | 18296009         | 1       |
| Phönix Gotha               | Peanut oil, refined | 13306103         | 1       |
| Phönix Gotha               | Peanut oil, refined | 13129202         | 1       |
| Phönix Gotha               | Peanut oil, refined | 15273403         | 1       |
| Phönix Gotha               | Peanut oil, refined | 310007           | 1       |
| Phönix Gotha               | Peanut oil, refined | 19059205         | 1       |
| Phönix Gotha               | Peanut oil, refined | 192485007        | 1       |
| Caelo                      | Peanut oil, refined | 12323204         | 16      |
| Fagron                     | Peanut oil, refined | 18K23-B01-357637 | 1       |
| Purren Apotheke            | Peanut oil, refined | 11313905         | 1       |
| Resana GmbH                | Peanut oil, refined | 1908-6406        | 1       |

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| Supplier                   | Substance                     | Batch       | Spectra |
|----------------------------|-------------------------------|-------------|---------|
| Resana GmbH / GEHE         | Peanut oil, refined           | 1805-5943   | 1       |
| Sanacorp                   | Peanut oil, refined           | 12274302    | 2       |
| Sanacorp                   | Peanut oil, refined           | 13129203    | 1       |
| Sanacorp                   | Peanut oil, refined           | 14355904    | 1       |
| Sanacorp                   | Peanut oil, refined           | 16348001    | 1       |
| Sanacorp                   | Peanut oil, refined           | 17042802    | 2       |
| Sanacorp                   | Peanut oil, refined           | 17169010    | 1       |
| Sanacorp                   | Peanut oil, refined           | 17169018    | 1       |
| Sanacorp                   | Peanut oil, refined           | 18208202    | 1       |
| Sanacorp                   | Peanut oil, refined           | 18296001    | 1       |
| Sanacorp                   | Peanut oil, refined           | 19059205    | 1       |
| Sanacorp                   | Peanut oil, refined           | 19059208    | 1       |
| Sanacorp                   | Peanut oil, refined           | 20001473004 | 1       |
| Caelo                      | Peanut oil, refined           | 466158      | 1       |
| Caelo                      | Peanut oil, refined           | 14355904    | 14      |
| Bombastus                  | Peanut oil, refined           | 266753      | 1       |
| Caelo                      | Peanut oil, refined           | 1000014700  | 1       |
| Caelo                      | Peanut oil, refined           | 11313906    | 2       |
| Caelo                      | Peanut oil, refined           | 19059205    | 38      |
| Sanacorp;13.05.15; 2,94EUR | Peanut oil, refined           | 14355905    | 1       |
| Caelo                      | Rapeseed oil, refined         | 15214407    | 1       |
| Caelo                      | Rapeseed oil, refined         | 12054406    | 2       |
| Caelo                      | Rapeseed oil, refined         | 16185004    | 3       |
| Caelo                      | Rapeseed oil, refined         | 17213901    | 3       |
| Caelo                      | Rapeseed oil, refined         | 18047201    | 1       |
| Caelo                      | Rapeseed oil, refined         | 15296106    | 3       |
| Caelo                      | Rapeseed oil, refined         | 15214403    | 1       |
| Caelo                      | Rapeseed oil, refined         | 18047204    | 1       |
| Caelo                      | Rapeseed oil, refined         | 16185006    | 1       |
| Bombastus                  | Safflower oil, refined type I | 21000062    | 1       |
| Bombastus                  | Safflower oil, refined type I | 309851      | 2       |
| Bombastus                  | Safflower oil, refined type I | 19000029    | 1       |
| Caelo                      | Safflower oil, refined type I | 299143      | 1       |
| Caelo                      | Safflower oil, refined type I | 16184901    | 1       |
| Caelo                      | Safflower oil, refined type I | 305902      | 1       |
| AHD                        | Sesame oil, refined           | 1000007221  | 1       |
| Caelo                      | Sesame oil, refined           | 20003617003 | 1       |
| Alliance Healthcare        | Sesame oil, refined           | 17177703    | 1       |
| Alliance Healthcare        | Sesame oil, refined           | 17332103    | 1       |
| Alliance Healthcare        | Sesame oil, refined           | 17332106    | 1       |
| Alliance Healthcare        | Sesame oil, refined           | 1000009220  | 1       |
| Alliance/Verta             | Sesame oil, refined           | 92011       | 2       |
| Bremer Schlüssel/Phönix    | Sesame oil, refined           | 1000007221  | 1       |
| Caelo                      | Sesame oil, refined           | 18331302    | 9       |
| Caelo                      | Sesame oil, refined           | 10241803    | 1       |
| Caelo                      | Sesame oil, refined           | 30051201    | 1       |
| Caelo                      | Sesame oil, refined           | 12054501    | 1       |
| Caelo                      | Sesame oil, refined           | 5319201     | 2       |
| Caelo                      | Sesame oil, refined           | 25051305    | 1       |
| Caelo                      | Sesame oil, refined           | 21051305    | 1       |
| Caelo                      | Sesame oil, refined           | 13011107    | 7       |
| Caelo                      | Sesame oil, refined           | 14101302    | 1       |
| Caelo                      | Sesame oil, refined           | 13011105    | 1       |
| Caelo                      | Sesame oil, refined           | 13011109    | 1       |
| Caelo                      | Sesame oil, refined           | 130111107   | 1       |
| Caelo                      | Sesame oil, refined           | 17011405    | 1       |
| Caelo                      | Sesame oil, refined           | 13172906    | 5       |
| Caelo                      | Sesame oil, refined           | 10011503    | 1       |
| Caelo                      | Sesame oil, refined           | 14170004    | 9       |
| Caelo                      | Sesame oil, refined           | 14170001    | 1       |

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| Supplier                   | Substance           | Batch              | Spectra |
|----------------------------|---------------------|--------------------|---------|
| Caelo                      | Sesame oil, refined | 14170005           | 3       |
| Caelo                      | Sesame oil, refined | 14351804           | 6       |
| Caelo                      | Sesame oil, refined | 15239405           | 5       |
| Caelo                      | Sesame oil, refined | 11081513           | 1       |
| Caelo                      | Sesame oil, refined | 1615E-02016        | 1       |
| Caelo                      | Sesame oil, refined | 28041709           | 1       |
| Caelo                      | Sesame oil, refined | 16312505           | 10      |
| Caelo                      | Sesame oil, refined | 16312507           | 8       |
| Caelo                      | Sesame oil, refined | 163125501          | 1       |
| Caelo                      | Sesame oil, refined | 123456             | 1       |
| Caelo                      | Sesame oil, refined | 17177701           | 11      |
| Caelo                      | Sesame oil, refined | 6071715            | 1       |
| Caelo                      | Sesame oil, refined | 1234               | 1       |
| Caelo                      | Sesame oil, refined | 8002939002         | 1       |
| Caelo                      | Sesame oil, refined | 17332102           | 6       |
| Caelo                      | Sesame oil, refined | 1717770            | 1       |
| Caelo                      | Sesame oil, refined | 7071804            | 1       |
| Caelo                      | Sesame oil, refined | 18331309           | 4       |
| Caelo                      | Sesame oil, refined | 19256002           | 8       |
| Caelo                      | Sesame oil, refined | 1925600002         | 1       |
| Caelo                      | Sesame oil, refined | 17177703           | 24      |
| Caelo                      | Sesame oil, refined | 15422706           | 6       |
| Caelo                      | Sesame oil, refined | 17332106           | 11      |
| Caelo                      | Sesame oil, refined | 17332103           | 13      |
| Caelo                      | Sesame oil, refined | 18331301           | 6       |
| Caelo                      | Sesame oil, refined | 183331301          | 1       |
| Caelo                      | Sesame oil, refined | 17332103P-180904-2 | 1       |
| Caelo                      | Sesame oil, refined | 1000007221         | 1       |
| Caelo                      | Sesame oil, refined | 5744101            | 1       |
| Caelo                      | Sesame oil, refined | 1000009220         | 9       |
| Caelo                      | Sesame oil, refined | 13011104           | 4       |
| Caelo                      | Sesame oil, refined | 1000010906         | 1       |
| Caelo                      | Sesame oil, refined | 13011105           | 11      |
| Caelo                      | Sesame oil, refined | 13172908           | 2       |
| Caelo                      | Sesame oil, refined | 15374006           | 6       |
| Caelo                      | Sesame oil, refined | 16312501           | 4       |
| Caelo                      | Sesame oil, refined | 1000005858         | 1       |
| Caelo                      | Sesame oil, refined | 18331305           | 2       |
| Caelo                      | Sesame oil, refined | 15374001           | 17      |
| Caelo                      | Sesame oil, refined | 123826             | 1       |
| Caelo                      | Sesame oil, refined | 18331303           | 1       |
| Caelo                      | Sesame oil, refined | 19256003           | 1       |
| Caelo                      | Sesame oil, refined | 100015599          | 1       |
| Caelo                      | Sesame oil, refined | 5117I-02016        | 1       |
| Caelo                      | Sesame oil, refined | 15422707           | 2       |
| Caelo                      | Sesame oil, refined | 18331308           | 4       |
| Caesar & Loretz GmbH       | Sesame oil, refined | 17332106           | 3       |
| Caesar & Loretz GmbH       | Sesame oil, refined | 18331301           | 5       |
| Caesar & Loretz GmbH       | Sesame oil, refined | 18331308           | 3       |
| Caesar & Loretz GmbH       | Sesame oil, refined | 192560003          | 3       |
| Caesar & Loretz GmbH       | Sesame oil, refined | 1000013957         | 2       |
| Caesar & Loretz GmbH/Pg... | Sesame oil, refined | 192560003          | 1       |
| Caesar und Loretz GmbH     | Sesame oil, refined | 16312505           | 1       |
| Caleo/ Noweda              | Sesame oil, refined | 17332103           | 1       |
| Cealo                      | Sesame oil, refined | 17332106           | 3       |
| Euro OTC                   | Sesame oil, refined | 15374001           | 1       |
| Euro OTC                   | Sesame oil, refined | 1911-6518          | 1       |
| Euro OTC                   | Sesame oil, refined | 13011107           | 1       |
| Euro OTC                   | Sesame oil, refined | 124494             | 1       |
| Fagron                     | Sesame oil, refined | 16312505           | 2       |

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| Supplier                   | Substance           | Batch       | Spectra |
|----------------------------|---------------------|-------------|---------|
| Fagron                     | Sesame oil, refined | 124494      | 2       |
| Fargon/Gehe                | Sesame oil, refined | 5872901     | 1       |
| Fiebig                     | Sesame oil, refined | 1000003864  | 1       |
| Fiebig                     | Sesame oil, refined | 17332103    | 1       |
| Fiebig/Lamotte             | Sesame oil, refined | 7316137     | 1       |
| Fiebig/Medesign            | Sesame oil, refined | 689299      | 1       |
| Gatt-Koller                | Sesame oil, refined | 1803403     | 2       |
| Gehe                       | Sesame oil, refined | 122972      | 1       |
| Gehe                       | Sesame oil, refined | 13397402    | 1       |
| Gehe / 23.01.13 Henry L... | Sesame oil, refined | 122972      | 1       |
| H.Lamotte/Ebert            | Sesame oil, refined | 1000005858  | 1       |
| Hedinger/Noweda            | Sesame oil, refined | 1000005858  | 1       |
| Henr                       | Sesame oil, refined | 123826      | 1       |
| Henry Lamotte              | Sesame oil, refined | 5319201     | 1       |
| Henry Lamotte              | Sesame oil, refined | 123826      | 1       |
| Henry Lamotte              | Sesame oil, refined | 5514801     | 1       |
| Henry Lamotte              | Sesame oil, refined | 2x5639301   | 1       |
| Henry Lamotte              | Sesame oil, refined | 124494      | 1       |
| Henry Lamotte              | Sesame oil, refined | 5744101     | 1       |
| Henry Lamotte              | Sesame oil, refined | 5872901     | 1       |
| Henry Lamotte              | Sesame oil, refined | 8001557002  | 3       |
| Henry Lamotte              | Sesame oil, refined | 8000531001  | 1       |
| Henry Lamotte              | Sesame oil, refined | 1000002705  | 2       |
| Henry Lamotte              | Sesame oil, refined | 2705        | 1       |
| Henry Lamotte              | Sesame oil, refined | 1000005858  | 1       |
| Henry Lamotte              | Sesame oil, refined | 1000009220  | 1       |
| Henry Lamotte              | Sesame oil, refined | 10000009220 | 1       |
| Henry Lamotte              | Sesame oil, refined | 1000010906  | 2       |
| Henry Lamotte / Noweda     | Sesame oil, refined | 5639301     | 1       |
| Henry Lamotte / Noweda     | Sesame oil, refined | 5872001     | 2       |
| Henry Lamotte / Noweda     | Sesame oil, refined | 8000531001  | 1       |
| Henry Lamotte / Noweda     | Sesame oil, refined | 8001557002  | 2       |
| Henry Lamotte Oils         | Sesame oil, refined | 122972      | 1       |
| Henry Lamotte Oils         | Sesame oil, refined | 5319201     | 2       |
| Henry Lamotte Oils         | Sesame oil, refined | 123488      | 2       |
| Henry Lamotte Oils         | Sesame oil, refined | 5514801     | 2       |
| Henry Lamotte Oils         | Sesame oil, refined | 1000009220  | 2       |
| Henry Lamotte Oils         | Sesame oil, refined | 1000010906  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 122972      | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 123488      | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000002705  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000003864  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000005858  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000010906  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000011866  | 7       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000011034  | 1       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000013957  | 3       |
| Henry Lamotte Oils GmbH    | Sesame oil, refined | 1000015599  | 1       |
| Henry Lamotte Oils GMBH... | Sesame oil, refined | 1000013957  | 1       |
| Henry Lamotte Oils GmbH... | Sesame oil, refined | 1000013957  | 1       |
| Henry Lamotte Oils GmbH... | Sesame oil, refined | 1000009220  | 1       |
| Henry Lamotte Oils GmbH... | Sesame oil, refined | 1000003864  | 2       |
| Henry Lamotte Oils GmbH... | Sesame oil, refined | 1000003864  | 1       |
| Henry Lamotte Oils GmbH... | Sesame oil, refined | 1000002705  | 1       |
| Henry Lamotte Oils/Ebert   | Sesame oil, refined | 1000007221  | 1       |
| Henry Lamotte Oils/Phönix  | Sesame oil, refined | 1000010906  | 2       |
| Henry Lamotte/ 26.06.13... | Sesame oil, refined | 123488      | 1       |
| Henry Lamotte/ AHD/ 08...  | Sesame oil, refined | 1000010906  | 1       |
| Henry Lamotte/ Fiebig      | Sesame oil, refined | 1000015599  | 1       |
| Henry Lamotte/ Noweda      | Sesame oil, refined | 5639301     | 1       |

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| Supplier               | Substance           | Batch        | Spectra |
|------------------------|---------------------|--------------|---------|
| Henry Lamotte/ Noweda  | Sesame oil, refined | 1000002705   | 1       |
| Henry Lamotte/ Noweda  | Sesame oil, refined | 1000005858   | 1       |
| Henry Lamotte/ NOWeda  | Sesame oil, refined | 5872901      | 1       |
| Henry lamotte/AHD      | Sesame oil, refined | 1000009220   | 1       |
| Henry Lamotte/AHD      | Sesame oil, refined | 1000010906   | 1       |
| Henry Lamotte/Gehe     | Sesame oil, refined | 1000010906   | 1       |
| Henry Lamotte/Kehr     | Sesame oil, refined | 8001557002   | 1       |
| Henry Lamotte/PH       | Sesame oil, refined | 1000010906   | 1       |
| Henry Lamotte/Sanacorp | Sesame oil, refined | 123826       | 1       |
| Henry Lamotte/Sanacorp | Sesame oil, refined | 8000531001   | 1       |
| Henry Lomotte/Noweda   | Sesame oil, refined | 1000002705   | 1       |
| Henry/Noweda           | Sesame oil, refined | 1000010906   | 4       |
| Henry/Noweda           | Sesame oil, refined | 1000013957   | 5       |
| Henry-Lamotte/Noweda   | Sesame oil, refined | 1000007221   | 2       |
| HenryLamotte/Phoenix   | Sesame oil, refined | 5135601      | 1       |
| HenryLamotteOils       | Sesame oil, refined | 1000003864   | 1       |
| Jenne                  | Sesame oil, refined | 17177703     | 1       |
| Kögl                   | Sesame oil, refined | 303709163816 | 1       |
| Kögl                   | Sesame oil, refined | 1700881      | 2       |
| Kögl                   | Sesame oil, refined | 1702060      | 1       |
| L10                    | Sesame oil, refined | 1000007221   | 1       |
| L12                    | Sesame oil, refined | 1000002705   | 2       |
| L12                    | Sesame oil, refined | 8002939002   | 2       |
| L12                    | Sesame oil, refined | 10000007221  | 1       |
| L12                    | Sesame oil, refined | 1000009220   | 4       |
| L12/Henry Lamotte      | Sesame oil, refined | 8001557002   | 2       |
| L12/Henry Lamotte      | Sesame oil, refined | 1000005858   | 3       |
| Lamotte                | Sesame oil, refined | 4711A-02016  | 1       |
| Lamotte                | Sesame oil, refined | 123826       | 3       |
| Lamotte                | Sesame oil, refined | 123488       | 2       |
| Lamotte                | Sesame oil, refined | 5514801      | 3       |
| Lamotte                | Sesame oil, refined | 124494       | 1       |
| Lamotte                | Sesame oil, refined | 5744101      | 1       |
| Lamotte                | Sesame oil, refined | 582001       | 1       |
| Lamotte                | Sesame oil, refined | 5872001      | 1       |
| Lamotte                | Sesame oil, refined | 5872901      | 1       |
| Lamotte                | Sesame oil, refined | 8000531001   | 3       |
| Lamotte                | Sesame oil, refined | 8001557002   | 4       |
| Lamotte                | Sesame oil, refined | 1000002705   | 1       |
| Lamotte                | Sesame oil, refined | 1000005858   | 1       |
| Lamotte                | Sesame oil, refined | 1000010906   | 1       |
| Lamotte                | Sesame oil, refined | 100003957    | 2       |
| Lamotte / GEHE         | Sesame oil, refined | 1000009220   | 2       |
| Lamotte / Sanacorp     | Sesame oil, refined | 10000010906  | 2       |
| Lamotte über Noweda    | Sesame oil, refined | 1000002705   | 1       |
| Lamotte über Phoenix   | Sesame oil, refined | 5639301      | 2       |
| Lamotte über Phoenix   | Sesame oil, refined | 5821001      | 1       |
| Lamotte über Phoenix   | Sesame oil, refined | 5872001      | 1       |
| Lamotte über Phoenix   | Sesame oil, refined | 5872901      | 2       |
| Lamotte über Phoenix   | Sesame oil, refined | 8000682001   | 2       |
| Lamotte/ Alliance      | Sesame oil, refined | 1000009220   | 1       |
| Lamotte/ Noweda        | Sesame oil, refined | 123488       | 1       |
| lamotte/ Phoenix       | Sesame oil, refined | 5744101      | 1       |
| Lamotte/ Sanacorb      | Sesame oil, refined | 1000013957   | 1       |
| Lamotte/Anzag          | Sesame oil, refined | 10000010906  | 1       |
| Lamotte/Anzag          | Sesame oil, refined | 1000013957   | 1       |
| Lamotte/ANzag          | Sesame oil, refined | 1000010906   | 1       |
| Lamotte/E&J            | Sesame oil, refined | 1000005858   | 1       |
| Lamotte/Fiebig         | Sesame oil, refined | 100000386    | 1       |
| Lamotte/Fiebig         | Sesame oil, refined | 1000005858   | 1       |

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| Supplier                   | Substance            | Batch              | Spectra |
|----------------------------|----------------------|--------------------|---------|
| Lamotte/Fiebig             | Sesame oil, refined  | 1000007221         | 1       |
| Lamotte/Fiebig             | Sesame oil, refined  | 18331301           | 1       |
| Lamotte/Fiebig             | Sesame oil, refined  | 1000010906         | 1       |
| Lamotte/Krieger            | Sesame oil, refined  | 5319201            | 1       |
| Lamotte/Krieger            | Sesame oil, refined  | 1000005858         | 1       |
| Lamotte/Krieger            | Sesame oil, refined  | 1000007221         | 2       |
| Lamotte/Krieger            | Sesame oil, refined  | 1000010906         | 2       |
| Lamotte/noweda             | Sesame oil, refined  | 170713a            | 1       |
| Lamotte/Noweda/ 22.12.2... | Sesame oil, refined  | 1000013957         | 1       |
| Lamotte/Phoenix            | Sesame oil, refined  | 1000009220         | 1       |
| Lamotte/Phönix             | Sesame oil, refined  | 58772901           | 1       |
| Lamotte/Phönix             | Sesame oil, refined  | 8000531001         | 1       |
| Lamotte/Phönix             | Sesame oil, refined  | 84280              | 1       |
| Lamotte/Phönix             | Sesame oil, refined  | 8002939002         | 2       |
| Lamotte/Phönix             | Sesame oil, refined  | 1000009220         | 1       |
| Lamotte/Phönix             | Sesame oil, refined  | 1000010906         | 1       |
| Lamotte/Sanacorp           | Sesame oil, refined  | 5744101            | 1       |
| Lamotte/Sanacorp           | Sesame oil, refined  | 5872001            | 1       |
| LaMotte/Spangro            | Sesame oil, refined  | 8001557002         | 1       |
| LaMotte/Spangro            | Sesame oil, refined  | 1000010906         | 1       |
| Medesign/ Fiebig           | Sesame oil, refined  | 689298             | 1       |
| Midas/Henry Lamotte        | Sesame oil, refined  | 1000003864         | 2       |
| Noweda                     | Sesame oil, refined  | 17332103           | 1       |
| Noweda                     | Sesame oil, refined  | 1000013957         | 1       |
| Caelo                      | Sesame oil, refined  | 192560003          | 6       |
| Noweda/Henry Lamotte Oils  | Sesame oil, refined  | 5872901            | 1       |
| Pharma Wenigerode/Phönix   | Sesame oil, refined  | 92011              | 4       |
| Pharma Wernigerode GmbH    | Sesame oil, refined  | 92011              | 5       |
| Phoenix                    | Sesame oil, refined  | 14170004           | 1       |
| Phoenix                    | Sesame oil, refined  | 16312501           | 1       |
| Phoenix                    | Sesame oil, refined  | 8002939002         | 1       |
| Phoenix Göttingen 07.01... | Sesame oil, refined  | 1000007221         | 1       |
| Phoenix/Lamotte            | Sesame oil, refined  | 5634501            | 1       |
| Phönix 12.12.12            | Sesame oil, refined  | 12054508           | 1       |
| Primavera                  | Sesame oil, refined  | 9A26               | 2       |
| Sanacorp                   | Sesame oil, refined  | 1000002705         | 1       |
| Sanacorp                   | Sesame oil, refined  | 1000011034         | 2       |
| Sanacorp                   | Sesame oil, refined  | 1000010906         | 3       |
| Sanacorp                   | Sesame oil, refined  | 1000011866         | 1       |
| Sanacorp                   | Sesame oil, refined  | 20000741003        | 1       |
| Caelo                      | Sesame oil, refined  | 11224108           | 2       |
| spinnrad                   | Sesame oil, refined  | 320601091          | 1       |
| Taosis                     | Sesame oil, refined  | 1929               | 1       |
| vertanical                 | Sesame oil, refined  | 92011              | 1       |
| Vertanical                 | Sesame oil, refined  | 92011              | 2       |
| Vertanical / Ebert         | Sesame oil, refined  | 92011              | 1       |
| Vertanical GmbH            | Sesame oil, refined  | 92011              | 2       |
| Vertanical GmbH            | Sesame oil, refined  | SOE1000014055      | 2       |
| Vertanical Herstellkit     | Sesame oil, refined  | 92021A             | 1       |
| Vertanical/Anzag           | Sesame oil, refined  | 92011              | 1       |
| Vertanical/Phönix          | Sesame oil, refined  | 92011              | 2       |
| Vertanical/Phönix          | Sesame oil, refined  | SOE1000014055      | 1       |
| Vertanical/Phönix          | Sesame oil, refined  | SOE1000014055-V001 | 1       |
| Abis Pharma/Sanacorp       | Shea butter, refined | 10-500P/0714       | 1       |
| Abis-Pharma                | Shea butter, refined | 22-50P/0919        | 1       |
| Alliance Healthcare        | Shea butter, refined | 17085818           | 1       |
| Alliance Healthcare        | Shea butter, refined | 192058005          | 1       |
| Bahnhofapotheke Kempten... | Shea butter, refined | G16FGFI            | 1       |
| Bombastus                  | Shea butter, refined | 17287502           | 2       |
| cae                        | Shea butter, refined | 18222305           | 1       |

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| Supplier | Substance            | Batch       | Spectra |
|----------|----------------------|-------------|---------|
| Caelo    | Shea butter, refined | 11346509    | 1       |
| Caelo    | Shea butter, refined | 12242404    | 1       |
| Caelo    | Shea butter, refined | 13143807    | 1       |
| Caelo    | Shea butter, refined | 13143814    | 2       |
| Caelo    | Shea butter, refined | 13143813    | 2       |
| Caelo    | Shea butter, refined | 14033312    | 2       |
| Caelo    | Shea butter, refined | 17031501    | 1       |
| Caelo    | Shea butter, refined | 14033314    | 1       |
| Caelo    | Shea butter, refined | 15303005    | 2       |
| Caelo    | Shea butter, refined | 17085806    | 7       |
| Caelo    | Shea butter, refined | 17085803    | 3       |
| Caelo    | Shea butter, refined | 17085809    | 3       |
| Caelo    | Shea butter, refined | 17287506    | 2       |
| Caelo    | Shea butter, refined | 17287509    | 1       |
| Caelo    | Shea butter, refined | 18236004    | 7       |
| Caelo    | Shea butter, refined | 17085815    | 1       |
| Caelo    | Shea butter, refined | 18236002    | 2       |
| Caelo    | Shea butter, refined | 18222305    | 2       |
| Caelo    | Shea butter, refined | 18222304    | 3       |
| Caelo    | Shea butter, refined | 17149601    | 3       |
| Caelo    | Shea butter, refined | 19205802    | 2       |
| Caelo    | Shea butter, refined | 19205804    | 1       |
| Caelo    | Shea butter, refined | 192058004   | 1       |
| Caelo    | Shea butter, refined | 192058003   | 1       |
| Caelo    | Shea butter, refined | 12242416    | 2       |
| Caelo    | Shea butter, refined | 15303009    | 2       |
| Caelo    | Shea butter, refined | 16017203    | 3       |
| Caelo    | Shea butter, refined | 16017214    | 2       |
| Caelo    | Shea butter, refined | 20001135005 | 2       |
| Caelo    | Shea butter, refined | 20001135009 | 1       |
| Caelo    | Shea butter, refined | 11346514    | 1       |
| Caelo    | Shea butter, refined | 12242406    | 1       |
| Caelo    | Shea butter, refined | 16017208    | 4       |
| Caelo    | Shea butter, refined | 17085818    | 2       |
| Caelo    | Shea butter, refined | 192058005   | 1       |
| Caelo    | Shea butter, refined | 26021901    | 1       |
| Caelo    | Shea butter, refined | 8052001     | 1       |
| Caelo    | Shea butter, refined | 12242412    | 1       |
| Caelo    | Shea butter, refined | 10133305    | 2       |
| Caelo    | Shea butter, refined | 17085804    | 2       |
| Caelo    | Shea butter, refined | 14033306    | 1       |
| Caelo    | Shea butter, refined | 14261108    | 4       |
| Caelo    | Shea butter, refined | 19205803    | 4       |
| Caelo    | Shea butter, refined | 13143810    | 1       |
| Caelo    | Shea butter, refined | 17085813    | 1       |
| Caelo    | Shea butter, refined | 17287510    | 4       |
| Caelo    | Shea butter, refined | 12242410    | 1       |
| Caelo    | Shea butter, refined | 1224210     | 1       |
| Caelo    | Shea butter, refined | 14261110    | 1       |
| Caelo    | Shea butter, refined | 15303007    | 1       |
| Caelo    | Shea butter, refined | 14033303    | 1       |
| Caelo    | Shea butter, refined | 14033310    | 1       |
| Caelo    | Shea butter, refined | 14261109    | 1       |
| Caelo    | Shea butter, refined | 14261113    | 7       |
| Caelo    | Shea butter, refined | 15303002    | 4       |
| Caelo    | Shea butter, refined | 15303003    | 2       |
| Caelo    | Shea butter, refined | 15303001    | 1       |
| Caelo    | Shea butter, refined | 16017204    | 2       |
| Caelo    | Shea butter, refined | 16017205    | 3       |
| Caelo    | Shea butter, refined | 16017213    | 1       |

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| <b>Supplier</b>            | <b>Substance</b>     | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|----------------------|--------------|----------------|
| Caelo                      | Shea butter, refined | 17085807     | 2              |
| Caelo                      | Shea butter, refined | 17085802     | 3              |
| Caelo                      | Shea butter, refined | 17085810     | 2              |
| Caelo                      | Shea butter, refined | 17085817     | 1              |
| Caelo                      | Shea butter, refined | 17085821     | 1              |
| Caelo                      | Shea butter, refined | 17085812     | 2              |
| Caelo                      | Shea butter, refined | 17287508     | 1              |
| Caelo                      | Shea butter, refined | 17287505     | 3              |
| Caelo                      | Shea butter, refined | 17287514     | 1              |
| Caelo                      | Shea butter, refined | 18236003     | 2              |
| Caelo                      | Shea butter, refined | 18222303     | 3              |
| Caelo                      | Shea butter, refined | 18222306     | 1              |
| Caelo                      | Shea butter, refined | 15144907     | 8              |
| Caelo                      | Shea butter, refined | 15144901     | 2              |
| Caesar & Loretz GmbH       | Shea butter, refined | 18222305     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 18236002     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 18222308     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 18222304     | 2              |
| Caesar & Loretz GmbH       | Shea butter, refined | 18222310     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 19205801     | 3              |
| Caesar & Loretz GmbH       | Shea butter, refined | 19205803     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 192058003    | 4              |
| Caesar & Loretz GmbH       | Shea butter, refined | 19205802     | 1              |
| Caesar & Loretz GmbH       | Shea butter, refined | 19205804     | 2              |
| Caesar/Noweda              | Shea butter, refined | 13143813     | 2              |
| Canea/Phönix               | Shea butter, refined | SB1351M13    | 1              |
| Cealo                      | Shea butter, refined | 19205802     | 2              |
| DAC 2006                   | Shea butter, refined | 11346509     | 1              |
| ecocert/sanacorp           | Shea butter, refined | 20-0418C     | 1              |
| Euro OTC                   | Shea butter, refined | 1802A0688    | 1              |
| Fagron                     | Shea butter, refined | 18222305     | 2              |
| Fagron                     | Shea butter, refined | 121273       | 2              |
| Fagron                     | Shea butter, refined | 12G12-N14    | 1              |
| Fagron                     | Shea butter, refined | 12g12-n14    | 1              |
| Farfalla Essen/ Bahnhof... | Shea butter, refined | FA0130140    | 1              |
| Franz Thome                | Shea butter, refined | 400-15       | 1              |
| Gehe                       | Shea butter, refined | 11079802     | 1              |
| Gehe                       | Shea butter, refined | 11346509     | 1              |
| GEHE                       | Shea butter, refined | 18222305     | 1              |
| Bombastus                  | Shea butter, refined | SB1747       | 1              |
| Gehe/CaneaPharma           | Shea butter, refined | SB1827       | 1              |
| Caelo                      | Shea butter, refined | 18236005     | 1              |
| JENNE                      | Shea butter, refined | 17287510     | 1              |
| Caelo                      | Shea butter, refined | 14033304     | 2              |
| Fagron                     | Shea butter, refined | 11J07-N08    | 1              |
| Sanacop WE:18.11.17 100... | Shea butter, refined | 17085809     | 1              |
| sanacorp                   | Shea butter, refined | 14033310     | 1              |
| sanacorp WE:28.12.17 E...  | Shea butter, refined | 17085815     | 1              |
| Sanacorp/ Abis Pharma      | Shea butter, refined | keine        | 2              |
| Th. Geyer                  | Shea butter, refined | 18236002     | 1              |
| Sheabutter Import Franz... | Shea butter, refined | 14314-18515  | 1              |
| Sheabutter Import Franz... | Shea butter, refined | 14-3-0001    | 1              |
| Sheabutter-Import Franz... | Shea butter, refined | 1205355      | 2              |
| Sheabutter-Import Franz... | Shea butter, refined | 413-0001     | 1              |
| Spinnrad                   | Shea butter, refined | 217300181    | 1              |
| Spinnrad/Phönix            | Shea butter, refined | 416300182    | 1              |
| Caelo                      | Shea butter, refined | 15144902     | 1              |
| Caelo                      | Shea butter, refined | 14261102     | 1              |
| Caelo                      | Shea butter, refined | 14033313     | 3              |
| Caelo                      | Shea butter, refined | 14261111     | 1              |

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| Supplier             | Substance              | Batch       | Spectra |
|----------------------|------------------------|-------------|---------|
| Fagron               | Shea butter, refined   | 13C04-N01   | 5       |
| Wolfvital            | Shea butter, refined   | W68B058     | 1       |
| Caelo                | Soy lecithin, liquid   | 1604034-01  | 1       |
| Caelo                | Soy lecithin, liquid   | 1803030-01  | 1       |
| Caesar & Loretz GmbH | Soy lecithin, liquid   | 1803030-01  | 1       |
| Euro OTC             | Soy lecithin, liquid   | 160403401   | 1       |
| Euro OTC             | Soy lecithin, liquid   | 20061209    | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1204028-01  | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1604034-01  | 14      |
| Euro OTC             | Soy lecithin, liquid   | 614E3336    | 1       |
| Euro OTC             | Soy lecithin, liquid   | 180303001   | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1907035-01  | 5       |
| EUro/AHD             | Soy lecithin, liquid   | 1305019-01  | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1803030-01  | 5       |
| Euro OTC             | Soy lecithin, liquid   | 1703001-01  | 9       |
| Euro OTC             | Soy lecithin, liquid   | 1503038     | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1503038-02  | 2       |
| Fagron               | Soy lecithin, liquid   | 1604034-01  | 2       |
| Gehe                 | Soy lecithin, liquid   | 21022111/2  | 1       |
| Gehe                 | Soy lecithin, liquid   | 1803030-1   | 1       |
| Gehe - Lamotte       | Soy lecithin, liquid   | 1305019-01  | 1       |
| Euro OTC             | Soy lecithin, liquid   | 1404022V-02 | 3       |
| Noweda               | Soy lecithin, liquid   | 1604034-01  | 1       |
| Noweda               | Soy lecithin, liquid   | 1803030-01  | 1       |
| Euro OTC             | Soy lecithin, liquid   | 14404022-01 | 1       |
| Caelo                | Soy oil, refined       | 16347104    | 3       |
| Caelo                | Soy oil, refined       | 15239310    | 3       |
| Caelo                | Soy oil, refined       | 16081309    | 3       |
| Caelo                | Soy oil, refined       | 18319901    | 1       |
| Caelo                | Soy oil, refined       | 18319909    | 2       |
| Caelo                | Soy oil, refined       | 17300001    | 7       |
| Caelo                | Soy oil, refined       | 20001575006 | 1       |
| Caelo                | Soy oil, refined       | 15239303    | 1       |
| Caelo                | Soy oil, refined       | 14194107    | 1       |
| Caesar & Loretz GmbH | Soy oil, refined       | 18319901    | 2       |
| Caesar & Loretz GmbH | Soy oil, refined       | 18319909    | 1       |
| ALH                  | Sunflower oil, refined | 15163805    | 1       |
| Bombastus            | Sunflower oil, refined | 271457      | 1       |
| Bombastus            | Sunflower oil, refined | 285243      | 1       |
| Bombastus            | Sunflower oil, refined | 285712      | 2       |
| Bombastus            | Sunflower oil, refined | 281796      | 2       |
| Bombastus            | Sunflower oil, refined | 291278      | 1       |
| Bombastus            | Sunflower oil, refined | 292956      | 1       |
| Bombastus            | Sunflower oil, refined | 295818      | 2       |
| Bombastus            | Sunflower oil, refined | 298487      | 1       |
| Bombastus            | Sunflower oil, refined | 299712      | 1       |
| Bombastus            | Sunflower oil, refined | 275830      | 1       |
| Bombastus            | Sunflower oil, refined | 18005423    | 2       |
| Bombastus            | Sunflower oil, refined | 19000395    | 2       |
| Bombastus            | Sunflower oil, refined | 19003338    | 2       |
| Bombastus            | Sunflower oil, refined | 274107      | 1       |
| Caelo                | Sunflower oil, refined | 11000605    | 2       |
| Caelo                | Sunflower oil, refined | 16275801    | 1       |
| Caelo                | Sunflower oil, refined | 17242104    | 1       |
| Caelo                | Sunflower oil, refined | 17073005    | 1       |
| Caelo                | Sunflower oil, refined | 18027004    | 1       |
| Caelo                | Sunflower oil, refined | 180027005   | 1       |
| Caelo                | Sunflower oil, refined | 19046501    | 1       |
| Caelo                | Sunflower oil, refined | 191755001   | 1       |
| Caelo                | Sunflower oil, refined | 191755005   | 1       |

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| <b>Supplier</b>          | <b>Substance</b>       | <b>Batch</b> | <b>Spectra</b> |
|--------------------------|------------------------|--------------|----------------|
| Caelo                    | Sunflower oil, refined | 20000985005  | 1              |
| Caelo                    | Sunflower oil, refined | 12009804     | 3              |
| Caelo                    | Sunflower oil, refined | 18027005     | 1              |
| Caelo                    | Sunflower oil, refined | 14147101     | 3              |
| Caelo                    | Sunflower oil, refined | 15422801     | 1              |
| Caelo                    | Sunflower oil, refined | 18121004     | 10             |
| Caelo                    | Sunflower oil, refined | 14306701     | 2              |
| Caelo                    | Sunflower oil, refined | 19046504     | 4              |
| Caelo                    | Sunflower oil, refined | 19046506     | 4              |
| Caelo                    | Sunflower oil, refined | 191755002    | 1              |
| Caelo                    | Sunflower oil, refined | 13225102     | 2              |
| Caesar & Loretz GmbH     | Sunflower oil, refined | 18121004     | 1              |
| Caesar & Loretz GmbH     | Sunflower oil, refined | 20000985005  | 1              |
| Coelo                    | Sunflower oil, refined | 17242101     | 1              |
| Fagron                   | Sunflower oil, refined | 17242101     | 2              |
| Fischar                  | Sunflower oil, refined | 8004142001   | 1              |
| Gehe                     | Sunflower oil, refined | 11126606     | 1              |
| Gehe                     | Sunflower oil, refined | 15296303     | 1              |
| Gehe                     | Sunflower oil, refined | 16275804     | 1              |
| Bombastus                | Sunflower oil, refined | 309256       | 2              |
| Bombastus                | Sunflower oil, refined | 309255       | 1              |
| Bombastus                | Sunflower oil, refined | 19005126     | 4              |
| Bombastus                | Sunflower oil, refined | 19003337     | 1              |
| Caelo                    | Sunflower oil, refined | 15422805     | 1              |
| Caelo                    | Sunflower oil, refined | 16275804     | 6              |
| Henry lamotte            | Sunflower oil, refined | 8002491005   | 1              |
| Henry lamotte            | Sunflower oil, refined | 8003598001   | 4              |
| Henry lamotte            | Sunflower oil, refined | 8004261004   | 2              |
| Henry lamotte            | Sunflower oil, refined | 10000180859  | 1              |
| Henry lamotte            | Sunflower oil, refined | 1000010859   | 4              |
| Henry Lamotte            | Sunflower oil, refined | 5738004      | 1              |
| Henry Lamotte            | Sunflower oil, refined | 8001230001   | 1              |
| Henry Lamotte Oils GmbH  | Sunflower oil, refined | 1000010859   | 1              |
| Henry Lamotte/Sanacorp   | Sunflower oil, refined | 5738004      | 1              |
| J.H. Müller              | Sunflower oil, refined | 140229       | 1              |
| Jenne                    | Sunflower oil, refined | 17242101     | 1              |
| Jenne                    | Sunflower oil, refined | 18027005     | 1              |
| Lamotte/L3               | Sunflower oil, refined | 5422401      | 1              |
| Lamotte/Phönix           | Sunflower oil, refined | 1000010859   | 2              |
| Noweda                   | Sunflower oil, refined | 18121004     | 1              |
| Noweda / Henry Lamotte   | Sunflower oil, refined | 5422401      | 1              |
| Caelo                    | Sunflower oil, refined | 17242101     | 8              |
| Sanacorp                 | Sunflower oil, refined | 19046506     | 1              |
| Schubert / Phoenix       | Sunflower oil, refined | 1423F0-2027  | 2              |
| Wolf Handelsgesellschaft | Sunflower oil, refined | 1692305SK    | 1              |
| Wolf Handelsgesellschaft | Sunflower oil, refined | 1822313      | 1              |
| Caelo                    | Walnut oil, refined    | 11167103     | 1              |
| Caelo                    | Walnut oil, refined    | 24101309     | 1              |
| Caelo                    | Walnut oil, refined    | 15253203     | 1              |
| Caelo                    | Walnut oil, refined    | 4051702      | 1              |
| Caelo                    | Walnut oil, refined    | 12214904     | 1              |
| Caelo                    | Walnut oil, refined    | 12214902     | 1              |
| Caelo                    | Walnut oil, refined    | 13338302     | 1              |
| Hepart AG                | Walnut oil, refined    | 12214904     | 1              |
| Caelo                    | Walnut oil, refined    | 10328802     | 1              |
| Voegele                  | Walnut oil, refined    | 2013113013   | 2              |
| Vögele                   | Walnut oil, refined    | 2017113718   | 1              |
| AHD Cealo                | Wheatgerm oil, refined | 193009004    | 1              |
| Bombastus                | Wheatgerm oil, refined | 283449       | 1              |
| Bombastus                | Wheatgerm oil, refined | 301382       | 1              |

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| Supplier  | Substance              | Batch       | Spectra |
|-----------|------------------------|-------------|---------|
| Bombastus | Wheatgerm oil, refined | 301383      | 1       |
| Bombastus | Wheatgerm oil, refined | 307210      | 2       |
| Bombastus | Wheatgerm oil, refined | 309093      | 1       |
| Bombastus | Wheatgerm oil, refined | 18000536    | 4       |
| Bombastus | Wheatgerm oil, refined | 311302      | 2       |
| Bombastus | Wheatgerm oil, refined | 1800243     | 1       |
| Bombastus | Wheatgerm oil, refined | 19003005    | 1       |
| Bombastus | Wheatgerm oil, refined | 305122      | 2       |
| Bombastus | Wheatgerm oil, refined | 286986      | 1       |
| Bombastus | Wheatgerm oil, refined | 295374      | 1       |
| Bombastus | Wheatgerm oil, refined | 19001748    | 2       |
| Bombastus | Wheatgerm oil, refined | 307209      | 1       |
| Bombastus | Wheatgerm oil, refined | 18002442    | 1       |
| Bombastus | Wheatgerm oil, refined | 289212      | 1       |
| Bombastus | Wheatgerm oil, refined | 1800524     | 1       |
| Caelo     | Wheatgerm oil, refined | 13261605    | 1       |
| Caelo     | Wheatgerm oil, refined | 11227305    | 2       |
| Caelo     | Wheatgerm oil, refined | 12220304    | 2       |
| Caelo     | Wheatgerm oil, refined | W-240513-2  | 1       |
| Caelo     | Wheatgerm oil, refined | 12220307    | 1       |
| Caelo     | Wheatgerm oil, refined | 13011508    | 2       |
| Caelo     | Wheatgerm oil, refined | 13261601    | 4       |
| Caelo     | Wheatgerm oil, refined | 14272514    | 4       |
| Caelo     | Wheatgerm oil, refined | 14356001    | 6       |
| Caelo     | Wheatgerm oil, refined | 5011502     | 1       |
| Caelo     | Wheatgerm oil, refined | 14356006    | 4       |
| Caelo     | Wheatgerm oil, refined | 292513      | 1       |
| Caelo     | Wheatgerm oil, refined | 15374104    | 2       |
| Caelo     | Wheatgerm oil, refined | 15405201    | 1       |
| Caelo     | Wheatgerm oil, refined | 16137401    | 1       |
| Caelo     | Wheatgerm oil, refined | 16321301    | 12      |
| Caelo     | Wheatgerm oil, refined | 14121701    | 1       |
| Caelo     | Wheatgerm oil, refined | 6121709     | 1       |
| Caelo     | Wheatgerm oil, refined | 17290302    | 1       |
| Caelo     | Wheatgerm oil, refined | 18009501    | 6       |
| Caelo     | Wheatgerm oil, refined | 18009502    | 1       |
| Caelo     | Wheatgerm oil, refined | 18241003    | 2       |
| Caelo     | Wheatgerm oil, refined | 2011904     | 1       |
| Caelo     | Wheatgerm oil, refined | 18241007    | 2       |
| Caelo     | Wheatgerm oil, refined | 18241011    | 1       |
| Caelo     | Wheatgerm oil, refined | 19003004    | 1       |
| Caelo     | Wheatgerm oil, refined | 19143202    | 1       |
| Caelo     | Wheatgerm oil, refined | 20001556003 | 4       |
| Caelo     | Wheatgerm oil, refined | 14366001    | 1       |
| Caelo     | Wheatgerm oil, refined | 12220305    | 1       |
| Caelo     | Wheatgerm oil, refined | 14024502    | 1       |
| Caelo     | Wheatgerm oil, refined | 13011501    | 6       |
| Caelo     | Wheatgerm oil, refined | 15111603    | 4       |
| Caelo     | Wheatgerm oil, refined | 14272511    | 2       |
| Caelo     | Wheatgerm oil, refined | 13011503    | 2       |
| Caelo     | Wheatgerm oil, refined | 18241002    | 3       |
| Caelo     | Wheatgerm oil, refined | 15374101    | 7       |
| Caelo     | Wheatgerm oil, refined | 19143201    | 6       |
| Caelo     | Wheatgerm oil, refined | 12220306    | 2       |
| Caelo     | Wheatgerm oil, refined | 14272513    | 2       |
| Caelo     | Wheatgerm oil, refined | 15406201    | 2       |
| Caelo     | Wheatgerm oil, refined | 13011507    | 3       |
| Caelo     | Wheatgerm oil, refined | 12220302    | 1       |
| Caelo     | Wheatgerm oil, refined | 13011505    | 6       |
| Caelo     | Wheatgerm oil, refined | 15111602    | 4       |

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| Supplier                   | Substance              | Batch       | Spectra |
|----------------------------|------------------------|-------------|---------|
| Caelo                      | Wheatgerm oil, refined | 15111605    | 2       |
| Caelo                      | Wheatgerm oil, refined | 15406205    | 2       |
| Caelo                      | Wheatgerm oil, refined | 17290301    | 11      |
| Caelo                      | Wheatgerm oil, refined | 18241012    | 1       |
| Caelo                      | Wheatgerm oil, refined | 18009509    | 4       |
| Caelo                      | Wheatgerm oil, refined | 16137404    | 7       |
| Caelo                      | Wheatgerm oil, refined | 17216705    | 7       |
| Caelo                      | Wheatgerm oil, refined | 20001556007 | 1       |
| Caelo                      | Wheatgerm oil, refined | 13261603    | 7       |
| Caelo                      | Wheatgerm oil, refined | 14024501    | 7       |
| Caelo                      | Wheatgerm oil, refined | 1427251     | 1       |
| Caelo                      | Wheatgerm oil, refined | 14356003    | 2       |
| Caelo                      | Wheatgerm oil, refined | 15406206    | 1       |
| Caelo                      | Wheatgerm oil, refined | 16137405    | 3       |
| Caelo                      | Wheatgerm oil, refined | 18241006    | 6       |
| Caelo                      | Wheatgerm oil, refined | 618E-02784  | 1       |
| Caelo                      | Wheatgerm oil, refined | 17216702    | 2       |
| Caelo                      | Wheatgerm oil, refined | 18009506    | 4       |
| Caelo                      | Wheatgerm oil, refined | 17216701    | 7       |
| Caelo                      | Wheatgerm oil, refined | 18009505    | 8       |
| Caelo                      | Wheatgerm oil, refined | 213E-02784  | 1       |
| Caelo                      | Wheatgerm oil, refined | 18009510    | 1       |
| Caelo                      | Wheatgerm oil, refined | 15374105    | 1       |
| Caeol/Noweda               | Wheatgerm oil, refined | 18009505    | 1       |
| Caeöo                      | Wheatgerm oil, refined | 13261601    | 1       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 18241002    | 3       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 18241006    | 2       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 18241012    | 2       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 19143201    | 3       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 19143202    | 3       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 191432002   | 1       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 20001556002 | 2       |
| Caesar & Loretz GmbH       | Wheatgerm oil, refined | 20001556014 | 1       |
| Caesar & Loretz GmbH/sp... | Wheatgerm oil, refined | 18241017    | 1       |
| Dr. August Wolff/Phönix    | Wheatgerm oil, refined | 16137403    | 1       |
| Euro OTC                   | Wheatgerm oil, refined | 18009509    | 1       |
| Euro OTC                   | Wheatgerm oil, refined | 1305015-01  | 1       |
| Fagron                     | Wheatgerm oil, refined | 13D22-N13   | 1       |
| Fiebig                     | Wheatgerm oil, refined | 17290301    | 2       |
| Fiebig                     | Wheatgerm oil, refined | 18009501    | 1       |
| Fiebig                     | Wheatgerm oil, refined | 18009505    | 1       |
| GEHE                       | Wheatgerm oil, refined | 18000524    | 1       |
| GEHE                       | Wheatgerm oil, refined | 18241002    | 1       |
| Ichthyl Phönix             | Wheatgerm oil, refined | 12220302    | 1       |
| Caelo                      | Wheatgerm oil, refined | 13011502    | 1       |
| Caelo                      | Wheatgerm oil, refined | 6137403     | 1       |
| Caelo                      | Wheatgerm oil, refined | 18241008    | 1       |
| Noweda                     | Wheatgerm oil, refined | 14356003    | 1       |
| Phoenix                    | Wheatgerm oil, refined | 15374101    | 1       |
| Phoenix                    | Wheatgerm oil, refined | 16137403    | 1       |
| Phoenix                    | Wheatgerm oil, refined | 16321301    | 2       |
| Phoenix                    | Wheatgerm oil, refined | 18241006    | 1       |
| phönix                     | Wheatgerm oil, refined | 16321301    | 1       |
| Phönix                     | Wheatgerm oil, refined | 17216701    | 1       |
| Phönix                     | Wheatgerm oil, refined | 18241012    | 1       |
| PHÖNIX                     | Wheatgerm oil, refined | 17216705    | 1       |
| Primavera                  | Wheatgerm oil, refined | 3606132     | 1       |
| Primavera                  | Wheatgerm oil, refined | 1048L25     | 1       |
| Sanacorp                   | Wheatgerm oil, refined | 1/AKD2      | 1       |
| Sanacorp                   | Wheatgerm oil, refined | 19143201    | 1       |

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| Supplier                | Substance                       | Batch      | Spectra |
|-------------------------|---------------------------------|------------|---------|
| VDL;                    | Wheatgerm oil, refined          | 13261603   | 1       |
| VDL;11.3.16;3,45EUR     | Wheatgerm oil, refined          | 15374101   | 2       |
| VDL;3,44EUR;22.05.15    | Wheatgerm oil, refined          | 14356001   | 1       |
| Caelo                   | Almond oil, refined             | 13350007   | 4       |
| Caelo                   | Almond oil, refined             | 14042704   | 3       |
| Caelo                   | Almond oil, refined             |            | 24      |
| Gehe/Lamotte            | Almond oil, refined             |            | 1       |
| Kögl                    | Almond oil, refined             |            | 1       |
| phönix                  | Almond oil, refined             |            | 3       |
| Sanacopr                | Almond oil, refined             |            | 4       |
| xxx                     | Almond oil, refined             |            | 1       |
| Caelo                   | Apricot kernel oil, refined     | 13357604   | 1       |
| Caelo                   | Avocado oil, refined            | 13361406   | 9       |
| Caelo                   | Avocado oil, refined            | 14363703   | 12      |
| Taoasis                 | Avocado oil, refined            |            | 1       |
| Caelo                   | Borage oil, refined, stabili... | 13170606   | 15      |
| Caelo                   | Borage oil, refined, stabili... | 16266007   | 23      |
| Caelo                   | Borage oil, refined, stabili... | 14161904   | 4       |
|                         | Borage oil, refined, stabili... | 123387     | 1       |
|                         | Borage oil, refined, stabili... | 13170606   | 1       |
| Caelo                   | Codliver oil (type A)           | 12062501   | 11      |
| Caelo                   | Codliver oil (type A)           | 13396403   | 2       |
| Gall Pharma             | Codliver oil (type A)           |            | 1       |
| Henry Lamotte Oils GmBh | Codliver oil (type A)           |            | 1       |
| Phönix/Lamotte          | Codliver oil (type A)           |            | 1       |
| Caelo                   | Corn oil, refined               | 12141511   | 1       |
| Caelo                   | Decyl oleate                    | 14005001   | 4       |
| Caelo                   | Decyl oleate                    | 13378403   | 4       |
| Euro OTC                | Decyl oleate                    | 1309018-01 | 2       |
|                         | Evening primrose oil, refined   | 1710011-02 | 1       |
| allcura/Noweda          | Evening primrose oil, refined   |            | 1       |
|                         | Evening primrose oil, refined   | 1503031-01 | 1       |
|                         | Evening primrose oil, refined   | 150303101  | 1       |
| Caelo                   | Evening primrose oil, refined   | 14258610   | 20      |
| Caelo                   | Evening primrose oil, refined   | 12325103   | 4       |
| Caelo                   | Evening primrose oil, refined   | 14010915   | 14      |
| Euro OTC                | Evening primrose oil, refined   | 1407002-02 | 21      |
| Euro OTC                | Evening primrose oil, refined   |            | 2       |
| Gehe / Weltecke         | Evening primrose oil, refined   |            | 1       |
| Bombastus               | Flaxseed oil, native            | 281489     | 2       |
| Bombastus               | Flaxseed oil, native            | 20004426   | 2       |
| Bombastus               | Flaxseed oil, native            | 19001510   | 1       |
| Caelo                   | Flaxseed oil, native            | 14087903   | 1       |
| s.Prüfprotokoll         | Flaxseed oil, native            |            | 1       |
| Caelo                   | Grape seed oil, refined         | 13065302   | 7       |
| Caelo                   | Grape seed oil, refined         | 16092401   | 3       |
| Caelo                   | Jojoba oil, native              | 16070602   | 18      |
| Gatt-Koller             | Jojoba oil, native              |            | 1       |
| Caelo                   | Oleyl oleate (stabilised)       | 12220205   | 4       |
| Caelo                   | Oleyl oleate (stabilised)       | 12220207   | 3       |
| Apotheke am Landrain    | Olive oil, native               |            | 1       |
| Bombastus               | Olive oil, native               | 306949     | 10      |
| Bombastus               | Olive oil, native               | 19001848   | 32      |
| Caelo                   | Olive oil, native               | 14024409   | 8       |
| Caelo                   | Olive oil, native               | 163274     | 3       |
| Fagron                  | Olive oil, native               |            | 1       |
| Gehe                    | Olive oil, native               |            | 1       |
| Henry Lamotte           | Olive oil, native               |            | 6       |
| noweda                  | Olive oil, native               |            | 1       |
| Sanacorp                | Olive oil, native               |            | 1       |

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| Supplier      | Substance              | Batch      | Spectra |
|---------------|------------------------|------------|---------|
| Caelo         | Peanut oil, refined    | 13306106   | 15      |
| Caelo         | Peanut oil, refined    | 14115404   | 10      |
| Caelo         | Rapeseed oil, refined  | 13011008   | 1       |
| Caelo         | Sesame oil, refined    | 12054508   | 3       |
| Caelo         | Sesame oil, refined    | 13397402   | 3       |
|               | Sesame oil, refined    | 17332106   | 1       |
| Caelo         | Shea butter, refined   | 15303004   | 1       |
| Caelo         | Shea butter, refined   | 15144903   | 1       |
| Caelo         | Shea butter, refined   | 14261107   | 2       |
| Euro OTC      | Soy lecithin, liquid   | 1305019-01 | 1       |
| Euro OTC      | Soy lecithin, liquid   | 1404022-01 | 2       |
| Caelo         | Sunflower oil, refined | 15422804   | 1       |
| Henry Lamotte | Sunflower oil, refined | 1000010859 | 1       |
| Caelo         | Walnut oil, refined    | 13202401   | 3       |
| Caelo         | Wheatgerm oil, refined | 13261604   | 3       |
| Caelo         | Wheatgerm oil, refined | 16137403   | 5       |

- 219 372 spectra from 1121 *Apo-Ident* customers from a total of 43 371 batches from a further 318 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Triglycerides* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Triglycerides* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 5950          | 0              | 57 989        |
| <b>Type B</b> | 0              | 4465          | 0              | 86 446        |
| <b>Type C</b> | 0              | 21 884        | 107            | 219 076       |

The substance/substance group *Triglycerides* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9796 %) | 100.0000 % (> 99.8992 %) |
| <b>Type B</b> | 100.0000 % (> 99.9657 %) | 100.0000 % (> 99.8656 %) |
| <b>Type C</b> | 100.0000 % (> 99.6872 %) | 99.5134 % (> 99.4998 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Triglycerides* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in<br>main model | Distance in<br>second-stage model |
|-------------------------------------------|---------------------------|-----------------------------------|
| Sorbitan trioleate                        | 11.79                     | —                                 |
| Softisan <sup>®</sup> 378                 | 12.30                     | —                                 |
| Softisan <sup>®</sup> 649                 | 26.57                     | —                                 |
| Permethrin 25% solution                   | 27.23                     | —                                 |
| Salicylic acid concentrate 5%, white p... | 29.02                     | —                                 |
| Wool alcohol ointment DAB                 | 33.34                     | —                                 |
| Paraffin, yellow                          | 33.46                     | —                                 |
| Wool fat                                  | 34.28                     | —                                 |
| Metronidazole 25% in white petrolatum     | 34.50                     | —                                 |
| Paraffin, white                           | 35.37                     | —                                 |
| Pasta Cordes <sup>®</sup>                 | 36.44                     | —                                 |
| Castor oil                                | 37.76                     | —                                 |
| Emulsifying hydrophobic base gel DAC      | 38.50                     | —                                 |
| Isopropyl palmitate                       | 39.30                     | —                                 |
| Paraffin, light liquid                    | 39.31                     | —                                 |
| Hydrophilic ointment DAB                  | 39.34                     | —                                 |
| Triglycerides, medium-chain               | 42.57                     | —                                 |
| Paraffin, liquid                          | 44.26                     | —                                 |
| Triglycerol diisostearate                 | 45.16                     | —                                 |
| Squalane                                  | 47.65                     | —                                 |
| Unguentum Cordes <sup>®</sup>             | 48.57                     | —                                 |
| Hydrophobic base gel DAC                  | 49.73                     | —                                 |
| Citronella oil                            | 55.26                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Triglycerides* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30647     | 31350                  | 1.67                            | 45.82                              |
| 30679     | 31729                  | 2.12                            | 86.47                              |
| 30754     | 35299                  | 5.41                            | 32.18                              |
| 30840     | 33060                  | 4.43                            | 30.75                              |
| 30855     | 31775                  | 2.91                            | 69.70                              |
| 30863     | 31496                  | 8.28                            | 32.12                              |
| 30873     | 31350                  | 4.74                            | 46.16                              |
| 30878     | 31361                  | 5.32                            | 69.55                              |
| 30981     | 30981                  | 0.00                            | 65.07                              |
| 31016     | 31016                  | 0.00                            | 55.55                              |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31034            | 31523                      | 1.11                                | 31.45                                  |
| 31121            | 31121                      | 0.00                                | 62.37                                  |
| 31122            | 31122                      | 0.00                                | 35.11                                  |
| 31161            | 31161                      | 0.00                                | 61.70                                  |
| 31172            | 31172                      | 0.00                                | 77.01                                  |
| 31178            | 31729                      | 4.36                                | 84.19                                  |
| 31215            | 31215                      | 0.00                                | 46.99                                  |
| 31216            | 31216                      | 0.00                                | 64.37                                  |
| 31217            | 31217                      | 0.00                                | 53.31                                  |
| 31246            | 31246                      | 0.00                                | 31.44                                  |
| 31250            | 31250                      | 0.00                                | 28.33                                  |
| 31274            | 31274                      | 0.00                                | 52.06                                  |
| 31322            | 31322                      | 0.00                                | 46.04                                  |
| 31326            | 33064                      | 5.02                                | 83.64                                  |
| 31332            | 31332                      | 0.00                                | 49.38                                  |
| 31336            | 31336                      | 0.00                                | 33.28                                  |
| 31337            | 31770                      | 1.62                                | 36.19                                  |
| 31344            | 31274                      | 2.06                                | 52.52                                  |
| 31346            | 31801                      | 1.61                                | 31.40                                  |
| 31350            | 31350                      | 0.00                                | 44.46                                  |
| 31356            | 32195                      | 1.32                                | 32.65                                  |
| 31361            | 31361                      | 0.00                                | 64.79                                  |
| 31362            | 32334                      | 3.49                                | 61.89                                  |
| 31374            | 31274                      | 2.05                                | 51.92                                  |
| 31375            | 31375                      | 0.00                                | 27.36                                  |
| 31376            | 34716                      | 2.24                                | 44.36                                  |
| 31378            | 35057                      | 4.19                                | 55.35                                  |
| 31380            | 31216                      | 2.16                                | 63.79                                  |
| 31382            | 31382                      | 0.00                                | 36.18                                  |
| 31384            | 31161                      | 3.03                                | 61.26                                  |
| 31460            | 31460                      | 0.00                                | 66.20                                  |
| 31482            | 31322                      | 1.42                                | 45.13                                  |
| 31491            | 31491                      | 0.00                                | 54.24                                  |
| 31496            | 31496                      | 0.00                                | 32.37                                  |
| 31513            | 31513                      | 0.00                                | 28.02                                  |
| 31519            | 31322                      | 3.37                                | 44.63                                  |
| 31523            | 31523                      | 0.00                                | 28.19                                  |
| 31540            | 31729                      | 2.39                                | 86.00                                  |
| 31572            | 31572                      | 0.00                                | 65.17                                  |
| 31582            | 31513                      | 6.37                                | 31.16                                  |
| 31584            | 31382                      | 1.23                                | 36.86                                  |
| 31585            | 31801                      | 3.87                                | 34.68                                  |
| 31589            | 31460                      | 2.97                                | 66.09                                  |
| 31609            | 31609                      | 0.00                                | 50.41                                  |
| 31662            | 31801                      | 2.00                                | 33.57                                  |
| 31677            | 31361                      | 6.51                                | 67.16                                  |
| 31729            | 31729                      | 0.00                                | 87.92                                  |
| 31770            | 31770                      | 0.00                                | 35.91                                  |
| 31775            | 31775                      | 0.00                                | 67.63                                  |
| 31792            | 31729                      | 0.80                                | 87.66                                  |
| 31801            | 31801                      | 0.00                                | 31.89                                  |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31825            | 31361                      | 5.34                                | 63.74                                  |
| 31826            | 31513                      | 5.92                                | 30.55                                  |
| 31833            | 31833                      | 0.00                                | 31.57                                  |
| 31834            | 34643                      | 3.06                                | 58.09                                  |
| 31875            | 31729                      | 6.93                                | 82.54                                  |
| 32186            | 32186                      | 0.00                                | 31.20                                  |
| 32188            | 32188                      | 0.00                                | 34.84                                  |
| 32195            | 32195                      | 0.00                                | 31.43                                  |
| 32300            | 31513                      | 9.49                                | 30.61                                  |
| 32301            | 31513                      | 4.18                                | 27.74                                  |
| 32334            | 32334                      | 0.00                                | 60.08                                  |
| 32457            | 32457                      | 0.00                                | 31.91                                  |
| 32680            | 32680                      | 0.00                                | 32.26                                  |
| 32683            | 32683                      | 0.00                                | 27.60                                  |
| 32729            | 31161                      | 3.90                                | 56.79                                  |
| 32730            | 35043                      | 5.45                                | 55.56                                  |
| 32745            | 31217                      | 3.27                                | 52.06                                  |
| 32746            | 31161                      | 3.75                                | 59.79                                  |
| 32931            | 34666                      | 3.46                                | 29.04                                  |
| 32990            | 33085                      | 1.50                                | 33.41                                  |
| 32991            | 32457                      | 3.39                                | 33.47                                  |
| 33059            | 33059                      | 0.00                                | 33.58                                  |
| 33060            | 33060                      | 0.00                                | 30.24                                  |
| 33063            | 33063                      | 0.00                                | 34.68                                  |
| 33064            | 33064                      | 0.00                                | 75.03                                  |
| 33067            | 33067                      | 0.00                                | 34.99                                  |
| 33070            | 33070                      | 0.00                                | 31.22                                  |
| 33085            | 33085                      | 0.00                                | 32.78                                  |
| 33254            | 34807                      | 4.72                                | 44.38                                  |
| 33255            | 31122                      | 2.66                                | 33.84                                  |
| 33309            | 33309                      | 0.00                                | 59.64                                  |
| 33472            | 31016                      | 2.72                                | 56.61                                  |
| 33510            | 35579                      | 3.61                                | 62.53                                  |
| 33876            | 34300                      | 3.69                                | 43.58                                  |
| 33880            | 31172                      | 1.61                                | 77.77                                  |
| 33916            | 33916                      | 0.00                                | 65.30                                  |
| 33917            | 33917                      | 0.00                                | 49.44                                  |
| 34300            | 34300                      | 0.00                                | 46.69                                  |
| 34437            | 34437                      | 0.00                                | 53.11                                  |
| 34441            | 34441                      | 0.00                                | 45.60                                  |
| 34521            | 35045                      | 3.55                                | 33.76                                  |
| 34522            | 33064                      | 4.97                                | 83.96                                  |
| 34602            | 34602                      | 0.00                                | 55.69                                  |
| 34617            | 34617                      | 0.00                                | 33.71                                  |
| 34643            | 34643                      | 0.00                                | 61.69                                  |
| 34663            | 34663                      | 0.00                                | 42.24                                  |
| 34666            | 34666                      | 0.00                                | 29.81                                  |
| 34691            | 34807                      | 1.75                                | 45.05                                  |
| 34701            | 31609                      | 3.49                                | 50.81                                  |
| 34711            | 34711                      | 0.00                                | 42.51                                  |
| 34713            | 34713                      | 0.00                                | 58.17                                  |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 34716            | 34716                      | 0.00                                | 41.17                                  |
| 34718            | 34718                      | 0.00                                | 42.29                                  |
| 34721            | 34721                      | 0.00                                | 59.09                                  |
| 34751            | 34751                      | 0.00                                | 33.51                                  |
| 34753            | 34753                      | 0.00                                | 29.34                                  |
| 34807            | 34807                      | 0.00                                | 45.67                                  |
| 35018            | 35018                      | 0.00                                | 36.19                                  |
| 35038            | 35038                      | 0.00                                | 29.92                                  |
| 35043            | 35043                      | 0.00                                | 52.15                                  |
| 35045            | 35045                      | 0.00                                | 30.14                                  |
| 35046            | 35046                      | 0.00                                | 59.00                                  |
| 35053            | 35053                      | 0.00                                | 31.97                                  |
| 35055            | 35055                      | 0.00                                | 40.85                                  |
| 35056            | 35056                      | 0.00                                | 62.65                                  |
| 35057            | 35057                      | 0.00                                | 60.74                                  |
| 35271            | 35271                      | 0.00                                | 53.45                                  |
| 35286            | 31361                      | 5.70                                | 63.94                                  |
| 35288            | 33064                      | 5.35                                | 79.32                                  |
| 35299            | 35299                      | 0.00                                | 34.32                                  |
| 35467            | 34437                      | 3.33                                | 52.70                                  |
| 35579            | 35579                      | 0.00                                | 66.95                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Triglycerides, medium-chain**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 31483-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Triglycerides, medium-chain; Oleum neutrale

### Special notes

When selecting the *Triglycerides, medium-chain* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group   | Type A | Type B | Type C |
|-----------------------------|--------|--------|--------|
| Triglycerides, medium-chain | 7      | 22     | 792    |

## Second-stage model

For differentiation of the substance/substance group *Triglycerides, medium-chain* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Triglycerides, medium-chain*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|----------|---------------------|------------------|-----------|---------|--------------------|
| Caelo    | Triglycerides, m... | 13392404         | 31483     | 60      | AR-14-FG-012976-01 |
| Caelo    | Triglycerides, m... | 13348507         | 31484     | 60      | 20131028           |
| Euro OTC | Triglycerides, m... | 1402019-01       | 31485     | 60      | 20140317           |
| Euro OTC | Triglycerides, m... | 1509022          | 31771     | 60      | 20151007*          |
| Euro OTC | Triglycerides, m... | 1511011          | 31804     | 60      | 20151125*          |
| Euro OTC | Triglycerides, m... | 1601050          | 31955     | 60      | 20160218*          |
| Fagron   | Triglycerides, m... | 18G13-B01-363706 | 34674     | 40      | 20180824           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 400 spectra of 7 reference samples from the substance/substance group *Triglycerides, medium-chain*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 7 different batches.
- 63 539 spectra from a total of 1300 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 890 spectra of 22 reference samples from the substance/substance group *Triglycerides, medium-chain*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 22 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                   | Batch            | Sample ID | Spectra |
|----------|-----------------------------|------------------|-----------|---------|
| Caelo    | Triglycerides, medium-chain | 161243           | 32204     | 40      |
| Caelo    | Triglycerides, medium-chain | 162385           | 32697     | 40      |
| Caelo    | Triglycerides, medium-chain | 170160           | 33077     | 40      |
| Caelo    | Triglycerides, medium-chain | 170784           | 33312     | 40      |
| Caelo    | Triglycerides, medium-chain | 172177           | 33672     | 40      |
| Caelo    | Triglycerides, medium-chain | 191294           | 34607     | 40      |
| Caelo    | Triglycerides, medium-chain | 191993           | 34608     | 40      |
| Caelo    | Triglycerides, medium-chain | 191951           | 34609     | 40      |
| Caelo    | Triglycerides, medium-chain | 192781           | 34715     | 40      |
| Caelo    | Triglycerides, medium-chain | 20000549         | 35035     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1603041          | 32278     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1606035          | 32464     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1701023          | 32983     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1709014          | 33845     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1801034          | 33997     | 40      |
| Euro OTC | Triglycerides, medium-chain | 1812014          | 34429     | 40      |
| Euro OTC | Triglycerides, medium-chain | 2002001          | 34827     | 40      |
| Euro OTC | Triglycerides, medium-chain | 2005031          | 35068     | 40      |
| Euro OTC | Triglycerides, medium-chain | 2007018          | 35084     | 40      |
| Euro OTC | Triglycerides, medium-chain | 2011015          | 35137     | 40      |
| Euro OTC | Triglycerides, medium-chain | 2107028          | 35622     | 50      |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-365618 | 34761     | 40      |

- 90 601 spectra from a total of 1994 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 6095 spectra from 954 *Apo-Ident* customers from 813 batches from the substance/substance group *Triglycerides, medium-chain*.
- Among them are spectra of independent samples from 788 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier             | Substance                   | Batch      | Spectra |
|----------------------|-----------------------------|------------|---------|
| /Sanacorp 02.05.2016 | Triglycerides, medium-chain | 15272004   | 1       |
| 00000000             | Triglycerides, medium-chain | 103899     | 1       |
| Euro OTC             | Triglycerides, medium-chain | 190200502  | 1       |
| ACM                  | Triglycerides, medium-chain | KNC0254J15 | 5       |
| AHD                  | Triglycerides, medium-chain | 17361002   | 3       |
| AHD                  | Triglycerides, medium-chain | 18118808   | 2       |
| AHD                  | Triglycerides, medium-chain | 123999     | 1       |
| AHD                  | Triglycerides, medium-chain | 18238902   | 2       |
| AHD                  | Triglycerides, medium-chain | 192866001  | 2       |
| AHD                  | Triglycerides, medium-chain | 1902005-02 | 1       |
| AHD 23.12.2014       | Triglycerides, medium-chain | 14219003   | 1       |

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| Supplier                   | Substance                   | Batch              | Spectra |
|----------------------------|-----------------------------|--------------------|---------|
| Fagron                     | Triglycerides, medium-chain | 14D08-N01          | 1       |
| AHD/Bioletics              | Triglycerides, medium-chain | 123999             | 1       |
| AHD/Bioletics              | Triglycerides, medium-chain | 128842             | 1       |
| AHD/Bioletics              | Triglycerides, medium-chain | 139107             | 1       |
| AHD/Bionorica ethics       | Triglycerides, medium-chain | 125596             | 1       |
| AHD/Bionorica ethics       | Triglycerides, medium-chain | 127732             | 1       |
| AHD/THCPharma              | Triglycerides, medium-chain | 105041             | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 1302004-02         | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 1606035-01         | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 1801034-01         | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 105041             | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 116691             | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 125595             | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 135057             | 3       |
| Alliance Healthcare        | Triglycerides, medium-chain | 283811             | 1       |
| Alliance Healthcare        | Triglycerides, medium-chain | 139107             | 1       |
| Alliance Healthcare 08...  | Triglycerides, medium-chain | 1812014-01         | 1       |
| Caelo                      | Triglycerides, medium-chain | 1060001            | 2       |
| Alliance Heasth            | Triglycerides, medium-chain | 15H03-B03-525271   | 1       |
| Alliance/Bionorica         | Triglycerides, medium-chain | 107080             | 1       |
| Alliance/Fargon            | Triglycerides, medium-chain | 15H03-B03-525331   | 1       |
| Allianz                    | Triglycerides, medium-chain | 120015             | 1       |
| Anzag                      | Triglycerides, medium-chain | 12078604           | 2       |
| Anzag                      | Triglycerides, medium-chain | 12256505           | 1       |
| Anzag                      | Triglycerides, medium-chain | 16124304           | 1       |
| Anzag                      | Triglycerides, medium-chain | 98569              | 2       |
| Anzag                      | Triglycerides, medium-chain | 18118807           | 1       |
| Anzag 11.10.12             | Triglycerides, medium-chain | 11301109           | 1       |
| Anzag/Ethics               | Triglycerides, medium-chain | 109952             | 1       |
| Anzag/Henry Lamotte        | Triglycerides, medium-chain | 1504029-02         | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1210002-01         | 5       |
| ApoIdent                   | Triglycerides, medium-chain | 1709014-02         | 1       |
| apo-ident/ Phönix          | Triglycerides, medium-chain | 1601050-01         | 1       |
| Apo-Ident/Noweda           | Triglycerides, medium-chain | 1606035-02         | 1       |
| Apomi                      | Triglycerides, medium-chain | 180325             | 1       |
| Apomix                     | Triglycerides, medium-chain | 116587             | 1       |
| Apomix                     | Triglycerides, medium-chain | 125596             | 5       |
| Aurora                     | Triglycerides, medium-chain | 201874200-1880597  | 1       |
| Aurora                     | Triglycerides, medium-chain | 201874200-15203430 | 1       |
| Aurora                     | Triglycerides, medium-chain | 20-187             | 2       |
| Aurora                     | Triglycerides, medium-chain | 20-454             | 2       |
| Aurora                     | Triglycerides, medium-chain | 20-455             | 1       |
| Aurora                     | Triglycerides, medium-chain | 20-456             | 2       |
| Aurora Deutschland GmbH    | Triglycerides, medium-chain | 148381             | 1       |
| Aurora Deutschland GmbH    | Triglycerides, medium-chain | 20-187             | 2       |
| Aurora GmH                 | Triglycerides, medium-chain | 148381             | 2       |
| Beiersdorf / Gehe          | Triglycerides, medium-chain | 1805020-01         | 1       |
| Bionorica ethics/Phönix    | Triglycerides, medium-chain | 125596             | 1       |
| Bionorica ethics/Phönix    | Triglycerides, medium-chain | 125597             | 1       |
| bio                        | Triglycerides, medium-chain | 105038             | 1       |
| Bionirca ethics / Allia... | Triglycerides, medium-chain | 109951             | 1       |
| bionorica                  | Triglycerides, medium-chain | 93574              | 1       |
| bionorica                  | Triglycerides, medium-chain | 107077             | 1       |
| bionorica                  | Triglycerides, medium-chain | 145768             | 1       |
| Bionorica                  | Triglycerides, medium-chain | 69719              | 2       |
| Bionorica                  | Triglycerides, medium-chain | 79406              | 1       |
| Bionorica                  | Triglycerides, medium-chain | 87112              | 2       |
| Bionorica                  | Triglycerides, medium-chain | 87113              | 1       |
| Bionorica                  | Triglycerides, medium-chain | 91715              | 1       |
| Bionorica                  | Triglycerides, medium-chain | 91719              | 2       |

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| Supplier  | Substance                   | Batch       | Spectra |
|-----------|-----------------------------|-------------|---------|
| Bionorica | Triglycerides, medium-chain | 150930      | 1       |
| Bionorica | Triglycerides, medium-chain | 95080       | 1       |
| Bionorica | Triglycerides, medium-chain | 98569       | 1       |
| Bionorica | Triglycerides, medium-chain | 103902      | 4       |
| Bionorica | Triglycerides, medium-chain | 107079      | 4       |
| Bionorica | Triglycerides, medium-chain | 107078      | 1       |
| Bionorica | Triglycerides, medium-chain | 107080      | 2       |
| Bionorica | Triglycerides, medium-chain | 4817A-03960 | 1       |
| Bionorica | Triglycerides, medium-chain | 105038      | 3       |
| Bionorica | Triglycerides, medium-chain | 109953      | 2       |
| Bionorica | Triglycerides, medium-chain | 109950      | 3       |
| Bionorica | Triglycerides, medium-chain | 109951      | 1       |
| Bionorica | Triglycerides, medium-chain | 116693      | 2       |
| Bionorica | Triglycerides, medium-chain | 116646      | 2       |
| Bionorica | Triglycerides, medium-chain | 116640      | 1       |
| Bionorica | Triglycerides, medium-chain | 116637      | 2       |
| Bionorica | Triglycerides, medium-chain | 116645      | 3       |
| Bionorica | Triglycerides, medium-chain | 116643      | 4       |
| Bionorica | Triglycerides, medium-chain | 116639      | 1       |
| Bionorica | Triglycerides, medium-chain | 116688      | 1       |
| Bionorica | Triglycerides, medium-chain | 123998      | 8       |
| Bionorica | Triglycerides, medium-chain | 116638      | 1       |
| Bionorica | Triglycerides, medium-chain | 180325      | 1       |
| Bionorica | Triglycerides, medium-chain | 120015      | 4       |
| Bionorica | Triglycerides, medium-chain | 120016      | 2       |
| Bionorica | Triglycerides, medium-chain | 123999      | 4       |
| Bionorica | Triglycerides, medium-chain | 123015      | 1       |
| Bionorica | Triglycerides, medium-chain | 123997      | 4       |
| Bionorica | Triglycerides, medium-chain | 125596      | 3       |
| Bionorica | Triglycerides, medium-chain | 127733      | 2       |
| Bionorica | Triglycerides, medium-chain | 125597      | 5       |
| Bionorica | Triglycerides, medium-chain | 127732      | 2       |
| Bionorica | Triglycerides, medium-chain | 128839      | 12      |
| Bionorica | Triglycerides, medium-chain | 127731      | 2       |
| Bionorica | Triglycerides, medium-chain | 128842      | 6       |
| Bionorica | Triglycerides, medium-chain | 128841      | 2       |
| Bionorica | Triglycerides, medium-chain | 129877      | 4       |
| Bionorica | Triglycerides, medium-chain | 129876      | 6       |
| Bionorica | Triglycerides, medium-chain | 128843      | 8       |
| Bionorica | Triglycerides, medium-chain | 129879      | 3       |
| Bionorica | Triglycerides, medium-chain | 135056      | 6       |
| Bionorica | Triglycerides, medium-chain | 191062609   | 1       |
| Bionorica | Triglycerides, medium-chain | 129880      | 9       |
| Bionorica | Triglycerides, medium-chain | 120017      | 1       |
| Bionorica | Triglycerides, medium-chain | 250696      | 1       |
| Bionorica | Triglycerides, medium-chain | 129878      | 2       |
| Bionorica | Triglycerides, medium-chain | 12903       | 1       |
| Bionorica | Triglycerides, medium-chain | 135058      | 2       |
| Bionorica | Triglycerides, medium-chain | 132615      | 9       |
| Bionorica | Triglycerides, medium-chain | 139105      | 14      |
| Bionorica | Triglycerides, medium-chain | 269421      | 1       |
| Bionorica | Triglycerides, medium-chain | 141602      | 2       |
| Bionorica | Triglycerides, medium-chain | 139107      | 5       |
| Bionorica | Triglycerides, medium-chain | 141603      | 2       |
| Bionorica | Triglycerides, medium-chain | 141604      | 2       |
| Bionorica | Triglycerides, medium-chain | 201111011   | 1       |
| Bionorica | Triglycerides, medium-chain | 200901609   | 1       |
| Bionorica | Triglycerides, medium-chain | 145767      | 1       |
| Bionorica | Triglycerides, medium-chain | 145765      | 1       |
| BIONORICA | Triglycerides, medium-chain | 125597      | 1       |

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| Supplier                   | Substance                   | Batch          | Spectra |
|----------------------------|-----------------------------|----------------|---------|
| Bionorica / Alliance       | Triglycerides, medium-chain | 103902         | 1       |
| Bionorica / Alliance He... | Triglycerides, medium-chain | 120017         | 1       |
| Bionorica / Alliance He... | Triglycerides, medium-chain | 116637         | 1       |
| Bionorica / Alliance He... | Triglycerides, medium-chain | 123997         | 1       |
| Bionorica / Anzag          | Triglycerides, medium-chain | 123997         | 1       |
| Bionorica / E              | Triglycerides, medium-chain | 123999(Miglyol | 1       |
| Bionorica / E              | Triglycerides, medium-chain | 123999         | 2       |
| Bionorica / Gehe           | Triglycerides, medium-chain | 123999         | 1       |
| Bionorica / Gehe           | Triglycerides, medium-chain | 125596         | 1       |
| Bionorica / Gehe           | Triglycerides, medium-chain | 129878         | 1       |
| Bionorica / Gehe           | Triglycerides, medium-chain | 132615         | 1       |
| Bionorica / Kehr           | Triglycerides, medium-chain | 125597         | 1       |
| Bionorica / Krieger        | Triglycerides, medium-chain | 129880         | 1       |
| Bionorica / Krieger        | Triglycerides, medium-chain | 129879         | 1       |
| Bionorica / Krieger        | Triglycerides, medium-chain | 139105         | 2       |
| Bionorica / Krieger        | Triglycerides, medium-chain | 145768         | 1       |
| Bionorica / Phoenix        | Triglycerides, medium-chain | 139105         | 1       |
| bionorica / Phoenix / 0... | Triglycerides, medium-chain | 94874          | 1       |
| Bionorica / Phoenix 03...  | Triglycerides, medium-chain | 116643         | 1       |
| bionorica / Phoenix Lei... | Triglycerides, medium-chain | 95087          | 1       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 120015         | 1       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 125597         | 2       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 2x0000128842   | 1       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 129876         | 1       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 129880         | 1       |
| Bionorica / Phönix         | Triglycerides, medium-chain | 135058         | 1       |
| Bionorica / Sanacorp       | Triglycerides, medium-chain | 139105         | 1       |
| Bionorica / Sanacorp       | Triglycerides, medium-chain | 141602         | 1       |
| Bionorica /Ebert           | Triglycerides, medium-chain | 103901         | 1       |
| Bionorica /Ebert           | Triglycerides, medium-chain | 107078         | 1       |
| Bionorica /G               | Triglycerides, medium-chain | 129878         | 1       |
| Bionorica /Gehe 11.02.19   | Triglycerides, medium-chain | 125596         | 1       |
| Bionorica /Phönix          | Triglycerides, medium-chain | 116692         | 1       |
| Bionorica /Phönix          | Triglycerides, medium-chain | 116640         | 2       |
| Bionorica /Phönix          | Triglycerides, medium-chain | 120015         | 2       |
| Bionorica Dronabinol-Set   | Triglycerides, medium-chain | 107078         | 1       |
| Bionorica ethi             | Triglycerides, medium-chain | 128839         | 2       |
| bionorica ethics           | Triglycerides, medium-chain | 105044         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 109948         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 116689         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 127780         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 135958         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 128843         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 138508         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 140133         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 145382         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 139105         | 3       |
| bionorica ethics           | Triglycerides, medium-chain | 139107         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 141603         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 145767         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 141604         | 1       |
| bionorica ethics           | Triglycerides, medium-chain | 157871         | 2       |
| bionorica ethics           | Triglycerides, medium-chain | 145765         | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 91713          | 2       |
| Bionorica ethics           | Triglycerides, medium-chain | 94875          | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 103901         | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 103899         | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 105039         | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 107078         | 1       |
| Bionorica ethics           | Triglycerides, medium-chain | 107077         | 1       |

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| Supplier         | Substance                   | Batch             | Spectra |
|------------------|-----------------------------|-------------------|---------|
| Bionorica ethics | Triglycerides, medium-chain | 107079            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 107080            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 107081            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 103898            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 105038            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 109951            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 109948            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 109952            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 116688            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 109950            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 116692            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 116687            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 116645            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 116638            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 170517            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 116642            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 116643            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 120016            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 116640            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 116641            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 123013            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 123015            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 120015            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 171102            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 120017            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 123997            | 5       |
| Bionorica ethics | Triglycerides, medium-chain | 123998            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 123999            | 15      |
| Bionorica ethics | Triglycerides, medium-chain | 125597            | 12      |
| Bionorica ethics | Triglycerides, medium-chain | 125596            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 127732            | 5       |
| Bionorica ethics | Triglycerides, medium-chain | 128840            | 5       |
| Bionorica ethics | Triglycerides, medium-chain | 127731            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 129877            | 28      |
| Bionorica ethics | Triglycerides, medium-chain | 128842            | 10      |
| Bionorica ethics | Triglycerides, medium-chain | 128841            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 116639            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 128843            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 129876            | 5       |
| Bionorica ethics | Triglycerides, medium-chain | 266724            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 135056            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 129880            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 129878            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 135058            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 129879            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 132615            | 7       |
| Bionorica ethics | Triglycerides, medium-chain | 139105            | 26      |
| Bionorica ethics | Triglycerides, medium-chain | 1391050           | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 271674/0000277854 | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 141602            | 3       |
| Bionorica ethics | Triglycerides, medium-chain | 139107            | 4       |
| Bionorica ethics | Triglycerides, medium-chain | 141603            | 1       |
| Bionorica ethics | Triglycerides, medium-chain | 145767            | 2       |
| Bionorica ethics | Triglycerides, medium-chain | 156506            | 1       |
| Bionorica Ethics | Triglycerides, medium-chain | 62424             | 3       |
| Bionorica Ethics | Triglycerides, medium-chain | 75316             | 1       |
| Bionorica Ethics | Triglycerides, medium-chain | 95112             | 1       |
| Bionorica Ethics | Triglycerides, medium-chain | 94879             | 1       |
| Bionorica Ethics | Triglycerides, medium-chain | 94875             | 1       |
| Bionorica Ethics | Triglycerides, medium-chain | 95079             | 1       |

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| Supplier                   | Substance                   | Batch                                   | Spectra |
|----------------------------|-----------------------------|-----------------------------------------|---------|
| Bionorica Ethics           | Triglycerides, medium-chain | 98570                                   | 3       |
| Bionorica Ethics           | Triglycerides, medium-chain | 103899                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 105039                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 107077                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 107079                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 105038                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 107080                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109953                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109951                                  | 4       |
| Bionorica Ethics           | Triglycerides, medium-chain | 16689                                   | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109709                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 103898                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109949                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109950                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116692                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 105040                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 109959                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116688                                  | 3       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116646                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116638                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116639                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116640                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 120015                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 123015                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 120017                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 120016                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 123997                                  | 4       |
| Bionorica Ethics           | Triglycerides, medium-chain | 105044                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 127733                                  | 5       |
| Bionorica Ethics           | Triglycerides, medium-chain | 123999                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 125596                                  | 6       |
| Bionorica Ethics           | Triglycerides, medium-chain | 125597                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 116689                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 127732                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 128840                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 128842                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 128841                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 129877                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 129878                                  | 3       |
| Bionorica Ethics           | Triglycerides, medium-chain | 135056                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 129876                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 129880                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 135058                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 132615                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 139105                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 141602                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 283811                                  | 1       |
| Bionorica Ethics           | Triglycerides, medium-chain | 139107                                  | 3       |
| Bionorica Ethics           | Triglycerides, medium-chain | 141603                                  | 2       |
| Bionorica Ethics           | Triglycerides, medium-chain | 145767                                  | 4       |
| Bionorica Ethics           | Triglycerides, medium-chain | 145768                                  | 2       |
| Bionorica ethics / Ph...   | Triglycerides, medium-chain | 135058(DronabinolTropfenaset0000142331) | 2       |
| Bionorica ethics / Ph...   | Triglycerides, medium-chain | 139105                                  | 2       |
| Bionorica ethics / Ph...   | Triglycerides, medium-chain | 139107                                  | 2       |
| Bionorica ethics / Alli... | Triglycerides, medium-chain | 109951                                  | 1       |
| Bionorica ethics / Alli... | Triglycerides, medium-chain | 127732                                  | 1       |
| Bionorica ethics / Alli... | Triglycerides, medium-chain | 127731                                  | 2       |
| Bionorica Ethics / Alli... | Triglycerides, medium-chain | 129879                                  | 1       |
| Bionorica Ethics / Gehe    | Triglycerides, medium-chain | 116642                                  | 1       |
| Bionorica Ethics / Gehe    | Triglycerides, medium-chain | 116638                                  | 1       |

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| Supplier                   | Substance                   | Batch  | Spectra |
|----------------------------|-----------------------------|--------|---------|
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 125597 | 3       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 128843 | 1       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 128841 | 1       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 129876 | 2       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 132615 | 1       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 141602 | 1       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 139107 | 3       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 153403 | 1       |
| Bionorica Ethics / Noweda  | Triglycerides, medium-chain | 141604 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 103901 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 105039 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 107080 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 109951 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 116642 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 125596 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 109949 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 127732 | 2       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 127731 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 128842 | 2       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 128843 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 129878 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 129880 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 135058 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 319105 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 132615 | 1       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 139107 | 4       |
| Bionorica ethics / Phoe... | Triglycerides, medium-chain | 141602 | 1       |
| Bionorica ethics GmbH      | Triglycerides, medium-chain | 128839 | 1       |
| Bionorica ethics GmbH      | Triglycerides, medium-chain | 250696 | 1       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 138595 | 2       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 141267 | 4       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 137100 | 1       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 140133 | 3       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 139448 | 1       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 143967 | 1       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 145051 | 1       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 139105 | 4       |
| Bionorica Ethics GmbH      | Triglycerides, medium-chain | 141602 | 2       |
| Bionorica ethics GmbH/B... | Triglycerides, medium-chain | 129877 | 1       |
| Bionorica ethics GmbH/P... | Triglycerides, medium-chain | 129878 | 1       |
| Bionorica Ethics/ AHD      | Triglycerides, medium-chain | 128843 | 1       |
| Bionorica Ethics/ AHD      | Triglycerides, medium-chain | 129876 | 1       |
| Bionorica Ethics/ AHD      | Triglycerides, medium-chain | 132615 | 1       |
| Bionorica Ethics/ AHD      | Triglycerides, medium-chain | 139105 | 1       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 129877 | 2       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 135056 | 2       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 269421 | 1       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 132615 | 2       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 326151 | 1       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 139105 | 2       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 141602 | 2       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 141603 | 4       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 141604 | 1       |
| Bionorica ethics/ Biono... | Triglycerides, medium-chain | 145765 | 2       |
| Bionorica Ethics/ Gehe     | Triglycerides, medium-chain | 129876 | 2       |
| Bionorica Ethics/ Gehe     | Triglycerides, medium-chain | 127731 | 1       |
| Bionorica Ethics/ Gehe     | Triglycerides, medium-chain | 141603 | 1       |
| Bionorica ethics/ Kehr ... | Triglycerides, medium-chain | 139107 | 2       |
| Bionorica ethics/ Nowed... | Triglycerides, medium-chain | 141604 | 1       |
| Bionorica Ethics/ Phoenix  | Triglycerides, medium-chain | 232615 | 1       |

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| Supplier                     | Substance                   | Batch         | Spectra |
|------------------------------|-----------------------------|---------------|---------|
| Bionorica ethics/AHCA        | Triglycerides, medium-chain | 1409952       | 1       |
| Bionorica ethics/AHCA        | Triglycerides, medium-chain | 116646        | 1       |
| Bionorica ethics/AHD         | Triglycerides, medium-chain | 3(0000109950) | 1       |
| Bionorica ethics/AHD         | Triglycerides, medium-chain | 4(0000116692) | 1       |
| Bionorica ethics/AHD         | Triglycerides, medium-chain | 5(171102)     | 1       |
| Bionorica ethics/AHD         | Triglycerides, medium-chain | 7(0000116643) | 1       |
| Bionorica ethics/AHD         | Triglycerides, medium-chain | 6(0000116646) | 1       |
| Bionorica ethics/Allian. . . | Triglycerides, medium-chain | 116646        | 1       |
| Bionorica ethics/Allian. . . | Triglycerides, medium-chain | 125596        | 3       |
| Bionorica Ethics/Anzag       | Triglycerides, medium-chain | 135058        | 1       |
| Bionorica ethics/Bionor. . . | Triglycerides, medium-chain | 139107        | 1       |
| Bionorica ethics/Bionor. . . | Triglycerides, medium-chain | 145765        | 1       |
| Bionorica ethics/Ebert       | Triglycerides, medium-chain | 128842        | 1       |
| Bionorica ethics/Ebert       | Triglycerides, medium-chain | 137367        | 1       |
| Bionorica ethics/Ebert       | Triglycerides, medium-chain | 129878        | 1       |
| Bionorica Ethics/Fiebig      | Triglycerides, medium-chain | 116638        | 1       |
| Bionorica Ethics/Fiebig      | Triglycerides, medium-chain | 116639        | 1       |
| Bionorica ethics/Gehe        | Triglycerides, medium-chain | 127731        | 1       |
| Bionorica ethics/Gehe        | Triglycerides, medium-chain | 128842        | 2       |
| Bionorica Ethics/Gehe        | Triglycerides, medium-chain | 128843        | 1       |
| Bionorica Ethics/Gehe        | Triglycerides, medium-chain | 129878        | 1       |
| Bionorica Ethics/Gehe 0. . . | Triglycerides, medium-chain | 129880        | 1       |
| Bionorica Ethics/Gehe 0. . . | Triglycerides, medium-chain | 107081        | 1       |
| Bionorica Ethics/Gehe 1. . . | Triglycerides, medium-chain | 132615        | 1       |
| Bionorica ethics/Kehr        | Triglycerides, medium-chain | 95082         | 1       |
| Bionorica ethics/Kehr        | Triglycerides, medium-chain | 123999        | 1       |
| Bionorica ethics/Kehr        | Triglycerides, medium-chain | 125597        | 1       |
| Bionorica ethics/Kehr        | Triglycerides, medium-chain | 128842        | 1       |
| Bionorica ethics/Kehr , . .  | Triglycerides, medium-chain | 145768        | 2       |
| Bionorica ethics/Kehr , . .  | Triglycerides, medium-chain | 139105        | 1       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 129876        | 1       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 129879        | 3       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 129880        | 2       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 135058        | 3       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 132615        | 1       |
| Bionorica ethics/Krieger     | Triglycerides, medium-chain | 141603        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 105039        | 2       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 107077        | 2       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 125597        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 125596        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 127731        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 128843        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 129876        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 139448        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 142331        | 2       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 135058        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 2887817       | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 139105        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 128842        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 139107        | 4       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 149852        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 141603        | 1       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 145767        | 3       |
| Bionorica ethics/Noweda      | Triglycerides, medium-chain | 141604        | 1       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 85113         | 3       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 95112         | 1       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 127733        | 1       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 128841        | 1       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 128840        | 1       |
| Bionorica Ethics/Noweda      | Triglycerides, medium-chain | 129877        | 1       |

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| <b>Supplier</b>            | <b>Substance</b>            | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------------|--------------|----------------|
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 109950       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 170517       | 2              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 116646       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 116642       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 116639       | 2              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 116641       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 109949       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 123014       | 2              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 123997       | 3              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 123999       | 2              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 154427       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 139107       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 145768       | 2              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 156506       | 1              |
| Bionorica ethics/Phoenix   | Triglycerides, medium-chain | 141604       | 2              |
| Bionorica ethics/phönix    | Triglycerides, medium-chain | 123997       | 1              |
| Bionorica ethics/Phönix    | Triglycerides, medium-chain | 129879       | 1              |
| Bionorica ethics/Phönix... | Triglycerides, medium-chain | 129877       | 4              |
| Bionorica Ethics/Phönix... | Triglycerides, medium-chain | 127780       | 1              |
| Bionorica ethics/Sanacorp  | Triglycerides, medium-chain | 116692       | 1              |
| Bionorica Ethics/Sanacorp  | Triglycerides, medium-chain | 125597       | 1              |
| Bionorica ethics/Sanaco... | Triglycerides, medium-chain | 150930       | 1              |
| Bionorica ethics/Sanaco... | Triglycerides, medium-chain | 97884        | 1              |
| Bionorica ethics/Sanaco... | Triglycerides, medium-chain | 93569        | 1              |
| bionorica ethics-Noweda    | Triglycerides, medium-chain | 128842       | 1              |
| bionorica ethics-Noweda    | Triglycerides, medium-chain | 128843       | 1              |
| bionorica ethics-Noweda    | Triglycerides, medium-chain | 129880       | 1              |
| bionorica ethics-Noweda    | Triglycerides, medium-chain | 139107       | 1              |
| Bionorica etics            | Triglycerides, medium-chain | 116643       | 1              |
| Bionorica etics            | Triglycerides, medium-chain | 120017       | 1              |
| bionorica gehe             | Triglycerides, medium-chain | 139107       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 107080       | 2              |
| Bionorica SE               | Triglycerides, medium-chain | 116689       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 116640       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 116638       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 120015       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 123015       | 2              |
| Bionorica SE               | Triglycerides, medium-chain | 120016       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 127732       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 129876       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 139105       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 141602       | 2              |
| Bionorica SE               | Triglycerides, medium-chain | 139107       | 1              |
| Bionorica SE               | Triglycerides, medium-chain | 141603       | 2              |
| Bionorica SE               | Triglycerides, medium-chain | 145767       | 4              |
| Bionorica SE               | Triglycerides, medium-chain | 145765       | 7              |
| Bionorica SE/Noweda        | Triglycerides, medium-chain | 125596       | 1              |
| Bionorica SE/Noweda        | Triglycerides, medium-chain | 129876       | 1              |
| Bionorica SE/Phönix        | Triglycerides, medium-chain | 116643       | 1              |
| Bionorica/                 | Triglycerides, medium-chain | 107078       | 1              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 120017       | 1              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 123999       | 1              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 125597       | 1              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 128842       | 2              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 129876       | 4              |
| Bionorica/ AHD             | Triglycerides, medium-chain | 135058       | 1              |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 116639       | 1              |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 116641       | 1              |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 125596       | 1              |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 125595       | 1              |

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| Supplier                   | Substance                   | Batch          | Spectra |
|----------------------------|-----------------------------|----------------|---------|
| Bionorica/ Alliance        | Triglycerides, medium-chain | 129876         | 1       |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 141602         | 1       |
| Bionorica/ Alliance        | Triglycerides, medium-chain | 145767         | 1       |
| Bionorica/ Allianve        | Triglycerides, medium-chain | 135056         | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 8(0000126132)  | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 9(0000123015)  | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 10(0000123999) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 12(0000251649) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 13(0000125596) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 14(0000125596) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 15(0000127732) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 16(0000127732) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 17(0000127731) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 18(0000128842) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 19(0000128841) | 1       |
| Bionorica/ Anzag           | Triglycerides, medium-chain | 20(0000128843) | 1       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 120016         | 1       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 123997         | 3       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 127732         | 1       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 127731         | 1       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 128841         | 2       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 128843         | 1       |
| Bionorica/ Gehe            | Triglycerides, medium-chain | 129876         | 1       |
| Bionorica/ Gehe 05.04.19   | Triglycerides, medium-chain | 127732         | 1       |
| Bionorica/ Gehe 10.05.19   | Triglycerides, medium-chain | 127731         | 1       |
| Bionorica/ Gehe 15.05.19   | Triglycerides, medium-chain | 125597         | 1       |
| Bionorica/ Gehe 17.09.2... | Triglycerides, medium-chain | 129876         | 1       |
| Bionorica/ Krieger         | Triglycerides, medium-chain | 128842         | 1       |
| Bionorica/ Noweda          | Triglycerides, medium-chain | 109950         | 1       |
| Bionorica/ Noweda          | Triglycerides, medium-chain | 120017         | 1       |
| Bionorica/ Otto Gk         | Triglycerides, medium-chain | 139107         | 1       |
| Bionorica/ Otto Gk         | Triglycerides, medium-chain | 141603         | 3       |
| Bionorica/ Otto Gk         | Triglycerides, medium-chain | 141604         | 1       |
| Bionorica/ Otto Gk         | Triglycerides, medium-chain | 145768         | 2       |
| bionorica/ Phoenix Leip... | Triglycerides, medium-chain | 103900         | 1       |
| bionorica/ Phoenix Leip... | Triglycerides, medium-chain | 98569          | 1       |
| Bionorica/ Phönix Lab      | Triglycerides, medium-chain | 127733         | 3       |
| Bionorica/ Phönix Lab      | Triglycerides, medium-chain | 135056         | 3       |
| Bionorica/ Phönix Lab      | Triglycerides, medium-chain | 132615         | 5       |
| Bionorica/ Phönix Lab      | Triglycerides, medium-chain | 141602         | 4       |
| Bionorica/ Sanacorp        | Triglycerides, medium-chain | 107077         | 1       |
| Bionorica/ Sanacorp        | Triglycerides, medium-chain | 171102         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 109709         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 123013         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 123997         | 2       |
| Bionorica/AHD              | Triglycerides, medium-chain | 120016         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 123999         | 2       |
| Bionorica/AHD              | Triglycerides, medium-chain | 125597         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 133557         | 2       |
| Bionorica/AHD              | Triglycerides, medium-chain | 129880         | 2       |
| Bionorica/AHD              | Triglycerides, medium-chain | 135058         | 1       |
| Bionorica/AHD              | Triglycerides, medium-chain | 141602         | 1       |
| Bionorica/Alliance         | Triglycerides, medium-chain | 117113         | 1       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 109951         | 1       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 105038         | 2       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 109952         | 1       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 109950         | 2       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116689         | 1       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 109949         | 1       |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116687         | 2       |

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| <b>Supplier</b>            | <b>Substance</b>            | <b>Batch</b> | <b>Spectra</b> |
|----------------------------|-----------------------------|--------------|----------------|
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116642       | 2              |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116639       | 2              |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116640       | 1              |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116638       | 1              |
| Bionorica/Alliance Heal... | Triglycerides, medium-chain | 116643       | 3              |
| Bionorica/Anzag            | Triglycerides, medium-chain | 98569        | 1              |
| Bionorica/Anzag            | Triglycerides, medium-chain | 10538        | 1              |
| Bionorica/Anzag            | Triglycerides, medium-chain | 129879       | 1              |
| Bionorica/Anzag            | Triglycerides, medium-chain | 135058       | 2              |
| Bionorica/Anzag            | Triglycerides, medium-chain | 139107       | 2              |
| Bionorica/Fiebig           | Triglycerides, medium-chain | 116687       | 1              |
| bionorica/Gehe             | Triglycerides, medium-chain | 141602       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 105039       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 116638       | 2              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 116639       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 123997       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 120016       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 123998       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 125597       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 127732       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 128843       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 125595       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 129880       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 129879       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 129877       | 1              |
| Bionorica/Gehe             | Triglycerides, medium-chain | 139107       | 1              |
| BIONORICA/GEHE             | Triglycerides, medium-chain | 109950       | 1              |
| BIONORICA/GEHE             | Triglycerides, medium-chain | 120017       | 1              |
| BIONORICA/GEHE             | Triglycerides, medium-chain | 127732       | 2              |
| BIONORICA/GEHE             | Triglycerides, medium-chain | 129876       | 1              |
| BIONORICA/GEHE 26.06.18    | Triglycerides, medium-chain | 116687       | 1              |
| BIONORICA/GEHE 15.03.19    | Triglycerides, medium-chain | 125597       | 1              |
| Bionorica/Gehe 26.06.2019  | Triglycerides, medium-chain | 128842       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 151130       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 109951       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 116686       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 123997       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 129878       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 132615       | 4              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 129879       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 139105       | 1              |
| Bionorica/Kehr             | Triglycerides, medium-chain | 141602       | 2              |
| Bionorica/kehr 27.08.2020  | Triglycerides, medium-chain | 141603       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 98569        | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 109949       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 116638       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 116642       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 109950       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 120016       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 120017       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 123997       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 123999       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 125596       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 125597       | 2              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 127732       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 128842       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 138508       | 1              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 141602       | 2              |
| Bionorica/Krieger          | Triglycerides, medium-chain | 139107       | 1              |
| Bionorica/Noweda           | Triglycerides, medium-chain | 93566        | 1              |

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| Supplier                    | Substance                   | Batch       | Spectra |
|-----------------------------|-----------------------------|-------------|---------|
| Bionorica/Noweda            | Triglycerides, medium-chain | 98573       | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 103899      | 2       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 103900      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 103902      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 107079      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 107080      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 105038      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 123999      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 127732      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 128839      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 127731      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 137100      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 128843      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 138037      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 129878      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 135058      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 132615      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 143550      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 139105      | 4       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 145382      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 148242      | 2       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 141602      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 139107      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 149852      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 155597      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 153403      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 153782      | 3       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 141604      | 2       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 156506      | 1       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 157871      | 3       |
| Bionorica/Noweda            | Triglycerides, medium-chain | 154616      | 1       |
| BIONORICA/Noweda            | Triglycerides, medium-chain | 128842      | 1       |
| Bionorica/phoenix           | Triglycerides, medium-chain | 1318A-03960 | 1       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 58448       | 11      |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 171102      | 1       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 116642      | 1       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 123014      | 2       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 123999      | 1       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 127732      | 1       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 128843      | 4       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 129876      | 2       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 132615      | 4       |
| Bionorica/Phoenix           | Triglycerides, medium-chain | 154616      | 2       |
| bionorica/Phoenix/29.12.... | Triglycerides, medium-chain | 95080       | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 105038      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 109953      | 2       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 116587      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 116642      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 120015      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 123997      | 3       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 127733      | 2       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 257537      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 127732      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 128839      | 4       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 123998      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 129877      | 7       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 135056      | 5       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 129876      | 1       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 129880      | 5       |
| Bionorica/Phönix            | Triglycerides, medium-chain | 135058      | 1       |

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| Supplier                   | Substance                   | Batch           | Spectra |
|----------------------------|-----------------------------|-----------------|---------|
| Bionorica/Phönix           | Triglycerides, medium-chain | 132615          | 3       |
| Bionorica/Phönix           | Triglycerides, medium-chain | 139105          | 12      |
| Bionorica/Phönix           | Triglycerides, medium-chain | 141602          | 8       |
| Bionorica/Phönix           | Triglycerides, medium-chain | 141603          | 1       |
| Bionorica/Phönix IE1125... | Triglycerides, medium-chain | 128843          | 5       |
| Bionorica/Phönix Pharma    | Triglycerides, medium-chain | 128840          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 116640          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 123013          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 123997          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 123999          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 125596          | 2       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 128841          | 2       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 129876          | 2       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 129880          | 5       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 139448          | 1       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 135058          | 2       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 132615          | 3       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 139107          | 5       |
| Bionorica/Sanacorp         | Triglycerides, medium-chain | 149852          | 1       |
| Bionorica/Sanacorp WE:     | Triglycerides, medium-chain | 85532           | 1       |
| Bionoricaethics            | Triglycerides, medium-chain | 1391050         | 1       |
| BionoricaEthics            | Triglycerides, medium-chain | 116643          | 2       |
| Bionoricaethics (Dronab... | Triglycerides, medium-chain | 128843(0137640) | 1       |
| Bionoricaethics / K        | Triglycerides, medium-chain | 120017(Miglyol  | 1       |
| Bionoricaethics / K        | Triglycerides, medium-chain | 120017          | 1       |
| BionoricaEthics / Phöni... | Triglycerides, medium-chain | 127733          | 8       |
| BionoricaEthics/ Bionor... | Triglycerides, medium-chain | 139105          | 2       |
| BionoricaEthics/ Bionor... | Triglycerides, medium-chain | 129880          | 1       |
| Bionoricaethics/ E (Dro... | Triglycerides, medium-chain | 170517          | 1       |
| BionoricaEthics/ Phönix    | Triglycerides, medium-chain | 128840          | 1       |
| BionoricaEthics/ Phönix... | Triglycerides, medium-chain | 145767          | 1       |
| BionoricaEthics/AHD        | Triglycerides, medium-chain | 132615          | 1       |
| BionoricaEthics/Fiebig     | Triglycerides, medium-chain | 109952          | 1       |
| BionoricaEthics/Noweda     | Triglycerides, medium-chain | 105038          | 1       |
| BionoricaEthics/Noweda     | Triglycerides, medium-chain | 105041          | 1       |
| Bionoricaethics/Phoenix    | Triglycerides, medium-chain | 139105          | 1       |
| bionoricaEthiks/Phoenix    | Triglycerides, medium-chain | 116687          | 1       |
| bionoricaEthiks/Phoenix    | Triglycerides, medium-chain | 147079          | 1       |
| bionoricaEthiks/Phoenix    | Triglycerides, medium-chain | 145767          | 1       |
| BionoricPhoenix            | Triglycerides, medium-chain | 958448          | 1       |
| Bionornica                 | Triglycerides, medium-chain | 125597          | 1       |
| Bionrica Ethics GmbH       | Triglycerides, medium-chain | 129878          | 1       |
| Bombastus                  | Triglycerides, medium-chain | 17361001        | 1       |
| Bombastus                  | Triglycerides, medium-chain | 17236202        | 2       |
| Bombastus                  | Triglycerides, medium-chain | 58/18           | 1       |
| Bombastus                  | Triglycerides, medium-chain | 116587          | 1       |
| Bombastus                  | Triglycerides, medium-chain | 15139608        | 1       |
| Bombastus                  | Triglycerides, medium-chain | 308509          | 1       |
| Bombastus                  | Triglycerides, medium-chain | 1603041-02      | 1       |
| Bombastus                  | Triglycerides, medium-chain | 1801034-01      | 1       |
| Bombastus                  | Triglycerides, medium-chain | 14098306        | 1       |
| Caelo                      | Triglycerides, medium-chain | 13348503        | 9       |
| Caelo                      | Triglycerides, medium-chain | 13348506        | 5       |
| Caelo                      | Triglycerides, medium-chain | 11D29-N01       | 1       |
| Caelo                      | Triglycerides, medium-chain | 11301109        | 1       |
| Caelo                      | Triglycerides, medium-chain | 41101-01998     | 1       |
| Caelo                      | Triglycerides, medium-chain | 12256505        | 22      |
| Caelo                      | Triglycerides, medium-chain | 12078605        | 2       |
| Caelo                      | Triglycerides, medium-chain | 11154601        | 1       |
| Caelo                      | Triglycerides, medium-chain | 20270312-3      | 1       |

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| Supplier | Substance                   | Batch      | Spectra |
|----------|-----------------------------|------------|---------|
| Caelo    | Triglycerides, medium-chain | 8011301    | 1       |
| Caelo    | Triglycerides, medium-chain | 1210002-01 | 1       |
| Caelo    | Triglycerides, medium-chain | 1226505    | 1       |
| Caelo    | Triglycerides, medium-chain | 18031307   | 1       |
| Caelo    | Triglycerides, medium-chain | 12253802   | 4       |
| Caelo    | Triglycerides, medium-chain | 1803111    | 2       |
| Caelo    | Triglycerides, medium-chain | 1256504    | 1       |
| Caelo    | Triglycerides, medium-chain | 12356908   | 22      |
| Caelo    | Triglycerides, medium-chain | 2113Q01998 | 1       |
| Caelo    | Triglycerides, medium-chain | 31051303   | 1       |
| Caelo    | Triglycerides, medium-chain | 10194002   | 1       |
| Caelo    | Triglycerides, medium-chain | 1115805    | 2       |
| Caelo    | Triglycerides, medium-chain | 13095304   | 12      |
| Caelo    | Triglycerides, medium-chain | 50775165   | 1       |
| Caelo    | Triglycerides, medium-chain | 13098601   | 16      |
| Caelo    | Triglycerides, medium-chain | 23082013B  | 1       |
| Caelo    | Triglycerides, medium-chain | 2101305    | 1       |
| Caelo    | Triglycerides, medium-chain | 12101303   | 1       |
| Caelo    | Triglycerides, medium-chain | 13098605   | 5       |
| Caelo    | Triglycerides, medium-chain | 101001     | 1       |
| Caelo    | Triglycerides, medium-chain | 18111309   | 1       |
| Caelo    | Triglycerides, medium-chain | 13210301   | 1       |
| Caelo    | Triglycerides, medium-chain | 13348501   | 5       |
| Caelo    | Triglycerides, medium-chain | 13177111   | 1       |
| Caelo    | Triglycerides, medium-chain | 14098306   | 3       |
| Caelo    | Triglycerides, medium-chain | 14098305   | 1       |
| Caelo    | Triglycerides, medium-chain | 14330503   | 1       |
| Caelo    | Triglycerides, medium-chain | 15239802   | 1       |
| Caelo    | Triglycerides, medium-chain | 15012016   | 1       |
| Caelo    | Triglycerides, medium-chain | 60492256   | 1       |
| Caelo    | Triglycerides, medium-chain | 15374201   | 1       |
| Caelo    | Triglycerides, medium-chain | 10356205   | 1       |
| Caelo    | Triglycerides, medium-chain | 11207501   | 1       |
| Caelo    | Triglycerides, medium-chain | 11154602   | 3       |
| Caelo    | Triglycerides, medium-chain | 6061201    | 1       |
| Caelo    | Triglycerides, medium-chain | 11207502   | 2       |
| Caelo    | Triglycerides, medium-chain | 13081205   | 1       |
| Caelo    | Triglycerides, medium-chain | 27101202   | 1       |
| Caelo    | Triglycerides, medium-chain | 14101704   | 1       |
| Caelo    | Triglycerides, medium-chain | 14219003   | 14      |
| Caelo    | Triglycerides, medium-chain | 14219009   | 10      |
| Caelo    | Triglycerides, medium-chain | 11031502   | 1       |
| Caelo    | Triglycerides, medium-chain | 6051503    | 1       |
| Caelo    | Triglycerides, medium-chain | 1411009-02 | 2       |
| Caelo    | Triglycerides, medium-chain | 15080603   | 1       |
| Caelo    | Triglycerides, medium-chain | 13159607   | 1       |
| Caelo    | Triglycerides, medium-chain | 15139604   | 16      |
| Caelo    | Triglycerides, medium-chain | 15272005   | 34      |
| Caelo    | Triglycerides, medium-chain | 12079604   | 1       |
| Caelo    | Triglycerides, medium-chain | 15270004   | 1       |
| Caelo    | Triglycerides, medium-chain | 1527003    | 1       |
| Caelo    | Triglycerides, medium-chain | 1572003    | 1       |
| Caelo    | Triglycerides, medium-chain | 15379608   | 29      |
| Caelo    | Triglycerides, medium-chain | 15379611   | 13      |
| Caelo    | Triglycerides, medium-chain | 15379606   | 1       |
| Caelo    | Triglycerides, medium-chain | 1572005    | 1       |
| Caelo    | Triglycerides, medium-chain | 152722007  | 1       |
| Caelo    | Triglycerides, medium-chain | 15272007   | 15      |
| Caelo    | Triglycerides, medium-chain | 1537908    | 1       |
| Caelo    | Triglycerides, medium-chain | 15379610   | 20      |

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| Supplier | Substance                   | Batch            | Spectra |
|----------|-----------------------------|------------------|---------|
| Caelo    | Triglycerides, medium-chain | 16124304         | 14      |
| Caelo    | Triglycerides, medium-chain | 15379612         | 19      |
| Caelo    | Triglycerides, medium-chain | 15H03-B03-525331 | 1       |
| Caelo    | Triglycerides, medium-chain | 15H03-B03-525271 | 1       |
| Caelo    | Triglycerides, medium-chain | 15379690         | 1       |
| Caelo    | Triglycerides, medium-chain | 15385501         | 1       |
| Caelo    | Triglycerides, medium-chain | 16124308         | 26      |
| Caelo    | Triglycerides, medium-chain | 15379602/170314M | 1       |
| Caelo    | Triglycerides, medium-chain | 20165321         | 1       |
| Caelo    | Triglycerides, medium-chain | 1001008-01       | 1       |
| Caelo    | Triglycerides, medium-chain | 11051706         | 1       |
| Caelo    | Triglycerides, medium-chain | 17016002         | 33      |
| Caelo    | Triglycerides, medium-chain | 17016001         | 60      |
| Caelo    | Triglycerides, medium-chain | 1701600201115811 | 1       |
| Caelo    | Triglycerides, medium-chain | 16124310         | 1       |
| Caelo    | Triglycerides, medium-chain | 13124310         | 1       |
| Caelo    | Triglycerides, medium-chain | 27071702         | 1       |
| Caelo    | Triglycerides, medium-chain | 16H18-B01        | 2       |
| Caelo    | Triglycerides, medium-chain | 1606035-03       | 3       |
| Caelo    | Triglycerides, medium-chain | 17016008         | 22      |
| Caelo    | Triglycerides, medium-chain | 17076008         | 1       |
| Caelo    | Triglycerides, medium-chain | 17194901         | 2       |
| Caelo    | Triglycerides, medium-chain | 17236202         | 78      |
| Caelo    | Triglycerides, medium-chain | 18121703         | 1       |
| Caelo    | Triglycerides, medium-chain | 1504029-01       | 1       |
| Caelo    | Triglycerides, medium-chain | 17326202         | 1       |
| Caelo    | Triglycerides, medium-chain | 1706007          | 1       |
| Caelo    | Triglycerides, medium-chain | 116692           | 1       |
| Caelo    | Triglycerides, medium-chain | 17F16-B02-341874 | 1       |
| Caelo    | Triglycerides, medium-chain | 23041803         | 1       |
| Caelo    | Triglycerides, medium-chain | 18118804         | 1       |
| Caelo    | Triglycerides, medium-chain | 116646           | 1       |
| Caelo    | Triglycerides, medium-chain | 18118801         | 86      |
| Caelo    | Triglycerides, medium-chain | 21071804         | 1       |
| Caelo    | Triglycerides, medium-chain | 181188001        | 1       |
| Caelo    | Triglycerides, medium-chain | 1801034-01       | 1       |
| Caelo    | Triglycerides, medium-chain | 116643           | 1       |
| Caelo    | Triglycerides, medium-chain | 116640           | 1       |
| Caelo    | Triglycerides, medium-chain | 18118802         | 14      |
| Caelo    | Triglycerides, medium-chain | 17361003         | 1       |
| Caelo    | Triglycerides, medium-chain | 18118807         | 106     |
| Caelo    | Triglycerides, medium-chain | 18118808         | 21      |
| Caelo    | Triglycerides, medium-chain | 28111806         | 1       |
| Caelo    | Triglycerides, medium-chain | 1821953          | 1       |
| Caelo    | Triglycerides, medium-chain | 18238901         | 86      |
| Caelo    | Triglycerides, medium-chain | 1818807          | 2       |
| Caelo    | Triglycerides, medium-chain | 18008807         | 1       |
| Caelo    | Triglycerides, medium-chain | 17322107         | 1       |
| Caelo    | Triglycerides, medium-chain | 125596           | 2       |
| Caelo    | Triglycerides, medium-chain | 18239004         | 31      |
| Caelo    | Triglycerides, medium-chain | 1812014-01       | 5       |
| Caelo    | Triglycerides, medium-chain | 17F16-B02        | 2       |
| Caelo    | Triglycerides, medium-chain | MI20190508_01    | 1       |
| Caelo    | Triglycerides, medium-chain | 18048203         | 2       |
| Caelo    | Triglycerides, medium-chain | 19060001         | 59      |
| Caelo    | Triglycerides, medium-chain | 182390003        | 1       |
| Caelo    | Triglycerides, medium-chain | 19055105         | 1       |
| Caelo    | Triglycerides, medium-chain | 18110105         | 1       |
| Caelo    | Triglycerides, medium-chain | 19055103         | 1       |
| Caelo    | Triglycerides, medium-chain | 19060005         | 13      |

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| Supplier | Substance                   | Batch               | Spectra |
|----------|-----------------------------|---------------------|---------|
| Caelo    | Triglycerides, medium-chain | 90600041            | 1       |
| Caelo    | Triglycerides, medium-chain | 1930-f03-526161     | 1       |
| Caelo    | Triglycerides, medium-chain | 19060003            | 1       |
| Caelo    | Triglycerides, medium-chain | 190600001           | 1       |
| Caelo    | Triglycerides, medium-chain | 1906004             | 1       |
| Caelo    | Triglycerides, medium-chain | 19012203            | 1       |
| Caelo    | Triglycerides, medium-chain | 19286001            | 1       |
| Caelo    | Triglycerides, medium-chain | 192931002           | 3       |
| Caelo    | Triglycerides, medium-chain | 241018E-02          | 1       |
| Caelo    | Triglycerides, medium-chain | 19286605            | 1       |
| Caelo    | Triglycerides, medium-chain | 20002916002         | 1       |
| Caelo    | Triglycerides, medium-chain | 2000343001          | 1       |
| Caelo    | Triglycerides, medium-chain | 23339200034431      | 1       |
| Caelo    | Triglycerides, medium-chain | 20003443001         | 2       |
| Caelo    | Triglycerides, medium-chain | 20003443003         | 2       |
| Caelo    | Triglycerides, medium-chain | 2000358002          | 1       |
| Caelo    | Triglycerides, medium-chain | 29/18               | 1       |
| Caelo    | Triglycerides, medium-chain | 1906001             | 1       |
| Caelo    | Triglycerides, medium-chain | ch17016007          | 1       |
| Caelo    | Triglycerides, medium-chain | CHB19060004         | 2       |
| Caelo    | Triglycerides, medium-chain | 1612307             | 1       |
| Caelo    | Triglycerides, medium-chain | 13348502            | 8       |
| Caelo    | Triglycerides, medium-chain | 150402902           | 1       |
| Caelo    | Triglycerides, medium-chain | 107080              | 1       |
| Caelo    | Triglycerides, medium-chain | 180103401           | 1       |
| Caelo    | Triglycerides, medium-chain | 161243047           | 1       |
| Caelo    | Triglycerides, medium-chain | 170420MT/16124308   | 1       |
| Caelo    | Triglycerides, medium-chain | 180607              | 4       |
| Caelo    | Triglycerides, medium-chain | 1818808             | 1       |
| Caelo    | Triglycerides, medium-chain | 20002281003         | 4       |
| Caelo    | Triglycerides, medium-chain | 3413I-01998         | 1       |
| Caelo    | Triglycerides, medium-chain | 1601050-01          | 5       |
| Caelo    | Triglycerides, medium-chain | 1603041-02          | 3       |
| Caelo    | Triglycerides, medium-chain | 18A19-B04-525821    | 1       |
| Caelo    | Triglycerides, medium-chain | 1606035-02          | 1       |
| Caelo    | Triglycerides, medium-chain | 123999              | 3       |
| Caelo    | Triglycerides, medium-chain | 130200402           | 1       |
| Caelo    | Triglycerides, medium-chain | 1504029-02          | 1       |
| Caelo    | Triglycerides, medium-chain | 12356903            | 9       |
| Caelo    | Triglycerides, medium-chain | 19055106            | 2       |
| Caelo    | Triglycerides, medium-chain | 12356901            | 7       |
| Caelo    | Triglycerides, medium-chain | 192866005           | 26      |
| Caelo    | Triglycerides, medium-chain | 18118808P-181227-9  | 1       |
| Caelo    | Triglycerides, medium-chain | 192866001P-200518-5 | 1       |
| Caelo    | Triglycerides, medium-chain | 19060002P-191206-2  | 1       |
| Caelo    | Triglycerides, medium-chain | 12078604            | 15      |
| Caelo    | Triglycerides, medium-chain | 116641              | 1       |
| Caelo    | Triglycerides, medium-chain | 15H03-B03-312351    | 1       |
| Caelo    | Triglycerides, medium-chain | 146(18238902)       | 1       |
| Caelo    | Triglycerides, medium-chain | 11(0000125596)      | 1       |
| Caelo    | Triglycerides, medium-chain | 17194902            | 12      |
| Caelo    | Triglycerides, medium-chain | 15272008            | 3       |
| Caelo    | Triglycerides, medium-chain | 1115811             | 2       |
| Caelo    | Triglycerides, medium-chain | 190600002           | 2       |
| Caelo    | Triglycerides, medium-chain | 14219007            | 12      |
| Caelo    | Triglycerides, medium-chain | 15272003            | 38      |
| Caelo    | Triglycerides, medium-chain | 16238504            | 1       |
| Caelo    | Triglycerides, medium-chain | 171123M/17016009    | 1       |
| Caelo    | Triglycerides, medium-chain | 19060011            | 20      |
| Caelo    | Triglycerides, medium-chain | 192866009           | 7       |

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| Supplier | Substance                   | Batch               | Spectra |
|----------|-----------------------------|---------------------|---------|
| Caelo    | Triglycerides, medium-chain | 15272006            | 18      |
| Caelo    | Triglycerides, medium-chain | 15H03-B03 (BTM-Set) | 1       |
| Caelo    | Triglycerides, medium-chain | 3336                | 1       |
| Caelo    | Triglycerides, medium-chain | 3113506             | 1       |
| Caelo    | Triglycerides, medium-chain | 4817A-01998         | 1       |
| Caelo    | Triglycerides, medium-chain | 17361002            | 33      |
| Caelo    | Triglycerides, medium-chain | 17361001            | 115     |
| Caelo    | Triglycerides, medium-chain | 128843              | 1       |
| Caelo    | Triglycerides, medium-chain | 20002281001         | 7       |
| Caelo    | Triglycerides, medium-chain | 1302004-01          | 1       |
| Caelo    | Triglycerides, medium-chain | 1906005             | 1       |
| Caelo    | Triglycerides, medium-chain | 16124307            | 88      |
| Caelo    | Triglycerides, medium-chain | 192866003           | 18      |
| Caelo    | Triglycerides, medium-chain | 170116002           | 1       |
| Caelo    | Triglycerides, medium-chain | 13177102            | 21      |
| Caelo    | Triglycerides, medium-chain | 15139607            | 24      |
| Caelo    | Triglycerides, medium-chain | 105041              | 1       |
| Caelo    | Triglycerides, medium-chain | 18239003            | 90      |
| Caelo    | Triglycerides, medium-chain | 20003429004         | 6       |
| Caelo    | Triglycerides, medium-chain | 15272004            | 47      |
| Caelo    | Triglycerides, medium-chain | 1256505             | 1       |
| Caelo    | Triglycerides, medium-chain | 95084               | 5       |
| Caelo    | Triglycerides, medium-chain | 16288504            | 1       |
| Caelo    | Triglycerides, medium-chain | 17016007            | 91      |
| Caelo    | Triglycerides, medium-chain | 17076001            | 1       |
| Caelo    | Triglycerides, medium-chain | 618E-01998          | 1       |
| Caelo    | Triglycerides, medium-chain | 1805020-01          | 1       |
| Caelo    | Triglycerides, medium-chain | 18A19B04            | 1       |
| Caelo    | Triglycerides, medium-chain | 18235901            | 1       |
| Caelo    | Triglycerides, medium-chain | 19060002            | 20      |
| Caelo    | Triglycerides, medium-chain | 140133              | 1       |
| Caelo    | Triglycerides, medium-chain | 192866001           | 19      |
| Caelo    | Triglycerides, medium-chain | 4420E-03960         | 1       |
| Caelo    | Triglycerides, medium-chain | 614M1998            | 1       |
| Caelo    | Triglycerides, medium-chain | 14G25-B03-302294    | 1       |
| Caelo    | Triglycerides, medium-chain | 20000747004         | 1       |
| Caelo    | Triglycerides, medium-chain | 1572006             | 1       |
| Caelo    | Triglycerides, medium-chain | 15242006            | 1       |
| Caelo    | Triglycerides, medium-chain | 15376911            | 5       |
| Caelo    | Triglycerides, medium-chain | 15H03-B03-328583    | 1       |
| Caelo    | Triglycerides, medium-chain | 16124306/170518M    | 1       |
| Caelo    | Triglycerides, medium-chain | 150518              | 1       |
| Caelo    | Triglycerides, medium-chain | 16238501            | 1       |
| Caelo    | Triglycerides, medium-chain | GT-8009020616       | 1       |
| Caelo    | Triglycerides, medium-chain | 180109M/17236204    | 1       |
| Caelo    | Triglycerides, medium-chain | 180206M/17236204    | 1       |
| Caelo    | Triglycerides, medium-chain | 109948              | 3       |
| Caelo    | Triglycerides, medium-chain | 116690              | 4       |
| Caelo    | Triglycerides, medium-chain | 116691              | 2       |
| Caelo    | Triglycerides, medium-chain | 18A19-B04-525713    | 1       |
| Caelo    | Triglycerides, medium-chain | 1805020             | 1       |
| Caelo    | Triglycerides, medium-chain | 71142383            | 1       |
| Caelo    | Triglycerides, medium-chain | 181188802           | 1       |
| Caelo    | Triglycerides, medium-chain | 123998              | 3       |
| Caelo    | Triglycerides, medium-chain | Caelo               | 1       |
| Caelo    | Triglycerides, medium-chain | 135058              | 2       |
| Caelo    | Triglycerides, medium-chain | 139105              | 1       |
| Caelo    | Triglycerides, medium-chain | 18238902            | 40      |
| Caelo    | Triglycerides, medium-chain | 15379609            | 22      |
| Caelo    | Triglycerides, medium-chain | 11207503            | 1       |

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| Supplier             | Substance                   | Batch            | Spectra |
|----------------------|-----------------------------|------------------|---------|
| Caelo                | Triglycerides, medium-chain | 12356909         | 4       |
| Caelo                | Triglycerides, medium-chain | 12356904         | 1       |
| Caelo                | Triglycerides, medium-chain | 14380802         | 18      |
| Caelo                | Triglycerides, medium-chain | 15139605         | 19      |
| Caelo                | Triglycerides, medium-chain | 16124309         | 1       |
| Caelo                | Triglycerides, medium-chain | 123015           | 2       |
| Caelo                | Triglycerides, medium-chain | 183238901        | 1       |
| Caelo                | Triglycerides, medium-chain | 19055101         | 2       |
| Caelo                | Triglycerides, medium-chain | 190591206        | 1       |
| Caelo                | Triglycerides, medium-chain | 128841           | 1       |
| Caelo                | Triglycerides, medium-chain | 19245202         | 4       |
| Caelo                | Triglycerides, medium-chain | 12256504         | 6       |
| Caelo                | Triglycerides, medium-chain | 1225604          | 1       |
| Caelo                | Triglycerides, medium-chain | 13177101         | 9       |
| Caelo                | Triglycerides, medium-chain | 14380804         | 28      |
| Caelo                | Triglycerides, medium-chain | 1539605          | 1       |
| Caelo                | Triglycerides, medium-chain | 15H03-B03-525120 | 1       |
| Caelo                | Triglycerides, medium-chain | 1537961          | 1       |
| Caelo                | Triglycerides, medium-chain | 15H-B03-525120   | 1       |
| Caelo                | Triglycerides, medium-chain | 15H-B03-525331   | 1       |
| Caelo                | Triglycerides, medium-chain | 10124307         | 1       |
| Caelo                | Triglycerides, medium-chain | 16238508         | 1       |
| Caelo                | Triglycerides, medium-chain | 17236203         | 30      |
| Caelo                | Triglycerides, medium-chain | 18118803         | 2       |
| Caelo                | Triglycerides, medium-chain | 1818801          | 4       |
| Caelo                | Triglycerides, medium-chain | 181118807        | 1       |
| Caelo                | Triglycerides, medium-chain | 18G13-B01-353059 | 1       |
| Caelo                | Triglycerides, medium-chain | 190302002        | 1       |
| Caelo                | Triglycerides, medium-chain | 1906002          | 1       |
| Caelo                | Triglycerides, medium-chain | 19060004         | 32      |
| Caelo                | Triglycerides, medium-chain | 19060010         | 41      |
| Caelo                | Triglycerides, medium-chain | 19293102         | 3       |
| Caelo                | Triglycerides, medium-chain | 17004301         | 1       |
| Caelo                | Triglycerides, medium-chain | 20003585002      | 10      |
| Caelo                | Triglycerides, medium-chain | 2014030260       | 1       |
| Caelo                | Triglycerides, medium-chain | 13095306         | 3       |
| Caelo                | Triglycerides, medium-chain | 59/AKD7          | 1       |
| Caelo                | Triglycerides, medium-chain | 1606035-01       | 2       |
| Caelo                | Triglycerides, medium-chain | 1701600711/2019  | 1       |
| Caelo                | Triglycerides, medium-chain | 116689           | 1       |
| Caelo                | Triglycerides, medium-chain | 1801034-02       | 2       |
| Caelo                | Triglycerides, medium-chain | 1960001          | 1       |
| Caelo                | Triglycerides, medium-chain | 17162701         | 1       |
| Caelo                | Triglycerides, medium-chain | 1060010          | 1       |
| Caelo                | Triglycerides, medium-chain | 141602           | 1       |
| Caelo                | Triglycerides, medium-chain | 192866008        | 20      |
| Caelo                | Triglycerides, medium-chain | 200003585002     | 1       |
| Caelo                | Triglycerides, medium-chain | 613A-01998       | 1       |
| Caelo                | Triglycerides, medium-chain | 192866002        | 49      |
| Caelo                | Triglycerides, medium-chain | 19245203         | 2       |
| Caolo/Ahd            | Triglycerides, medium-chain | 18238901         | 1       |
| Caolo/Noweda         | Triglycerides, medium-chain | 15379608         | 1       |
| Caesar               | Triglycerides, medium-chain | 17016007         | 1       |
| Caesar & Loretz      | Triglycerides, medium-chain | 16124307         | 1       |
| Caesar & Loretz      | Triglycerides, medium-chain | 18118807         | 1       |
| Caesar & Loretz GmbH | Triglycerides, medium-chain | 12078603         | 1       |
| Caesar & Loretz GmbH | Triglycerides, medium-chain | 13098601         | 1       |
| Caesar & Loretz GmbH | Triglycerides, medium-chain | 116642           | 1       |
| Caesar & Loretz GmbH | Triglycerides, medium-chain | 17361002         | 1       |
| Caesar & Loretz GmbH | Triglycerides, medium-chain | 17F16-B02-525622 | 1       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 18238901    | 9       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 18238902    | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 18239004    | 7       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 18239003    | 21      |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 1812014-01  | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060002    | 5       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060001    | 13      |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 18239007    | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060005    | 6       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060004    | 5       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060011    | 15      |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060012    | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 190600002   | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 19060010    | 8       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866001   | 11      |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866002   | 15      |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866003   | 7       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 190600001   | 1       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866005   | 7       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866008   | 5       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 192866009   | 5       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 20003585002 | 4       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 20003429001 | 2       |
| Caesar & Loretz GmbH       | Triglycerides, medium-chain | 20003585001 | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 15272006    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 192866005   | 2       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 192866003   | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 17236202    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 18238902    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 18239005    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 19060004    | 2       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 190600001   | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 19060001    | 2       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 19060005    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerides, medium-chain | 19060011    | 5       |
| Caesar & Loretz GmbH Hi... | Triglycerides, medium-chain | 15379610    | 1       |
| Caesar & Loretz GmbH, P... | Triglycerides, medium-chain | 17016001    | 1       |
| Caesar & Loretz GmbH/ M... | Triglycerides, medium-chain | 19060001    | 1       |
| Caesar & Loretz GmbH/AHD   | Triglycerides, medium-chain | 18239003    | 1       |
| Caesar & Loretz GmbH/An... | Triglycerides, medium-chain | 192866005   | 1       |
| Caesar & Loretz GmbH/Fi... | Triglycerides, medium-chain | 18239003    | 1       |
| Caesar & Loretz GmbH/Gehe  | Triglycerides, medium-chain | 18239003    | 2       |
| Caesar & Loretz GmbH/Gehe  | Triglycerides, medium-chain | 18238901    | 1       |
| Caesar & Loretz GmbH/Gehe  | Triglycerides, medium-chain | 19060010    | 1       |
| Caesar & Loretz GmbH/Gehe  | Triglycerides, medium-chain | 192866002   | 2       |
| Caesar & Loretz GmbH/GEHE  | Triglycerides, medium-chain | 19060001    | 1       |
| Caesar & Loretz GmbH/Je... | Triglycerides, medium-chain | 19060010    | 1       |
| Caesar & Loretz GmbH/K     | Triglycerides, medium-chain | 125596      | 1       |
| Caesar & Loretz GmbH/No... | Triglycerides, medium-chain | 19060011    | 5       |
| Caesar & Loretz GmbH/ph... | Triglycerides, medium-chain | 19060001    | 1       |
| Caesar & Loretz GmbH/Ph... | Triglycerides, medium-chain | 18239003    | 2       |
| Caesar & Loretz GmbH/Sana  | Triglycerides, medium-chain | 18238901    | 1       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 19060001    | 1       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 19060010    | 2       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 192866002   | 1       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 192866005   | 1       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 20003585002 | 1       |
| Caesar & Loretz GmbH/Sa... | Triglycerides, medium-chain | 192866008   | 1       |
| Caesar & Loretz GmbHSan... | Triglycerides, medium-chain | 19060005    | 1       |
| Caesar & Loretz Hilden/... | Triglycerides, medium-chain | 19060004    | 1       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Caesar Loretz              | Triglycerides, medium-chain | 19055101         | 1       |
| Caesar und Loretz GmbH     | Triglycerides, medium-chain | 17016007         | 1       |
| Caesar und Loretz GmbH     | Triglycerides, medium-chain | 17361001         | 1       |
| Caesar&Lorenz              | Triglycerides, medium-chain | 17016001         | 1       |
| Caesar&Loretz GmbH         | Triglycerides, medium-chain | 192866002        | 1       |
| Caesar&loretz,Phoenix      | Triglycerides, medium-chain | 13177102         | 1       |
| Caesar&loretz,Phoenix      | Triglycerides, medium-chain | 14219003         | 1       |
| Caesar/Alliance            | Triglycerides, medium-chain | 14219007         | 1       |
| Caesar/Noweda              | Triglycerides, medium-chain | 11301104         | 1       |
| Caesar/Noweda              | Triglycerides, medium-chain | 13177109         | 1       |
| Caleo/Phönix               | Triglycerides, medium-chain | 14380803         | 1       |
| Cannamedical               | Triglycerides, medium-chain | CKI90MGANG       | 1       |
| Cannamedical / Phönix      | Triglycerides, medium-chain | CKI90MGANG       | 1       |
| Caolo- Phönix              | Triglycerides, medium-chain | 14098306         | 1       |
| Caolo/NOWEDA               | Triglycerides, medium-chain | 18118802         | 1       |
| Cealo                      | Triglycerides, medium-chain | 16124307         | 1       |
| Cealo/Kehr                 | Triglycerides, medium-chain | 20000699001      | 1       |
| Ceasar & Loretz GmbH / ... | Triglycerides, medium-chain | 18238901         | 1       |
| celo/phönix                | Triglycerides, medium-chain | 13095306         | 1       |
| Cremer Oleo GmbH & Co K... | Triglycerides, medium-chain | 15H03-B03-525120 | 1       |
| Defektur                   | Triglycerides, medium-chain | 1710910-b        | 1       |
| Delta                      | Triglycerides, medium-chain | 17361001         | 1       |
| Dr. Wolff/Gehe             | Triglycerides, medium-chain | 1801034-02       | 1       |
| Ebert                      | Triglycerides, medium-chain | 13098601         | 1       |
| Ebert 12.10.16             | Triglycerides, medium-chain | 15379611         | 1       |
| eigen                      | Triglycerides, medium-chain | 2819I-03960      | 1       |
| eigen                      | Triglycerides, medium-chain | 4619Q-03960      | 1       |
| eigene Herstellung         | Triglycerides, medium-chain | 1712907-a        | 1       |
| Ethics/Noweda              | Triglycerides, medium-chain | 128842           | 3       |
| Ethics/Phönix              | Triglycerides, medium-chain | 2880050000304322 | 1       |
| Eurho                      | Triglycerides, medium-chain | 1205015-01       | 1       |
| EuRho                      | Triglycerides, medium-chain | 1111037-01       | 1       |
| EuRho                      | Triglycerides, medium-chain | 4121201          | 1       |
| EuRho                      | Triglycerides, medium-chain | 1504029-02       | 1       |
| EuRho                      | Triglycerides, medium-chain | 1406016-01       | 1       |
| EuRho                      | Triglycerides, medium-chain | 1801034-01       | 3       |
| EuRho                      | Triglycerides, medium-chain | 1801034-02       | 1       |
| EuRho                      | Triglycerides, medium-chain | 1902005-02       | 1       |
| EuRho / 11                 | Triglycerides, medium-chain | 2007018-01       | 1       |
| EuRho GEHE                 | Triglycerides, medium-chain | 1902005-01       | 1       |
| EuRho/ NOWEDA              | Triglycerides, medium-chain | 1902005-02       | 1       |
| EuRho/ Phönix              | Triglycerides, medium-chain | 1606035-03       | 1       |
| Eurho/Phoenix              | Triglycerides, medium-chain | 13095303         | 2       |
| EuRho/Phönix               | Triglycerides, medium-chain | 13020004-02      | 1       |
| EuRho/Phönix               | Triglycerides, medium-chain | 1411009-01       | 2       |
| EuRho/Phönix               | Triglycerides, medium-chain | 1411009-02       | 1       |
| EuRho/Phönix               | Triglycerides, medium-chain | 1504029-02       | 1       |
| EuRho/Sanacorp             | Triglycerides, medium-chain | 1812014-01       | 1       |
| EuRho/Sanacorp             | Triglycerides, medium-chain | 1902005-02       | 1       |
| EuRho/VDL                  | Triglycerides, medium-chain | 1801034-02       | 1       |
| euro                       | Triglycerides, medium-chain | 1812014          | 1       |
| Euro / AHD                 | Triglycerides, medium-chain | 1902005-01       | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 160304102        | 3       |
| Euro OTC                   | Triglycerides, medium-chain | 150902201        | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1105005-01       | 2       |
| Euro OTC                   | Triglycerides, medium-chain | 1007009-01       | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1411009-02       | 6       |
| Euro OTC                   | Triglycerides, medium-chain | 1504029-02       | 12      |
| Euro OTC                   | Triglycerides, medium-chain | 1509022-01       | 4       |
| Euro OTC                   | Triglycerides, medium-chain | 160105001        | 2       |

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| Supplier     | Substance                   | Batch              | Spectra |
|--------------|-----------------------------|--------------------|---------|
| Euro OTC     | Triglycerides, medium-chain | 15379612           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1600105001         | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1511011-1          | 1       |
| Euro OTC     | Triglycerides, medium-chain | 17016002           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1701023-01         | 8       |
| Euro OTC     | Triglycerides, medium-chain | 71161892           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 8003093001         | 1       |
| Euro OTC     | Triglycerides, medium-chain | 18118801           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1801034-02         | 26      |
| Euro OTC     | Triglycerides, medium-chain | 1812012-1          | 1       |
| Euro OTC     | Triglycerides, medium-chain | 200701801          | 2       |
| Euro OTC     | Triglycerides, medium-chain | 71143373           | 4       |
| Euro OTC     | Triglycerides, medium-chain | 1601050-01         | 48      |
| Euro OTC     | Triglycerides, medium-chain | 91144781           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 2011015-01         | 3       |
| Euro OTC     | Triglycerides, medium-chain | 130200401          | 1       |
| Euro OTC     | Triglycerides, medium-chain | 61140578           | 2       |
| Euro OTC     | Triglycerides, medium-chain | 81146263           | 5       |
| Euro OTC     | Triglycerides, medium-chain | 1205015-01         | 3       |
| Euro OTC     | Triglycerides, medium-chain | 1111037-01         | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1302004-02         | 8       |
| Euro OTC     | Triglycerides, medium-chain | 1411009-01         | 8       |
| Euro OTC     | Triglycerides, medium-chain | 41141312           | 1       |
| Euro OTC     | Triglycerides, medium-chain | 160105             | 1       |
| Euro OTC     | Triglycerides, medium-chain | GT-8009020616      | 1       |
| Euro OTC     | Triglycerides, medium-chain | 160603502          | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1801034-01         | 57      |
| Euro OTC     | Triglycerides, medium-chain | 1805020-01         | 38      |
| Euro OTC     | Triglycerides, medium-chain | 1606035-01         | 32      |
| Euro OTC     | Triglycerides, medium-chain | 1606035-02         | 26      |
| Euro OTC     | Triglycerides, medium-chain | 81147353           | 7       |
| Euro OTC     | Triglycerides, medium-chain | 1902005-2005031-01 | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1144252            | 2       |
| Euro OTC     | Triglycerides, medium-chain | 170901402          | 2       |
| Euro OTC     | Triglycerides, medium-chain | 1902005-02         | 41      |
| Euro OTC     | Triglycerides, medium-chain | 2005031-01         | 20      |
| Euro OTC     | Triglycerides, medium-chain | 1411009-002        | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1511011-01         | 14      |
| Euro OTC     | Triglycerides, medium-chain | 1309025-01         | 2       |
| Euro OTC     | Triglycerides, medium-chain | 1902005-01         | 33      |
| Euro OTC     | Triglycerides, medium-chain | 151101101          | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1302004-01         | 12      |
| Euro OTC     | Triglycerides, medium-chain | 2007018-01         | 12      |
| Euro OTC     | Triglycerides, medium-chain | 1603041-01         | 6       |
| Euro OTC     | Triglycerides, medium-chain | 1902005-42         | 1       |
| Euro OTC     | Triglycerides, medium-chain | 58448              | 2       |
| Euro OTC     | Triglycerides, medium-chain | 67940              | 2       |
| Euro OTC     | Triglycerides, medium-chain | 1406016-01         | 5       |
| Euro OTC     | Triglycerides, medium-chain | 2614A-01998        | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1603041-02         | 28      |
| Euro OTC     | Triglycerides, medium-chain | 160427             | 1       |
| Euro OTC     | Triglycerides, medium-chain | 1812014-01         | 56      |
| Euro OTC     | Triglycerides, medium-chain | 15379610           | 1       |
| Euro/ Phönix | Triglycerides, medium-chain | 1117Q-01998        | 1       |
| Euro/Phönix  | Triglycerides, medium-chain | 1805020-01         | 1       |
| Euro/Phönix  | Triglycerides, medium-chain | 81146263           | 1       |
| Euro/Phönix  | Triglycerides, medium-chain | 1902005-01         | 2       |
| Euro OTC     | Triglycerides, medium-chain | 1504029-01         | 10      |
| Euro OTC     | Triglycerides, medium-chain | 700282             | 2       |
| Euro OTC     | Triglycerides, medium-chain | 1709014-01         | 33      |

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| Supplier                   | Substance                   | Batch                | Spectra |
|----------------------------|-----------------------------|----------------------|---------|
| Euro OTC                   | Triglycerides, medium-chain | 71161992             | 6       |
| Euro OTC                   | Triglycerides, medium-chain | 1812014_01           | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 71142383             | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 180502001            | 4       |
| Euro OTC                   | Triglycerides, medium-chain | 1606035-03           | 11      |
| Euro OTC                   | Triglycerides, medium-chain | 1709014-02           | 25      |
| Euro OTC                   | Triglycerides, medium-chain | 170901401            | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1509022-01G          | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1812014-1            | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 127733               | 3       |
| Euro OTC                   | Triglycerides, medium-chain | 180103402            | 2       |
| Euro OTC                   | Triglycerides, medium-chain | 19020005-02          | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 1709014-01-20180404M | 1       |
| Fa. Bionorica/ Fa. Krie... | Triglycerides, medium-chain | 132615               | 1       |
| Fagron                     | Triglycerides, medium-chain | 14G25-B03            | 4       |
| Fagron                     | Triglycerides, medium-chain | 10K09-0031           | 1       |
| Fagron                     | Triglycerides, medium-chain | 12I04-N07            | 8       |
| Fagron                     | Triglycerides, medium-chain | 12C27-N02            | 1       |
| Fagron                     | Triglycerides, medium-chain | 12K07-N22            | 5       |
| Fagron                     | Triglycerides, medium-chain | 13E24-N04            | 14      |
| Fagron                     | Triglycerides, medium-chain | 12104-N07            | 1       |
| Fagron                     | Triglycerides, medium-chain | 13H02-N03            | 1       |
| Fagron                     | Triglycerides, medium-chain | 13H02N03             | 1       |
| Fagron                     | Triglycerides, medium-chain | 14G25B03             | 1       |
| Fagron                     | Triglycerides, medium-chain | 14D11-N01            | 1       |
| Fagron                     | Triglycerides, medium-chain | 14G25-B03-305014     | 1       |
| Fagron                     | Triglycerides, medium-chain | 12/04-N07            | 1       |
| Fagron                     | Triglycerides, medium-chain | 140514               | 1       |
| Fagron                     | Triglycerides, medium-chain | 15D24-B03-525046     | 2       |
| Fagron                     | Triglycerides, medium-chain | 15D24B03525046       | 1       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03            | 4       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-312924     | 5       |
| Fagron                     | Triglycerides, medium-chain | 15D24-B03-307759     | 2       |
| Fagron                     | Triglycerides, medium-chain | 150518               | 5       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-525189     | 2       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-318530     | 3       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-318529     | 11      |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-325574     | 2       |
| Fagron                     | Triglycerides, medium-chain | 15403-B03-318529     | 1       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-318529     | 1       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-311235     | 1       |
| Fagron                     | Triglycerides, medium-chain | 16H18-B01-525420     | 8       |
| Fagron                     | Triglycerides, medium-chain | 15H03-B03-328583     | 3       |
| Fagron                     | Triglycerides, medium-chain | 16H18-B01            | 8       |
| Fagron                     | Triglycerides, medium-chain | 16H-18-B01-525420    | 1       |
| Fagron                     | Triglycerides, medium-chain | 15H03B03312315       | 1       |
| Fagron                     | Triglycerides, medium-chain | 16H18-B01-525506     | 12      |
| Fagron                     | Triglycerides, medium-chain | 27101710             | 1       |
| Fagron                     | Triglycerides, medium-chain | 1606035-01           | 1       |
| Fagron                     | Triglycerides, medium-chain | 107076               | 1       |
| Fagron                     | Triglycerides, medium-chain | 16h18-b01-525531     | 1       |
| Fagron                     | Triglycerides, medium-chain | 17F16-B02-525662     | 1       |
| Fagron                     | Triglycerides, medium-chain | 17F16-B02-525622     | 18      |
| Fagron                     | Triglycerides, medium-chain | 17f16-b02-525622     | 1       |
| Fagron                     | Triglycerides, medium-chain | 17F16-B02-525657     | 5       |
| Fagron                     | Triglycerides, medium-chain | 17F16-802            | 2       |
| Fagron                     | Triglycerides, medium-chain | 18A19-B04-525704     | 2       |
| Fagron                     | Triglycerides, medium-chain | 18A19-B04            | 23      |
| Fagron                     | Triglycerides, medium-chain | 109948               | 1       |
| Fagron                     | Triglycerides, medium-chain | 116646               | 1       |

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| Supplier | Substance                   | Batch             | Spectra |
|----------|-----------------------------|-------------------|---------|
| Fagron   | Triglycerides, medium-chain | 18A19-B04525725   | 1       |
| Fagron   | Triglycerides, medium-chain | 1801034-01        | 1       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-348506  | 3       |
| Fagron   | Triglycerides, medium-chain | 18A19B04525725    | 1       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-525726  | 16      |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-348507  | 1       |
| Fagron   | Triglycerides, medium-chain | 18a19-bo4-350476  | 1       |
| Fagron   | Triglycerides, medium-chain | 18a19-b04-525726  | 1       |
| Fagron   | Triglycerides, medium-chain | 17F16B02-341874   | 1       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-525821  | 4       |
| Fagron   | Triglycerides, medium-chain | 525837            | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-52871   | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-525837  | 4       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-352212  | 4       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01_525948  | 1       |
| Fagron   | Triglycerides, medium-chain | 18g13-b01-355309  | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-525912  | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-525948  | 2       |
| Fagron   | Triglycerides, medium-chain | 18g13-b01-525975  | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-525975  | 3       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-353926  | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13             | 1       |
| Fagron   | Triglycerides, medium-chain | 18G-B01-525975    | 1       |
| Fagron   | Triglycerides, medium-chain | 19J10-F12-366180  | 8       |
| Fagron   | Triglycerides, medium-chain | 1930-F03-365619   | 1       |
| Fagron   | Triglycerides, medium-chain | 19i30-F03-526163  | 1       |
| Fagron   | Triglycerides, medium-chain | 190I30-F03-526162 | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-365618  | 1       |
| Fagron   | Triglycerides, medium-chain | 19J10-F12         | 4       |
| Fagron   | Triglycerides, medium-chain | 20A29-F17-526272  | 12      |
| Fagron   | Triglycerides, medium-chain | 1930-F03-526162   | 1       |
| Fagron   | Triglycerides, medium-chain | 19130-F03-526162  | 1       |
| Fagron   | Triglycerides, medium-chain | IoI01eoGmbH160427 | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13B01357639    | 1       |
| Fagron   | Triglycerides, medium-chain | 18A19/B04/348506  | 1       |
| Fagron   | Triglycerides, medium-chain | 12A20-N16         | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-355309  | 10      |
| Fagron   | Triglycerides, medium-chain | 20A29-F16-369728  | 1       |
| Fagron   | Triglycerides, medium-chain | 19j10-F12-366180  | 1       |
| Fagron   | Triglycerides, medium-chain | 14G25-B03-296937  | 6       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-525713  | 9       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-526063  | 7       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-526102  | 4       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-526160  | 1       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03_318529  | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-526039  | 4       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-350476  | 6       |
| Fagron   | Triglycerides, medium-chain | F12_3661800       | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-526161  | 2       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-526162  | 2       |
| Fagron   | Triglycerides, medium-chain | 16124308          | 1       |
| Fagron   | Triglycerides, medium-chain | 11L19-N20         | 1       |
| Fagron   | Triglycerides, medium-chain | 18A19-B014-525725 | 2       |
| Fagron   | Triglycerides, medium-chain | 181026/1003       | 1       |
| Fagron   | Triglycerides, medium-chain | 18118807          | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03-365619  | 3       |
| Fagron   | Triglycerides, medium-chain | 17-F16-B02-341874 | 1       |
| Fagron   | Triglycerides, medium-chain | 181201401         | 1       |
| Fagron   | Triglycerides, medium-chain | 16H18-B01_525477  | 1       |
| Fagron   | Triglycerides, medium-chain | 171209            | 6       |

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| Supplier | Substance                   | Batch            | Spectra |
|----------|-----------------------------|------------------|---------|
| Fagron   | Triglycerides, medium-chain | 20A29-F17-368743 | 3       |
| Fagron   | Triglycerides, medium-chain | 17F16-B02        | 8       |
| Fagron   | Triglycerides, medium-chain | 1805020-01       | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-525781 | 1       |
| Fagron   | Triglycerides, medium-chain | 16H18-B01-331028 | 8       |
| Fagron   | Triglycerides, medium-chain | 16h18-b01-331028 | 1       |
| Fagron   | Triglycerides, medium-chain | 110321           | 1       |
| Fagron   | Triglycerides, medium-chain | 13j25-b11        | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-801-526004 | 2       |
| Fagron   | Triglycerides, medium-chain | 19/30-F03-526160 | 1       |
| Fagron   | Triglycerides, medium-chain | 1210002-01       | 3       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-322735 | 5       |
| Fagron   | Triglycerides, medium-chain | 17F16-B02-341874 | 5       |
| Fagron   | Triglycerides, medium-chain | 20a29-f16        | 1       |
| Fagron   | Triglycerides, medium-chain | 11G28-N07        | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-357639 | 3       |
| Fagron   | Triglycerides, medium-chain | 19/30-F03-526163 | 2       |
| Fagron   | Triglycerides, medium-chain | 20A29/F17-526272 | 1       |
| Fagron   | Triglycerides, medium-chain | 14G25-B03-302294 | 13      |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-312351 | 12      |
| Fagron   | Triglycerides, medium-chain | 18G13-B01        | 12      |
| Fagron   | Triglycerides, medium-chain | 15H03-318529     | 1       |
| Fagron   | Triglycerides, medium-chain | 160427           | 2       |
| Fagron   | Triglycerides, medium-chain | 17f16-b02-340113 | 1       |
| Fagron   | Triglycerides, medium-chain | 116638           | 1       |
| Fagron   | Triglycerides, medium-chain | 105040           | 1       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-526004 | 8       |
| Fagron   | Triglycerides, medium-chain | 20A29-F17        | 9       |
| Fagron   | Triglycerides, medium-chain | 20A29-F16-526370 | 2       |
| Fagron   | Triglycerides, medium-chain | 20A29-F16        | 5       |
| Fagron   | Triglycerides, medium-chain | 20J19-F04        | 1       |
| Fagron   | Triglycerides, medium-chain | 20J20-F01        | 1       |
| Fagron   | Triglycerides, medium-chain | 20A29-F16-375098 | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30-F03        | 6       |
| Fagron   | Triglycerides, medium-chain | 120604           | 2       |
| Fagron   | Triglycerides, medium-chain | 130502           | 1       |
| Fagron   | Triglycerides, medium-chain | 13J21-N06        | 1       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-525271 | 6       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03322735  | 1       |
| Fagron   | Triglycerides, medium-chain | 161123           | 4       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-353059 | 8       |
| Fagron   | Triglycerides, medium-chain | 14K28-N01        | 4       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-525225 | 2       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-525331 | 3       |
| Fagron   | Triglycerides, medium-chain | 15H03-B03-525383 | 1       |
| Fagron   | Triglycerides, medium-chain | 16H18-B01-525477 | 2       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-345025 | 4       |
| Fagron   | Triglycerides, medium-chain | 18A19B04350476   | 1       |
| Fagron   | Triglycerides, medium-chain | 180607           | 2       |
| Fagron   | Triglycerides, medium-chain | 18G13-B01-0031   | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30F03526162   | 1       |
| Fagron   | Triglycerides, medium-chain | 19I30F03526163   | 1       |
| Fagron   | Triglycerides, medium-chain | 19J10-F12-526198 | 2       |
| Fagron   | Triglycerides, medium-chain | 20A29-F16-526345 | 4       |
| Fagron   | Triglycerides, medium-chain | 17F16-B02-340113 | 7       |
| Fagron   | Triglycerides, medium-chain | 170517           | 9       |
| Fagron   | Triglycerides, medium-chain | 17F16-B02_525622 | 1       |
| Fagron   | Triglycerides, medium-chain | 17361001         | 2       |
| Fagron   | Triglycerides, medium-chain | 18118801         | 2       |
| Fagron   | Triglycerides, medium-chain | 18A19-B04-525800 | 3       |

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| Supplier           | Substance                   | Batch             | Spectra |
|--------------------|-----------------------------|-------------------|---------|
| Fagron             | Triglycerides, medium-chain | 18G13-B01-525871  | 5       |
| Fagron             | Triglycerides, medium-chain | 18239003          | 1       |
| Fagron             | Triglycerides, medium-chain | 1902005-02        | 1       |
| Fagron             | Triglycerides, medium-chain | 20A29-F16_375098  | 1       |
| Fagron             | Triglycerides, medium-chain | 16H18-B01-525531  | 3       |
| Fagron             | Triglycerides, medium-chain | 18A19-B04-525705  | 13      |
| Fagron             | Triglycerides, medium-chain | 15H03-B03-525120  | 8       |
| Fargon             | Triglycerides, medium-chain | 150518            | 1       |
| Fargon             | Triglycerides, medium-chain | 16H18-B01-525420  | 1       |
| Fargon /Phönix     | Triglycerides, medium-chain | 17F16-B02340113   | 1       |
| Fargon/Phönix      | Triglycerides, medium-chain | 150518            | 1       |
| Fargon/Sanacorp    | Triglycerides, medium-chain | 11L19-N20         | 1       |
| Fiebig             | Triglycerides, medium-chain | 11207502          | 1       |
| Fiebig             | Triglycerides, medium-chain | 15272006          | 1       |
| Fiebig             | Triglycerides, medium-chain | 15379610          | 1       |
| Fiebig             | Triglycerides, medium-chain | 16124308          | 3       |
| Fiebig             | Triglycerides, medium-chain | 15H003-B03-525383 | 1       |
| Fiebig             | Triglycerides, medium-chain | 16124310          | 1       |
| Fiebig             | Triglycerides, medium-chain | 17016002          | 1       |
| Fiebig             | Triglycerides, medium-chain | 17016007          | 1       |
| Fiebig             | Triglycerides, medium-chain | 17016008          | 1       |
| Fiebig             | Triglycerides, medium-chain | 17236203          | 4       |
| Fiebig             | Triglycerides, medium-chain | 17361001          | 1       |
| Fiebig             | Triglycerides, medium-chain | 18118807          | 1       |
| Fiebig             | Triglycerides, medium-chain | 18118808          | 1       |
| Fiebig             | Triglycerides, medium-chain | 18238902          | 7       |
| Fiebig             | Triglycerides, medium-chain | 18239004          | 2       |
| Fiebig             | Triglycerides, medium-chain | 190923            | 1       |
| Fiebig/ THC Pharma | Triglycerides, medium-chain | 105043            | 1       |
| Fischar/Phoenix    | Triglycerides, medium-chain | 105044            | 1       |
| Fragon/Phönix      | Triglycerides, medium-chain | 18G13-B01-526063  | 1       |
| fragon             | Triglycerides, medium-chain | 17F16-B02-525622  | 1       |
| Gatt-Koller        | Triglycerides, medium-chain | 1802502           | 2       |
| Gatt-Koller        | Triglycerides, medium-chain | 1803423           | 1       |
| Gehe               | Triglycerides, medium-chain | 12078603          | 1       |
| Gehe               | Triglycerides, medium-chain | 12356908          | 1       |
| Gehe               | Triglycerides, medium-chain | 1302004-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 13177102          | 3       |
| Gehe               | Triglycerides, medium-chain | 1309025-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 14D23-B02-293330  | 1       |
| Gehe               | Triglycerides, medium-chain | 1504029-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 1601050-0         | 1       |
| Gehe               | Triglycerides, medium-chain | 1601050-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 15H03-B03-312351  | 1       |
| Gehe               | Triglycerides, medium-chain | 1603041-02        | 1       |
| Gehe               | Triglycerides, medium-chain | 1539608           | 1       |
| Gehe               | Triglycerides, medium-chain | 15379612          | 1       |
| Gehe               | Triglycerides, medium-chain | 16124307          | 3       |
| Gehe               | Triglycerides, medium-chain | 15272004          | 1       |
| Gehe               | Triglycerides, medium-chain | 17016001          | 3       |
| Gehe               | Triglycerides, medium-chain | 16124310          | 1       |
| Gehe               | Triglycerides, medium-chain | 160427            | 2       |
| Gehe               | Triglycerides, medium-chain | 16H18-B01-525477  | 1       |
| Gehe               | Triglycerides, medium-chain | 117111            | 1       |
| Gehe               | Triglycerides, medium-chain | 1701023-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 117113            | 1       |
| Gehe               | Triglycerides, medium-chain | 17F1-B02-340113   | 1       |
| Gehe               | Triglycerides, medium-chain | 1709014-01        | 1       |
| Gehe               | Triglycerides, medium-chain | 109951            | 1       |
| Gehe               | Triglycerides, medium-chain | 109949            | 1       |

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| Supplier                     | Substance                   | Batch            | Spectra |
|------------------------------|-----------------------------|------------------|---------|
| Gehe                         | Triglycerides, medium-chain | 18A19-B04525705  | 1       |
| Gehe                         | Triglycerides, medium-chain | 1801034-01       | 1       |
| Gehe                         | Triglycerides, medium-chain | 18A19-B04-345025 | 1       |
| Gehe                         | Triglycerides, medium-chain | 116644           | 1       |
| Gehe                         | Triglycerides, medium-chain | 1805020-01       | 1       |
| Gehe                         | Triglycerides, medium-chain | 1801034-02       | 1       |
| Gehe                         | Triglycerides, medium-chain | 18A19-B04-348506 | 1       |
| Gehe                         | Triglycerides, medium-chain | 18238902         | 1       |
| Gehe                         | Triglycerides, medium-chain | 1812014-01       | 1       |
| Gehe                         | Triglycerides, medium-chain | 18G13-B01-353059 | 1       |
| Gehe                         | Triglycerides, medium-chain | 1902005-01       | 1       |
| Gehe                         | Triglycerides, medium-chain | 2002001-01       | 1       |
| GEHE                         | Triglycerides, medium-chain | 1603041-01       | 1       |
| GEHE                         | Triglycerides, medium-chain | 95080            | 1       |
| GEHE                         | Triglycerides, medium-chain | 1603041-02       | 1       |
| GEHE                         | Triglycerides, medium-chain | 98569            | 1       |
| GEHE                         | Triglycerides, medium-chain | 17016001         | 1       |
| GEHE                         | Triglycerides, medium-chain | 1606035-03       | 1       |
| GEHE                         | Triglycerides, medium-chain | 105039           | 1       |
| GEHE                         | Triglycerides, medium-chain | 107078           | 1       |
| GEHE                         | Triglycerides, medium-chain | 107077           | 2       |
| GEHE                         | Triglycerides, medium-chain | 71161992         | 1       |
| GEHE                         | Triglycerides, medium-chain | 1801034-01       | 2       |
| GEHE                         | Triglycerides, medium-chain | 116687           | 1       |
| GEHE                         | Triglycerides, medium-chain | 109949           | 1       |
| GEHE                         | Triglycerides, medium-chain | 1805020-01       | 1       |
| GEHE                         | Triglycerides, medium-chain | 1812014-01       | 2       |
| GEHE                         | Triglycerides, medium-chain | 1902005-001      | 1       |
| Caelo                        | Triglycerides, medium-chain | 17118807         | 1       |
| Gehe 07.12.18                | Triglycerides, medium-chain | 123015           | 1       |
| GEHE, 02.01.2019             | Triglycerides, medium-chain | 1805020-01       | 1       |
| Gehe/Bionorica               | Triglycerides, medium-chain | 116641           | 1       |
| Gehe/Bionorica Ethics        | Triglycerides, medium-chain | 116641           | 1       |
| Gehe/Bionorica Ethics        | Triglycerides, medium-chain | 125596           | 1       |
| Caelo                        | Triglycerides, medium-chain | 14380803         | 9       |
| Gehe/EuRo                    | Triglycerides, medium-chain | 1603041-02       | 2       |
| Euro OTC                     | Triglycerides, medium-chain | 16030410         | 1       |
| Fagron                       | Triglycerides, medium-chain | 18A19-B04-525725 | 15      |
| Fagron                       | Triglycerides, medium-chain | 18A19-04-348506  | 1       |
| gehe-06.11.18                | Triglycerides, medium-chain | 12016            | 1       |
| Gehe-Eurho 10.09.18          | Triglycerides, medium-chain | 71143373         | 1       |
| Euro OTC                     | Triglycerides, medium-chain | 150402901        | 1       |
| Hansen & Rosenthal/Noweda    | Triglycerides, medium-chain | 1509022-01       | 1       |
| Hansen&Rosenthal/Phönix      | Triglycerides, medium-chain | 1406016-01       | 1       |
| HCT Pharma                   | Triglycerides, medium-chain | 2012100833       | 1       |
| Hedinger                     | Triglycerides, medium-chain | 1606035-02       | 2       |
| Hedinger                     | Triglycerides, medium-chain | 17361001         | 1       |
| Henry lamotte                | Triglycerides, medium-chain | 18G13-B01-357639 | 2       |
| Henry Lamotte                | Triglycerides, medium-chain | 1302004-01       | 1       |
| Henry Lamotte GmbH/ San. ... | Triglycerides, medium-chain | 16124307         | 1       |
| Henry Lamotte Oils GmbH...   | Triglycerides, medium-chain | 15379602         | 1       |
| Hersteller                   | Triglycerides, medium-chain | 135058           | 1       |
| hochhaus-Apotheke            | Triglycerides, medium-chain | 1606035-01       | 1       |
| Hubertus Apotheke            | Triglycerides, medium-chain | 15379610         | 1       |
| Ichthyol/Phönix              | Triglycerides, medium-chain | 1603041-02       | 2       |
| IOI Oleo GmbH                | Triglycerides, medium-chain | 181217           | 1       |
| IOI Oleo/AHD                 | Triglycerides, medium-chain | 18G13-B01-355309 | 1       |
| Fagron                       | Triglycerides, medium-chain | 17F16-B02-525621 | 6       |
| Jenne                        | Triglycerides, medium-chain | 107081           | 1       |
| Jenne                        | Triglycerides, medium-chain | 18A19-B04        | 4       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Jenne                      | Triglycerides, medium-chain | 116646           | 1       |
| Jenne / Bionorica          | Triglycerides, medium-chain | 139105           | 3       |
| k.A.                       | Triglycerides, medium-chain | 120016           | 1       |
| Kehr                       | Triglycerides, medium-chain | 98570            | 1       |
| Kehr                       | Triglycerides, medium-chain | 109949           | 1       |
| Kehr                       | Triglycerides, medium-chain | 109953           | 1       |
| Kehr                       | Triglycerides, medium-chain | 116586           | 1       |
| Kehr                       | Triglycerides, medium-chain | 1801034-01       | 1       |
| Kehr                       | Triglycerides, medium-chain | 11664            | 1       |
| Kehr                       | Triglycerides, medium-chain | 116639           | 1       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | 105041           | 1       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | 105040           | 2       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | 116690           | 1       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | 116691           | 1       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | 116644           | 2       |
| Kehr/THC Pharma            | Triglycerides, medium-chain | VT231118-1       | 1       |
| Kögl                       | Triglycerides, medium-chain | 188006163816     | 1       |
| Kögl                       | Triglycerides, medium-chain | 391711160417     | 1       |
| Kögl                       | Triglycerides, medium-chain | 19102171217      | 1       |
| Kögl                       | Triglycerides, medium-chain | 19102170817      | 1       |
| Kögl                       | Triglycerides, medium-chain | 1700780          | 4       |
| Krieger                    | Triglycerides, medium-chain | 3081             | 1       |
| Krieger                    | Triglycerides, medium-chain | 17361002         | 1       |
| Krieger                    | Triglycerides, medium-chain | 142331           | 1       |
| Krieger Bionorica ethics   | Triglycerides, medium-chain | 132615           | 1       |
| Krieger Bionorica ethics   | Triglycerides, medium-chain | 141604           | 1       |
| Krieger/Bionorica          | Triglycerides, medium-chain | 139107           | 1       |
| Fagron                     | Triglycerides, medium-chain | 17236203         | 3       |
| L12                        | Triglycerides, medium-chain | 18G13-B01-352212 | 2       |
| L30                        | Triglycerides, medium-chain | 15H03-b03-318530 | 1       |
| L31                        | Triglycerides, medium-chain | 18A19-B04-345026 | 1       |
| Laborchemie Apolda/ Now... | Triglycerides, medium-chain | 18118807         | 1       |
| Midas Phönix               | Triglycerides, medium-chain | 17016007         | 2       |
| Miglyol                    | Triglycerides, medium-chain | 15139605         | 1       |
| nachtragen                 | Triglycerides, medium-chain | 125596           | 2       |
| nachtragen                 | Triglycerides, medium-chain | 127733           | 2       |
| Noveda                     | Triglycerides, medium-chain | 12256505         | 1       |
| Noveda                     | Triglycerides, medium-chain | 19060010         | 1       |
| Noveda                     | Triglycerides, medium-chain | 11301109         | 2       |
| Noveda                     | Triglycerides, medium-chain | 101001           | 1       |
| Noveda                     | Triglycerides, medium-chain | 11207501         | 1       |
| Noveda                     | Triglycerides, medium-chain | 15139608         | 1       |
| Noveda                     | Triglycerides, medium-chain | 14219007         | 1       |
| Noveda                     | Triglycerides, medium-chain | 17016001         | 1       |
| Noveda                     | Triglycerides, medium-chain | 17236202         | 2       |
| Noveda                     | Triglycerides, medium-chain | 1701023-01       | 2       |
| Noveda                     | Triglycerides, medium-chain | 1801034-01       | 3       |
| Noveda                     | Triglycerides, medium-chain | 1805020-01       | 2       |
| Noveda                     | Triglycerides, medium-chain | 18118801         | 1       |
| Noveda                     | Triglycerides, medium-chain | 116644           | 3       |
| Noveda                     | Triglycerides, medium-chain | 18A19-B04-525800 | 1       |
| Noveda                     | Triglycerides, medium-chain | 18238901         | 1       |
| Noveda                     | Triglycerides, medium-chain | 18239004         | 1       |
| Noveda                     | Triglycerides, medium-chain | 18G13-B01-525948 | 1       |
| Noveda                     | Triglycerides, medium-chain | 18239003         | 3       |
| Noveda                     | Triglycerides, medium-chain | 18G13-B01-525975 | 2       |
| Noveda                     | Triglycerides, medium-chain | 1812014-01       | 2       |
| Noveda                     | Triglycerides, medium-chain | 19060004         | 1       |
| Noveda                     | Triglycerides, medium-chain | 129877           | 1       |
| Noveda                     | Triglycerides, medium-chain | 1902005-01       | 1       |

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| Supplier                   | Substance                   | Batch            | Spectra |
|----------------------------|-----------------------------|------------------|---------|
| Noweda                     | Triglycerides, medium-chain | 181217           | 1       |
| Noweda                     | Triglycerides, medium-chain | 1902005-02       | 1       |
| Noweda                     | Triglycerides, medium-chain | 4902005-02       | 1       |
| Noweda                     | Triglycerides, medium-chain | 2002001-01       | 1       |
| Noweda                     | Triglycerides, medium-chain | 192866002        | 1       |
| Noweda                     | Triglycerides, medium-chain | 19I30-F03        | 1       |
| Noweda                     | Triglycerides, medium-chain | 14602            | 1       |
| Noweda                     | Triglycerides, medium-chain | 2005031-01       | 1       |
| Noweda                     | Triglycerides, medium-chain | 2007018-01       | 2       |
| Noweda                     | Triglycerides, medium-chain | 1144252          | 1       |
| Caelo                      | Triglycerides, medium-chain | 10356208         | 1       |
| Noweda /THC Pharma         | Triglycerides, medium-chain | 109709           | 1       |
| Noweda Bionorica           | Triglycerides, medium-chain | 145767           | 1       |
| Fagron                     | Triglycerides, medium-chain | 19130-F03-526160 | 1       |
| Noweda/Bionorica           | Triglycerides, medium-chain | 103901           | 1       |
| Noweda/Bionorica           | Triglycerides, medium-chain | 123013           | 1       |
| Noweda/Bionorica ethics    | Triglycerides, medium-chain | 120015           | 1       |
| Caelo                      | Triglycerides, medium-chain | 15139608         | 33      |
| Caelo                      | Triglycerides, medium-chain | 103899           | 1       |
| Caelo                      | Triglycerides, medium-chain | 116637           | 1       |
| Caelo                      | Triglycerides, medium-chain | 127732           | 3       |
| Caelo                      | Triglycerides, medium-chain | 129878           | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 181201401        | 1       |
| Noweda/THC Pharma          | Triglycerides, medium-chain | 105041           | 2       |
| Noweda/THC Pharma          | Triglycerides, medium-chain | 105044           | 1       |
| Noweda/THC Pharma          | Triglycerides, medium-chain | 116690           | 2       |
| Noweda/THC Pharma          | Triglycerides, medium-chain | 109948           | 1       |
| Noweda/THC Pharma          | Triglycerides, medium-chain | 129877           | 4       |
| Noweda_18.01.2020          | Triglycerides, medium-chain | 18G13-B01-526039 | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 160635-01        | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 141100901        | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 15040129-02      | 1       |
| Euro OTC                   | Triglycerides, medium-chain | 141100902        | 1       |
| Fagron                     | Triglycerides, medium-chain | 19130-F03-526162 | 1       |
| Phagron GmbH / Anzag       | Triglycerides, medium-chain | 12K07-N22        | 1       |
| Pharimex                   | Triglycerides, medium-chain | 75316            | 2       |
| Pharmachem                 | Triglycerides, medium-chain | 1606035-02       | 2       |
| Pharmachem                 | Triglycerides, medium-chain | 109952           | 2       |
| Pharmachem GmbH            | Triglycerides, medium-chain | 105041           | 1       |
| Pharmachem/Phoenix         | Triglycerides, medium-chain | 18118801         | 3       |
| Pharmapol                  | Triglycerides, medium-chain | 256401           | 1       |
| Pharmapol/Pharmapol        | Triglycerides, medium-chain | 245118           | 1       |
| phoenix                    | Triglycerides, medium-chain | 19060004         | 1       |
| Phoenix                    | Triglycerides, medium-chain | 13098601         | 1       |
| Phoenix                    | Triglycerides, medium-chain | 15139605         | 1       |
| Phoenix                    | Triglycerides, medium-chain | 15H03-B03-525271 | 1       |
| Phoenix                    | Triglycerides, medium-chain | 3052             | 1       |
| Phoenix                    | Triglycerides, medium-chain | 1606035-03       | 1       |
| Phoenix                    | Triglycerides, medium-chain | 17016007         | 1       |
| Phoenix                    | Triglycerides, medium-chain | 18A19-B04-525713 | 2       |
| Phoenix                    | Triglycerides, medium-chain | 1709014-02       | 1       |
| Phoenix                    | Triglycerides, medium-chain | 125596           | 1       |
| Phoenix                    | Triglycerides, medium-chain | 123998           | 1       |
| Phoenix                    | Triglycerides, medium-chain | 1812014-01       | 2       |
| Phoenix                    | Triglycerides, medium-chain | 18239003         | 1       |
| Phoenix                    | Triglycerides, medium-chain | 3390             | 1       |
| Phoenix                    | Triglycerides, medium-chain | 200112001        | 1       |
| Phoenix                    | Triglycerides, medium-chain | 19060004         | 1       |
| Phoenix Leipzig 05.09.2... | Triglycerides, medium-chain | 105039           | 1       |
| Phoenix Pharma             | Triglycerides, medium-chain | 129880           | 1       |

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| Supplier                 | Substance                   | Batch            | Spectra |
|--------------------------|-----------------------------|------------------|---------|
| Phoenix/Bionorica ethics | Triglycerides, medium-chain | 139105           | 1       |
| Phoenix/Bionorica ethics | Triglycerides, medium-chain | 145767           | 1       |
| Caelo                    | Triglycerides, medium-chain | 1902005-01       | 3       |
| Caelo                    | Triglycerides, medium-chain | 1902005-02       | 2       |
| phönix                   | Triglycerides, medium-chain | 1606035          | 1       |
| Phönix                   | Triglycerides, medium-chain | 1210002-01       | 2       |
| Phönix                   | Triglycerides, medium-chain | 11320508         | 1       |
| Phönix                   | Triglycerides, medium-chain | 12356901         | 1       |
| Phönix                   | Triglycerides, medium-chain | 1300204-01       | 1       |
| Phönix                   | Triglycerides, medium-chain | 13177102         | 1       |
| Phönix                   | Triglycerides, medium-chain | 16124304         | 1       |
| Phönix                   | Triglycerides, medium-chain | 16H18-B01-331028 | 1       |
| Phönix                   | Triglycerides, medium-chain | 3158             | 1       |
| Phönix                   | Triglycerides, medium-chain | 180103401        | 1       |
| Phönix                   | Triglycerides, medium-chain | 1805020-01       | 1       |
| Phönix                   | Triglycerides, medium-chain | 116640           | 1       |
| Phönix                   | Triglycerides, medium-chain | 123015           | 2       |
| Phönix                   | Triglycerides, medium-chain | 123997           | 1       |
| Phönix                   | Triglycerides, medium-chain | 1801034-02       | 1       |
| Phönix                   | Triglycerides, medium-chain | 123999           | 2       |
| Phönix                   | Triglycerides, medium-chain | 18118807         | 1       |
| Phönix                   | Triglycerides, medium-chain | 125596           | 1       |
| Phönix                   | Triglycerides, medium-chain | 18238901         | 1       |
| Phönix                   | Triglycerides, medium-chain | 18G13-B01-355309 | 1       |
| Phönix                   | Triglycerides, medium-chain | 125597           | 1       |
| Phönix                   | Triglycerides, medium-chain | 127732           | 2       |
| Phönix                   | Triglycerides, medium-chain | 128842           | 3       |
| Phönix                   | Triglycerides, medium-chain | 128841           | 2       |
| Phönix                   | Triglycerides, medium-chain | 128843           | 4       |
| Phönix                   | Triglycerides, medium-chain | 129876           | 6       |
| Phönix                   | Triglycerides, medium-chain | 1812014-01       | 1       |
| Phönix                   | Triglycerides, medium-chain | 129880           | 1       |
| Phönix                   | Triglycerides, medium-chain | 135058           | 3       |
| Phönix                   | Triglycerides, medium-chain | 132615           | 1       |
| Phönix                   | Triglycerides, medium-chain | 1902005-02       | 1       |
| Phönix                   | Triglycerides, medium-chain | 141602           | 1       |
| Phönix                   | Triglycerides, medium-chain | 2002001-01       | 1       |
| Phönix                   | Triglycerides, medium-chain | 2007018-01       | 1       |
| Phönix 29.10.12          | Triglycerides, medium-chain | 12078604         | 1       |
| Phönix Gotha             | Triglycerides, medium-chain | 1205015-01       | 2       |
| Phönix Gotha             | Triglycerides, medium-chain | 1210002-01       | 2       |
| Phönix Gotha             | Triglycerides, medium-chain | 1302004-01       | 3       |
| Phönix Gotha             | Triglycerides, medium-chain | 1302004-02       | 1       |
| Phönix Gotha             | Triglycerides, medium-chain | 1411009-01       | 2       |
| Phönix Gotha             | Triglycerides, medium-chain | 1411009-02       | 1       |
| Phönix Gotha             | Triglycerides, medium-chain | 1504029-01       | 2       |
| Phönix Gotha             | Triglycerides, medium-chain | 1709014-01       | 1       |
| Phönix Pharma Einkauf    | Triglycerides, medium-chain | 128843           | 2       |
| Phönix Pharma Einkauf    | Triglycerides, medium-chain | 141603           | 6       |
| Phönix Pharma Einkauf    | Triglycerides, medium-chain | 141604           | 3       |
| Phönix Pharma Einkauf    | Triglycerides, medium-chain | 283811           | 2       |
| Euro OTC                 | Triglycerides, medium-chain | 180103401        | 2       |
| Euro OTC                 | Triglycerides, medium-chain | 2002001-01       | 6       |
| Phönix/Bionorica         | Triglycerides, medium-chain | 105042           | 1       |
| Phönix/Bionorica         | Triglycerides, medium-chain | 109950           | 3       |
| Phönix/Bionorica         | Triglycerides, medium-chain | 109949           | 2       |
| Phönix/Bionorica         | Triglycerides, medium-chain | 116646           | 1       |
| Caelo                    | Triglycerides, medium-chain | 16H18-B01-525506 | 1       |
| Caelo                    | Triglycerides, medium-chain | 1225605          | 1       |
| Euro OTC                 | Triglycerides, medium-chain | 18118807         | 2       |

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| Supplier                  | Substance                   | Batch            | Spectra |
|---------------------------|-----------------------------|------------------|---------|
| sanacorp                  | Triglycerides, medium-chain | 148242           | 1       |
| sanacorp                  | Triglycerides, medium-chain | 2007018-01       | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 12078604         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 12356903         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 12356908         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 13177102         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 130502           | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 13348502         | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 56/AKD3          | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 14219003         | 3       |
| Sanacorp                  | Triglycerides, medium-chain | 58/AKD4          | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 15139608         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 15272003         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 93574            | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 6/AKD12          | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 15379608         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 98570            | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 17016007         | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 109950           | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 17361001         | 5       |
| Sanacorp                  | Triglycerides, medium-chain | 17361002         | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 18118801         | 3       |
| Sanacorp                  | Triglycerides, medium-chain | 18118807         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 171209           | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 18238902         | 3       |
| Sanacorp                  | Triglycerides, medium-chain | 18G13-B01        | 4       |
| Sanacorp                  | Triglycerides, medium-chain | 18238901         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 18239003         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 18G13-B01-357639 | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 19060002         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 19060001         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 19060011         | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 192866002        | 2       |
| Sanacorp                  | Triglycerides, medium-chain | 192866005        | 1       |
| Sanacorp                  | Triglycerides, medium-chain | 145765           | 1       |
| Caelo                     | Triglycerides, medium-chain | 116688           | 2       |
| Sanacorp /Bionorica       | Triglycerides, medium-chain | 116640           | 2       |
| Sanacorp WE:27.09.17 ...  | Triglycerides, medium-chain | 107077           | 1       |
| Sanacorp/Bionorica        | Triglycerides, medium-chain | 109952           | 2       |
| Sanacorp/Bionorica        | Triglycerides, medium-chain | 123999           | 1       |
| Sanacorp/Bionorica        | Triglycerides, medium-chain | 128841           | 2       |
| Sanacorp/Bionorica ethics | Triglycerides, medium-chain | 109949           | 1       |
| Sanacorp/Bionorica ethics | Triglycerides, medium-chain | 116640           | 1       |
| Sanacorp/Bionorica ethics | Triglycerides, medium-chain | 123013           | 2       |
| Sanacorp/Bionorica ethics | Triglycerides, medium-chain | 120017           | 1       |
| Sanacorp/Bionorica Ethics | Triglycerides, medium-chain | 83204            | 1       |
| Sanacorp/Bionorica Ethics | Triglycerides, medium-chain | 95079            | 1       |
| Sanacorp/Bionorica Ethics | Triglycerides, medium-chain | 98573            | 3       |
| Bombastus                 | Triglycerides, medium-chain | 123997           | 1       |
| Caelo                     | Triglycerides, medium-chain | 12078603         | 12      |
| Caelo                     | Triglycerides, medium-chain | AKD5             | 1       |
| Caelo                     | Triglycerides, medium-chain | 11301106         | 13      |
| Caelo                     | Triglycerides, medium-chain | 103900           | 1       |
| Caelo                     | Triglycerides, medium-chain | 116638           | 2       |
| Caelo                     | Triglycerides, medium-chain | 123997           | 2       |
| Caelo                     | Triglycerides, medium-chain | 19293101         | 3       |
| Caelo                     | Triglycerides, medium-chain | 19245205         | 3       |
| Caelo                     | Triglycerides, medium-chain | 20000699002      | 4       |
| Caelo                     | Triglycerides, medium-chain | 20000699003      | 2       |
| Euro OTC                  | Triglycerides, medium-chain | 116688           | 1       |

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| Supplier                   | Substance                   | Batch               | Spectra |
|----------------------------|-----------------------------|---------------------|---------|
| Spangro 23.2.19            | Triglycerides, medium-chain | 17F16-B02-525622    | 1       |
| Spectrum Therapeutics G... | Triglycerides, medium-chain | 150935              | 1       |
| Spectrum Therapeutics G... | Triglycerides, medium-chain | 145767              | 1       |
| Spectrum Therapeutics G... | Triglycerides, medium-chain | 145768              | 2       |
| Spectrum Therapeutics/N... | Triglycerides, medium-chain | 156356              | 1       |
| Spectrum Therapeutics/S... | Triglycerides, medium-chain | 153220              | 2       |
| THc                        | Triglycerides, medium-chain | 109948              | 2       |
| THC                        | Triglycerides, medium-chain | 95083               | 1       |
| THC                        | Triglycerides, medium-chain | 105041              | 3       |
| THC                        | Triglycerides, medium-chain | 105043              | 3       |
| THC                        | Triglycerides, medium-chain | 180522PMT0000105043 | 1       |
| THC                        | Triglycerides, medium-chain | 105040              | 1       |
| THC                        | Triglycerides, medium-chain | 116690              | 1       |
| THC                        | Triglycerides, medium-chain | 123998              | 2       |
| THC                        | Triglycerides, medium-chain | 125595              | 4       |
| THC                        | Triglycerides, medium-chain | 128840              | 2       |
| THC                        | Triglycerides, medium-chain | 141602              | 2       |
| THC                        | Triglycerides, medium-chain | 139107              | 1       |
| THC                        | Triglycerides, medium-chain | 141603              | 1       |
| THC Noweda                 | Triglycerides, medium-chain | 141602              | 3       |
| THC Noweda                 | Triglycerides, medium-chain | VT150221-0          | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 93571               | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 93573               | 2       |
| THC Pharm                  | Triglycerides, medium-chain | 105044              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 116691              | 3       |
| THC Pharm                  | Triglycerides, medium-chain | 116637              | 2       |
| THC Pharm                  | Triglycerides, medium-chain | 11690               | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 116644              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 127733              | 2       |
| THC Pharm                  | Triglycerides, medium-chain | 123998              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 128840              | 3       |
| THC Pharm                  | Triglycerides, medium-chain | 129877              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 125595              | 2       |
| THC Pharm                  | Triglycerides, medium-chain | 266724              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 250696              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 135057              | 3       |
| THC Pharm                  | Triglycerides, medium-chain | 195057              | 1       |
| THC Pharm                  | Triglycerides, medium-chain | VT091219-0          | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 141602              | 2       |
| THC Pharm                  | Triglycerides, medium-chain | F12-3661800         | 1       |
| THC Pharm                  | Triglycerides, medium-chain | 139107              | 1       |
| THC PHARM                  | Triglycerides, medium-chain | 116644              | 1       |
| THC Pharm / Phönix         | Triglycerides, medium-chain | 95083               | 1       |
| THC Pharm GmbH             | Triglycerides, medium-chain | 105043              | 1       |
| THC Pharm GmbH             | Triglycerides, medium-chain | 105041              | 2       |
| THC Pharm GmbH             | Triglycerides, medium-chain | 105040              | 1       |
| THC Pharm GmbH             | Triglycerides, medium-chain | 116690              | 2       |
| THC Pharm GmbH             | Triglycerides, medium-chain | 127733              | 2       |
| THC Pharm/ Noweda          | Triglycerides, medium-chain | 116637              | 1       |
| THC Pharm/ Noweda          | Triglycerides, medium-chain | 116644              | 1       |
| THC Pharm/ Noweda          | Triglycerides, medium-chain | 123998              | 1       |
| THC Pharm/Alliance         | Triglycerides, medium-chain | 109948              | 3       |
| THC PHarm/Bionorica        | Triglycerides, medium-chain | 109949              | 1       |
| THC PHarm/Bionorica        | Triglycerides, medium-chain | 116691              | 3       |
| THC PHarm/Bionorica        | Triglycerides, medium-chain | 127733              | 2       |
| THC Pharm/Gehe             | Triglycerides, medium-chain | 128840              | 1       |
| THC Pharm/Gehe             | Triglycerides, medium-chain | 129877              | 1       |
| THC Pharm/Gehe             | Triglycerides, medium-chain | 135057              | 3       |
| THC Pharm/Phoenix          | Triglycerides, medium-chain | 116690              | 1       |
| THC Pharm/Phoenix          | Triglycerides, medium-chain | 116644              | 1       |

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| Supplier                   | Substance                   | Batch       | Spectra |
|----------------------------|-----------------------------|-------------|---------|
| THC Pharm/Phoenix          | Triglycerides, medium-chain | 123998      | 1       |
| THC pharm/Sanacorp         | Triglycerides, medium-chain | 141602      | 1       |
| THC pharm/Sanacorp         | Triglycerides, medium-chain | 141603      | 3       |
| THC Pharm/Sanacorp         | Triglycerides, medium-chain | 91714       | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 2012050379  | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 93573       | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 98572       | 2       |
| THC Pharma                 | Triglycerides, medium-chain | 105040      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 105042      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 105043      | 8       |
| THC Pharma                 | Triglycerides, medium-chain | 105041      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 105044      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 109948      | 2       |
| THC Pharma                 | Triglycerides, medium-chain | 161123      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 116690      | 5       |
| THC Pharma                 | Triglycerides, medium-chain | 98570       | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 116637      | 1       |
| THC Pharma                 | Triglycerides, medium-chain | 123998      | 5       |
| THC Pharma                 | Triglycerides, medium-chain | 127733      | 9       |
| THC Pharma                 | Triglycerides, medium-chain | 128840      | 2       |
| THC Pharma / Alliance H... | Triglycerides, medium-chain | 93566       | 1       |
| THC Pharma / Alliance H... | Triglycerides, medium-chain | 109953      | 1       |
| THC Pharma / Phoenix       | Triglycerides, medium-chain | 127733      | 3       |
| THC Pharma / Phönix        | Triglycerides, medium-chain | 109948      | 1       |
| THC Pharma / Phönix        | Triglycerides, medium-chain | 116690      | 4       |
| THC Pharma CPM/Phönix      | Triglycerides, medium-chain | 105043      | 4       |
| THC Pharma/ AHD            | Triglycerides, medium-chain | 127733      | 1       |
| THC Pharma/ Alliance He... | Triglycerides, medium-chain | 116690      | 1       |
| THC Pharma/ Anzag          | Triglycerides, medium-chain | 116644      | 1       |
| THC Pharma/ gehe           | Triglycerides, medium-chain | 116690      | 1       |
| THC Pharma/ Gehe           | Triglycerides, medium-chain | 116637      | 1       |
| THC Pharma/ Gehe           | Triglycerides, medium-chain | 116644      | 2       |
| THC Pharma/ Phönix         | Triglycerides, medium-chain | 105041      | 3       |
| Thc Pharma/ Spangro        | Triglycerides, medium-chain | 266724      | 1       |
| Thc Pharma/ Spangro        | Triglycerides, medium-chain | 125595      | 1       |
| Thc Pharma/ Spangro        | Triglycerides, medium-chain | 135057      | 1       |
| THC Pharma/Gehe            | Triglycerides, medium-chain | 105041      | 1       |
| THC Pharma/Gehe            | Triglycerides, medium-chain | 105043      | 1       |
| THC Pharma/Gehe            | Triglycerides, medium-chain | 11669105/20 | 1       |
| THC Pharma/Gehe            | Triglycerides, medium-chain | 116644      | 1       |
| THC Pharma/Kehr            | Triglycerides, medium-chain | 139374      | 2       |
| THC Pharma/Kehr            | Triglycerides, medium-chain | 129877      | 3       |
| THC Pharma/Kehr            | Triglycerides, medium-chain | VT050819-0  | 2       |
| THC Pharma/Kehr            | Triglycerides, medium-chain | 135057      | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 2014030260  | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 2015070139  | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 93573       | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 105043      | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | VT230419-0  | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | VT2304-19-0 | 1       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 125595      | 6       |
| THC Pharma/Noweda          | Triglycerides, medium-chain | 266724      | 1       |
| THC Pharma/Phoenix         | Triglycerides, medium-chain | VT200418    | 1       |
| THC Pharma/Phoenix         | Triglycerides, medium-chain | VT280918-1  | 1       |
| THC Pharma/Phönix          | Triglycerides, medium-chain | 85533       | 1       |
| THC Pharma/Phönix          | Triglycerides, medium-chain | 90059       | 2       |
| THC Pharma/Phönix          | Triglycerides, medium-chain | 93571       | 1       |
| THC Pharma/Phönix          | Triglycerides, medium-chain | 128840      | 2       |
| THC Pharma/Sanacorp        | Triglycerides, medium-chain | 93572       | 1       |
| THC Rezeptur-Set           | Triglycerides, medium-chain | 95084       | 2       |

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| Supplier                     | Substance                   | Batch                | Spectra |
|------------------------------|-----------------------------|----------------------|---------|
| THC/ Anzag                   | Triglycerides, medium-chain | 123998               | 1       |
| THC/ Anzag                   | Triglycerides, medium-chain | 127733               | 3       |
| THC/ Anzag                   | Triglycerides, medium-chain | 257537               | 1       |
| THC/ Anzag                   | Triglycerides, medium-chain | 125595               | 5       |
| THC/ Anzag                   | Triglycerides, medium-chain | 128840               | 1       |
| THC/ Anzag                   | Triglycerides, medium-chain | 135057               | 1       |
| THC/ KEHR                    | Triglycerides, medium-chain | 116637               | 1       |
| THC/ Noweda                  | Triglycerides, medium-chain | 116637               | 2       |
| THC/ Noweda                  | Triglycerides, medium-chain | 127733               | 1       |
| THC/ Noweda                  | Triglycerides, medium-chain | 141602               | 7       |
| THC/ Noweda                  | Triglycerides, medium-chain | 283811               | 1       |
| THC/ Phönix Pharma Eink. . . | Triglycerides, medium-chain | 132615               | 6       |
| THC/AEP                      | Triglycerides, medium-chain | 116644               | 1       |
| THC/AEP                      | Triglycerides, medium-chain | 125595               | 1       |
| THC/AEP                      | Triglycerides, medium-chain | 12595                | 1       |
| THC/AHD                      | Triglycerides, medium-chain | 125595               | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 98572                | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 105042               | 13      |
| THC/Gehe                     | Triglycerides, medium-chain | 105043               | 11      |
| THC/Gehe                     | Triglycerides, medium-chain | 105041               | 2       |
| THC/Gehe                     | Triglycerides, medium-chain | VT281117-2           | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | VT131217-1           | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 105044               | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 109948               | 2       |
| THC/Gehe                     | Triglycerides, medium-chain | 116690               | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 250696               | 1       |
| THC/Gehe                     | Triglycerides, medium-chain | 15057                | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 93570                | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 105040               | 8       |
| THC/Noweda                   | Triglycerides, medium-chain | 105042               | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 116691               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | 116644               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | 123998               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | 127733               | 5       |
| THC/Noweda                   | Triglycerides, medium-chain | VT140219-1           | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 128840               | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 125595               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | 251649               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | VT050819-0           | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | VT091219-0           | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 135057               | 3       |
| THC/Noweda                   | Triglycerides, medium-chain | 275765/0000288005    | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | VT200520-00000141602 | 1       |
| THC/Noweda                   | Triglycerides, medium-chain | 139107               | 2       |
| THC/Noweda                   | Triglycerides, medium-chain | VT070920-0           | 1       |
| THC/Phoenix                  | Triglycerides, medium-chain | 123998               | 1       |
| THC/phönix                   | Triglycerides, medium-chain | 116644               | 3       |
| THC/Phönix                   | Triglycerides, medium-chain | 2014030260           | 2       |
| THC/Phönix                   | Triglycerides, medium-chain | 95084                | 1       |
| THC/Phönix                   | Triglycerides, medium-chain | 116690               | 1       |
| THC/Phönix                   | Triglycerides, medium-chain | 116644               | 1       |
| THC/Phönix                   | Triglycerides, medium-chain | 135056               | 5       |
| THC/Sana                     | Triglycerides, medium-chain | 2015070139           | 2       |
| THC_PHARMA/Noweda            | Triglycerides, medium-chain | 116637               | 1       |
| THC-Ph -Noweda               | Triglycerides, medium-chain | 123998               | 1       |
| THCPH/ Gehe                  | Triglycerides, medium-chain | 129877               | 3       |
| THCPH/ Noweda                | Triglycerides, medium-chain | 127799               | 1       |
| THCPH/ Noweda                | Triglycerides, medium-chain | 135057               | 7       |
| THCPH/ Noweda                | Triglycerides, medium-chain | VT200520-0           | 1       |
| THCPH/ Noweda                | Triglycerides, medium-chain | 139107               | 2       |

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| Supplier                | Substance                   | Batch            | Spectra |
|-------------------------|-----------------------------|------------------|---------|
| THCPH/ Phoenix          | Triglycerides, medium-chain | 123998           | 1       |
| THCPH/ Phoenix          | Triglycerides, medium-chain | 127733           | 2       |
| THCPH/ Phoenix          | Triglycerides, medium-chain | 128840           | 1       |
| THCPH/ Phoenix          | Triglycerides, medium-chain | 125595           | 3       |
| THC-Pharm GmbH          | Triglycerides, medium-chain | 105042           | 1       |
| THC-Pharm GmbH          | Triglycerides, medium-chain | 105043           | 2       |
| THCPharm/Gehe           | Triglycerides, medium-chain | 125595           | 3       |
| THCPharm/Noweda         | Triglycerides, medium-chain | 250696           | 3       |
| THC-Pharma/Sanacorp     | Triglycerides, medium-chain | 105040           | 1       |
| Tilray Deutschland GmbH | Triglycerides, medium-chain | N0000009664      | 2       |
| Tilray Deutschland GmbH | Triglycerides, medium-chain | N0000009663      | 4       |
| WE:05.04.2016 Sanacorp  | Triglycerides, medium-chain | 15272006         | 1       |
|                         | Triglycerides, medium-chain | 13E24-N04        | 3       |
|                         | Triglycerides, medium-chain | 1406016-01       | 1       |
| Bionorica               | Triglycerides, medium-chain |                  | 1       |
| Bionorica 15.05.20      | Triglycerides, medium-chain |                  | 1       |
| BionoricaEthics/Noweda  | Triglycerides, medium-chain |                  | 1       |
| Caelo                   | Triglycerides, medium-chain | 13392404         | 2       |
| Caelo                   | Triglycerides, medium-chain |                  | 4       |
| Euro OTC                | Triglycerides, medium-chain | 1402019-01       | 2       |
| Euro OTC                | Triglycerides, medium-chain |                  | 1       |
| Fagron                  | Triglycerides, medium-chain |                  | 3       |
| Fagron                  | Triglycerides, medium-chain | 18G13-B01-363706 | 1       |
|                         | Triglycerides, medium-chain | 125597           | 1       |
| Sanacorp                | Triglycerides, medium-chain |                  | 1       |
| THC Pharm               | Triglycerides, medium-chain |                  | 1       |
| THC Pharma/Phönix       | Triglycerides, medium-chain |                  | 1       |

- 235 268 spectra from 1121 *Apo-Ident* customers from a total of 46 208 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Triglycerides, medium-chain* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Triglycerides, medium-chain* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 400           | 0              | 63 539        |
| <b>Type B</b> | 0              | 890           | 0              | 90 551        |
| <b>Type C</b> | 0              | 6066          | 29             | 235 268       |

The substance/substance group *Triglycerides, medium-chain* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 99.3258 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.5242 % (> 99.4750 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Triglycerides, medium-chain* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                             | Distance in<br>main model | Distance in<br>second-stage model |
|---------------------------------------|---------------------------|-----------------------------------|
| Squalane                              | 19.97                     | —                                 |
| 2-ethylhexyl laurate                  | 23.05                     | —                                 |
| Wool fat                              | 31.23                     | —                                 |
| Laurel oil                            | 32.31                     | —                                 |
| Soy lecithin, liquid                  | 34.10                     | —                                 |
| Wheatgerm oil, refined                | 37.17                     | —                                 |
| Guaiazulene 25%, water-soluble        | 38.22                     | —                                 |
| Shea butter, refined                  | 38.63                     | —                                 |
| Pasta Cordes <sup>®</sup>             | 39.88                     | —                                 |
| Isopropyl myristate                   | 40.64                     | —                                 |
| Peanut oil, refined                   | 40.85                     | —                                 |
| Sunflower oil, refined                | 42.55                     | —                                 |
| Apricot kernel oil, refined           | 42.96                     | —                                 |
| Camphor ointment                      | 43.53                     | —                                 |
| Sorbitan trioleate                    | 44.97                     | —                                 |
| Metronidazole 25% in white petrolatum | 46.18                     | —                                 |
| Grape seed oil, refined               | 47.47                     | —                                 |
| Soy oil, refined                      | 48.38                     | —                                 |
| Isopropyl palmitate                   | 49.15                     | —                                 |
| Sesame oil, refined                   | 50.20                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Triglycerides, medium-chain* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 31483     | 31483                  | 0.00                            | 20.02                              |
| 31484     | 31804                  | 1.94                            | 17.45                              |
| 31485     | 31804                  | 2.13                            | 17.15                              |

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| <b>Sample ID</b> | <b>Reference sample ID</b> | <b>Distance to reference sample</b> | <b>Distance to next foreign sample</b> |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| 31771            | 31771                      | 0.00                                | 18.61                                  |
| 31804            | 31804                      | 0.00                                | 16.58                                  |
| 31955            | 31955                      | 0.00                                | 17.34                                  |
| 34674            | 31804                      | 2.01                                | 15.43                                  |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Triglycerol diisostearate**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30756-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Triglycerol diisostearate; Triglyceroli diisostearas

### Special notes

When selecting the *Triglycerol diisostearate* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Triglycerol diisostearate | 4      | 3      | 61     |

## Second-stage model

For differentiation of the substance/substance group *Triglycerol diisostearate* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Triglycerol diisostearate*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Triglycerol diis... | 12018503 | 30756     | 40      | 20120201    |
| Caelo    | Triglycerol diis... | 13081002 | 31219     | 40      | 1403749     |
| Caelo    | Triglycerol diis... | 14118801 | 31338     | 40      | 20140425    |
| Caelo    | Triglycerol diis... | 20001275 | 35014     | 40      | 20200513*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 160 spectra of 4 reference samples from the substance/substance group *Triglycerol diisostearate*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 779 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 120 spectra of 3 reference samples from the substance/substance group *Triglycerol diisostearate*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance                 | Batch    | Sample ID | Spectra |
|----------|---------------------------|----------|-----------|---------|
| Caelo    | Triglycerol diisostearate | 163311   | 33094     | 40      |
| Caelo    | Triglycerol diisostearate | 180592   | 34073     | 40      |
| Caelo    | Triglycerol diisostearate | 20001286 | 34999     | 40      |

- 91 371 spectra from a total of 2013 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 428 spectra from 216 *Apo-Ident* customers from 64 batches from the substance/substance group *Triglycerol diisostearate*.
- Among them are spectra of independent samples from 61 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier            | Substance                 | Batch               | Spectra |
|---------------------|---------------------------|---------------------|---------|
| Alliance Healthcare | Triglycerol diisostearate | 18059207            | 1       |
| Caelo               | Triglycerol diisostearate | 192744003           | 14      |
| Audor Pharma        | Triglycerol diisostearate | 14118801            | 1       |
| Audor Pharma        | Triglycerol diisostearate | 916I-03496          | 1       |
| Bombastus           | Triglycerol diisostearate | 15283405            | 1       |
| Bombastus           | Triglycerol diisostearate | 18059201            | 1       |
| Caelo               | Triglycerol diisostearate | 11162902            | 1       |
| Caelo               | Triglycerol diisostearate | 11074801            | 1       |
| Caelo               | Triglycerol diisostearate | 12018501            | 2       |
| Caelo               | Triglycerol diisostearate | 12133303            | 5       |
| Caelo               | Triglycerol diisostearate | 12359401            | 3       |
| Caelo               | Triglycerol diisostearate | 12359405            | 7       |
| Caelo               | Triglycerol diisostearate | 9082013A            | 1       |
| Caelo               | Triglycerol diisostearate | 13236704            | 8       |
| Caelo               | Triglycerol diisostearate | 13399003            | 7       |
| Caelo               | Triglycerol diisostearate | 15283403            | 1       |
| Caelo               | Triglycerol diisostearate | 15283402            | 9       |
| Caelo               | Triglycerol diisostearate | 15283406            | 2       |
| Caelo               | Triglycerol diisostearate | 16179202            | 1       |
| Caelo               | Triglycerol diisostearate | 152835405           | 1       |
| Caelo               | Triglycerol diisostearate | 16179205            | 3       |
| Caelo               | Triglycerol diisostearate | 16331101            | 30      |
| Caelo               | Triglycerol diisostearate | 27101713            | 1       |
| Caelo               | Triglycerol diisostearate | 18059207            | 19      |
| Caelo               | Triglycerol diisostearate | 18183806            | 4       |
| Caelo               | Triglycerol diisostearate | 20001275003         | 9       |
| Caelo               | Triglycerol diisostearate | 18059202            | 1       |
| Caelo               | Triglycerol diisostearate | 192744002           | 2       |
| Caelo               | Triglycerol diisostearate | 192744003P200319-14 | 1       |
| Caelo               | Triglycerol diisostearate | 20001275010         | 2       |
| Caelo               | Triglycerol diisostearate | 18059208            | 1       |
| Caelo               | Triglycerol diisostearate | 3296                | 1       |
| Caelo               | Triglycerol diisostearate | 14193008            | 7       |
| Caelo               | Triglycerol diisostearate | 19138901            | 17      |
| Caelo               | Triglycerol diisostearate | 2(18059201)         | 1       |

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| Supplier                   | Substance                 | Batch       | Spectra |
|----------------------------|---------------------------|-------------|---------|
| Caelo                      | Triglycerol diisostearate | 19244203    | 1       |
| Caelo                      | Triglycerol diisostearate | 19138909    | 1       |
| Caelo                      | Triglycerol diisostearate | 15137505    | 15      |
| Caelo                      | Triglycerol diisostearate | 16331107    | 7       |
| Caelo                      | Triglycerol diisostearate | 18059201    | 42      |
| Caelo                      | Triglycerol diisostearate | 18183807    | 2       |
| Caelo                      | Triglycerol diisostearate | 19138902    | 7       |
| Caelo                      | Triglycerol diisostearate | 19274403    | 1       |
| Caelo                      | Triglycerol diisostearate | 20001275007 | 1       |
| Caelo                      | Triglycerol diisostearate | 1883802     | 1       |
| Caelo                      | Triglycerol diisostearate | 14380504    | 10      |
| Caelo                      | Triglycerol diisostearate | 15283401    | 1       |
| Caelo                      | Triglycerol diisostearate | 163311001   | 1       |
| Caelo                      | Triglycerol diisostearate | 16179207    | 1       |
| Caelo                      | Triglycerol diisostearate | 16331102    | 1       |
| Caelo                      | Triglycerol diisostearate | 14193003    | 5       |
| Caelo                      | Triglycerol diisostearate | 1859201     | 1       |
| Caelo                      | Triglycerol diisostearate | 14054802    | 2       |
| Caelo                      | Triglycerol diisostearate | 14118804    | 2       |
| Caelo                      | Triglycerol diisostearate | 15283404    | 11      |
| Caelo                      | Triglycerol diisostearate | 16062502    | 28      |
| Caelo                      | Triglycerol diisostearate | 16331103    | 20      |
| Caelo                      | Triglycerol diisostearate | 151375      | 1       |
| Caelo                      | Triglycerol diisostearate | 92744003    | 1       |
| Caesar & Lorenz GmbH       | Triglycerol diisostearate | 192744003   | 1       |
| Caesar & Loretz            | Triglycerol diisostearate | 16331101    | 1       |
| Caesar & Loretz            | Triglycerol diisostearate | 18059201    | 1       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 14054802    | 4       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 18183802    | 3       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 18183806    | 3       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 19138901    | 7       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 192744003   | 3       |
| Caesar & Loretz GmbH       | Triglycerol diisostearate | 20001275003 | 1       |
| Caesar & Loretz GmbH / ... | Triglycerol diisostearate | 16062502    | 1       |
| Caesar & Loretz GmbH / ... | Triglycerol diisostearate | 18183802    | 3       |
| Caesar & Loretz GmbH / ... | Triglycerol diisostearate | 19138901    | 1       |
| Caesar & Loretz GmbH/ P... | Triglycerol diisostearate | 19138901    | 1       |
| Caesar & Loretz GmbH/Ge... | Triglycerol diisostearate | 2000127510  | 1       |
| Caesar & Loretz GmbH/Kr... | Triglycerol diisostearate | 19138901    | 2       |
| Caesar&Loretz GmbH         | Triglycerol diisostearate | 16331101    | 1       |
| Caesar/Noweda              | Triglycerol diisostearate | 15283404    | 1       |
| Cordes/Anzag               | Triglycerol diisostearate | 16331101    | 1       |
| Fagron                     | Triglycerol diisostearate | 14193003    | 1       |
| Gehe                       | Triglycerol diisostearate | 12359401    | 1       |
| Gehe                       | Triglycerol diisostearate | 14118801    | 2       |
| Gehe                       | Triglycerol diisostearate | 16062502    | 1       |
| Gehe                       | Triglycerol diisostearate | 16331101    | 1       |
| GEHE                       | Triglycerol diisostearate | 18059201    | 1       |
| Caelo                      | Triglycerol diisostearate | 15283405    | 5       |
| Nachprüfung                | Triglycerol diisostearate | 3082019-5   | 1       |
| Noweda                     | Triglycerol diisostearate | 14380504    | 1       |
| Noweda                     | Triglycerol diisostearate | 14193008    | 1       |
| Caelo                      | Triglycerol diisostearate | 18183802    | 15      |
| Caelo                      | Triglycerol diisostearate | 1913891     | 1       |
| Pala                       | Triglycerol diisostearate | 1616E-03496 | 1       |
| Pala                       | Triglycerol diisostearate | 192744003   | 1       |
| Phoenix                    | Triglycerol diisostearate | 14054802    | 1       |
| Phoenix                    | Triglycerol diisostearate | 15283405    | 1       |
| Phoenix                    | Triglycerol diisostearate | 16331101    | 1       |
| Phoenix                    | Triglycerol diisostearate | 18183806    | 1       |

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| Supplier | Substance                 | Batch    | Spectra |
|----------|---------------------------|----------|---------|
| Phonix   | Triglycerol diisostearate | 18059201 | 1       |
| Phönix   | Triglycerol diisostearate | 16331103 | 1       |
| Phönix   | Triglycerol diisostearate | 18059201 | 4       |
| PHÖNIX   | Triglycerol diisostearate | 16331103 | 1       |
| Sanacorp | Triglycerol diisostearate | 15137505 | 1       |
| Caelo    | Triglycerol diisostearate | 12018503 | 3       |
| Caelo    | Triglycerol diisostearate | 13081002 | 4       |
| Caelo    | Triglycerol diisostearate | 14118801 | 10      |

- 240 935 spectra from 1121 *Apo-Ident* customers from a total of 46 944 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Triglycerol diisostearate* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Triglycerol diisostearate* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 160           | 0              | 63 779        |
| Type B | 0              | 120           | 0              | 91 371        |
| Type C | 0              | 428           | 0              | 240 935       |

The substance/substance group *Triglycerol diisostearate* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9798 %) | 100.0000 % (> 96.2500 %) |
| Type B | 100.0000 % (> 99.9656 %) | 100.0000 % (> 95.0000 %) |
| Type C | 100.0000 % (> 99.6849 %) | 100.0000 % (> 98.5981 %) |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Triglycerol diisostearate* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                         | Distance in<br>main model | Distance in<br>second-stage model |
|-----------------------------------|---------------------------|-----------------------------------|
| Sorbitan- and glycerol monooleate | 24.08                     | —                                 |
| Softisan <sup>®</sup> 649         | 35.22                     | —                                 |
| Castor oil                        | 36.19                     | —                                 |
| Polyol fatty acid ester           | 40.23                     | —                                 |
| Macrogol 8 stearate type I        | 41.72                     | —                                 |
| Macrogolglycerol ricinoleate      | 42.24                     | —                                 |
| Macrogol 4 lauryl ether           | 43.83                     | —                                 |
| Hydrophilic ointment DAB          | 45.57                     | —                                 |
| Pasta Cordes <sup>®</sup>         | 50.44                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Triglycerol diisostearate* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30756     | 31219                  | 5.83                            | 33.60                              |
| 31219     | 31219                  | 0.00                            | 38.44                              |
| 31338     | 35014                  | 6.05                            | 37.49                              |
| 35014     | 35014                  | 0.00                            | 37.87                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Verbena oil, nature-identical**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30666-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Verbena oil, nature-identical; Oleum verbenae

### Special notes

When selecting the *Verbena oil, nature-identical* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group     | Type A | Type B | Type C |
|-------------------------------|--------|--------|--------|
| Verbena oil, nature-identical | 5      | 2      | 3      |

## Second-stage model

For differentiation of the substance/substance group *Verbena oil, nature-identical* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Verbena oil, nature-identical*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate |
|----------|---------------------|----------|-----------|---------|-------------|
| Caelo    | Verbena oil, nat... | 10368808 | 30666     | 40      | 20101229    |
| Caelo    | Verbena oil, nat... | 13141710 | 31194     | 40      | 1412074     |
| Caelo    | Verbena oil, nat... | 14026003 | 31399     | 40      | 20140128    |
| Caelo    | Verbena oil, nat... | 15229809 | 32071     | 60      | 20150714    |
| Caelo    | Verbena oil, nat... | 192731   | 34720     | 40      | 20191004*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 220 spectra of 5 reference samples from the substance/substance group *Verbena oil, nature-identical*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 5 different batches.
- 63 719 spectra from a total of 1302 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Verbena oil, nature-identical*.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                     | Batch    | Sample ID | Spectra |
|----------|-------------------------------|----------|-----------|---------|
| Caelo    | Verbena oil, nature-identical | 16290903 | 33604     | 40      |
| Caelo    | Verbena oil, nature-identical | 172589   | 33906     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 4 spectra from 3 *Apo-Ident* customers from 3 batches from the substance/substance group *Verbena oil, nature-identical*.
- Among them are spectra of independent samples from 3 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                     | Batch    | Spectra |
|----------|-------------------------------|----------|---------|
| Caelo    | Verbena oil, nature-identical | 16290910 | 1       |
| Caelo    | Verbena oil, nature-identical | 17258901 | 2       |
| Caelo    | Verbena oil, nature-identical | 13141704 | 1       |

- 241 359 spectra from 1121 *Apo-Ident* customers from a total of 47 003 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Verbena oil, nature-identical* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Verbena oil, nature-identical* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 220           | 0              | 63 719        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 4             | 0              | 241 359       |

The substance/substance group *Verbena oil, nature-identical* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.2727 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6871 %) | n/a (n/a)                |



In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Verbena oil, nature-identical* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance             | Distance in<br>main model | Distance in<br>second-stage model |
|-----------------------|---------------------------|-----------------------------------|
| Acorus oil            | 32.58                     | —                                 |
| Geranium oil, genuine | 38.18                     | —                                 |
| Cedar wood oil        | 45.07                     | —                                 |
| Myrtle oil            | 46.51                     | —                                 |
| Dwarf pine oil        | 50.57                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Verbena oil, nature-identical* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30666     | 31194                  | 2.36                            | 53.47                              |
| 31194     | 31194                  | 0.00                            | 56.88                              |
| 31399     | 31194                  | 3.39                            | 55.32                              |
| 32071     | 31194                  | 4.65                            | 54.06                              |
| 34720     | 34720                  | 0.00                            | 56.75                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Viscous base solution (NRF p. 20)**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30659-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Viscous base solution (NRF p. 20)

### Special notes

When selecting the *Viscous base solution (NRF p. 20)* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group         | Type A | Type B | Type C |
|-----------------------------------|--------|--------|--------|
| Viscous base solution (NRF p. 20) | 13     | 58     | 518    |

## Second-stage model

For differentiation of the substance/substance group *Viscous base solution (NRF p. 20)* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Viscous base solution (NRF p. 20)*:

| Supplier | Substance           | Batch    | Sample ID | Spectra | Certificate        |
|----------|---------------------|----------|-----------|---------|--------------------|
| Caelo    | Viscous base sol... | 12127301 | 30659     | 40      | 1403145            |
| Caelo    | Viscous base sol... | 14020401 | 31354     | 60      | 20140124           |
| Caelo    | Viscous base sol... | 14109401 | 31658     | 60      | AR-15-FG-007904-01 |
| Caelo    | Viscous base sol... | 15265401 | 31790     | 60      | 20150825           |
| Caelo    | Viscous base sol... | 153888   | 31882     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153888   | 31883     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153888   | 31884     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153889   | 31885     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153889   | 31886     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 154121   | 31887     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 154121   | 31888     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 153890   | 31889     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153890   | 31890     | 60      | 20151124*          |
| Caelo    | Viscous base sol... | 153894   | 31893     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 153894   | 31894     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 153895   | 31895     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 153895   | 31896     | 60      | 20151130*          |
| Caelo    | Viscous base sol... | 191924   | 34775     | 40      | 20190809*          |
| Caelo    | Viscous base sol... | 21000457 | 35483     | 40      | 20210305*          |
| Caelo    | Viscous base sol... | 21000461 | 35484     | 40      | 20210305*          |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 1120 spectra of 20 reference samples from the substance/substance group *Viscous base solution (NRF p. 20)*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 13 different batches.
- 62 819 spectra from a total of 1294 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 2540 spectra of 60 reference samples from the substance/substance group *Viscous base solution (NRF p. 20)*.
- Among them are spectra of independent samples from 58 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch  | Sample ID | Spectra |
|----------|---------------------------------|--------|-----------|---------|
| Caelo    | Viscous base solution (NRF p... | 153892 | 31891     | 60      |
| Caelo    | Viscous base solution (NRF p... | 153893 | 31892     | 60      |
| Caelo    | Viscous base solution (NRF p... | 153896 | 31897     | 60      |
| Caelo    | Viscous base solution (NRF p... | 153897 | 31899     | 60      |
| Caelo    | Viscous base solution (NRF p... | 161076 | 32287     | 40      |
| Caelo    | Viscous base solution (NRF p... | 161089 | 32288     | 40      |
| Caelo    | Viscous base solution (NRF p... | 161090 | 32289     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162172 | 32356     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162173 | 32357     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162174 | 32358     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162175 | 32359     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162176 | 32360     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162297 | 32554     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162298 | 32555     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162299 | 32556     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162300 | 32557     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162301 | 32558     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162650 | 32559     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162651 | 32572     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162652 | 32573     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162653 | 32574     | 40      |
| Caelo    | Viscous base solution (NRF p... | 162655 | 32575     | 40      |
| Caelo    | Viscous base solution (NRF p... | 163153 | 32897     | 40      |
| Caelo    | Viscous base solution (NRF p... | 163152 | 32898     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170176 | 33146     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170177 | 33147     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170178 | 33148     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170179 | 33149     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170180 | 33150     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170239 | 33151     | 40      |
| Caelo    | Viscous base solution (NRF p... | 170240 | 33152     | 40      |
| Caelo    | Viscous base solution (NRF p... | 172319 | 33730     | 40      |
| Caelo    | Viscous base solution (NRF p... | 171940 | 33731     | 40      |
| Caelo    | Viscous base solution (NRF p... | 171941 | 33732     | 40      |
| Caelo    | Viscous base solution (NRF p... | 171942 | 33733     | 40      |
| Caelo    | Viscous base solution (NRF p... | 171943 | 33734     | 40      |
| Caelo    | Viscous base solution (NRF p... | 171944 | 33735     | 40      |
| Caelo    | Viscous base solution (NRF p... | 172892 | 33972     | 40      |
| Caelo    | Viscous base solution (NRF p... | 172895 | 33973     | 40      |
| Caelo    | Viscous base solution (NRF p... | 180306 | 34131     | 40      |
| Caelo    | Viscous base solution (NRF p... | 181240 | 34132     | 40      |
| Caelo    | Viscous base solution (NRF p... | 181242 | 34249     | 40      |
| Caelo    | Viscous base solution (NRF p... | 181244 | 34250     | 40      |

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| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Viscous base solution (NRF p... | 182684   | 34311     | 40      |
| Caelo    | Viscous base solution (NRF p... | 192231   | 34776     | 40      |
| Caelo    | Viscous base solution (NRF p... | 20000004 | 34986     | 40      |
| Caelo    | Viscous base solution (NRF p... | 20001919 | 35116     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000463 | 35307     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000462 | 35308     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000680 | 35309     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000458 | 35310     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000460 | 35311     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000466 | 35312     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000456 | 35482     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000464 | 35485     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21000465 | 35486     | 40      |
| Caelo    | Viscous base solution (NRF p... | 21001316 | 35542     | 50      |
| Caelo    | Viscous base solution (NRF p... | 21001317 | 35543     | 50      |
| Caelo    | Viscous base solution (NRF p... | 153896   | 31898     | 60      |
| Caelo    | Viscous base solution (NRF p... | 153897   | 31900     | 60      |

- 88 951 spectra from a total of 1958 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 1740 spectra from 178 *Apo-Ident* customers from 523 batches from the substance/substance group *Viscous base solution (NRF p. 20)*.
- Among them are spectra of independent samples from 518 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Caelo                      | Viscous base solution (NRF p... | 16217602    | 12      |
| Caelo                      | Viscous base solution (NRF p... | 16217301    | 9       |
| Caelo                      | Viscous base solution (NRF p... | 17138801    | 3       |
| Alliance am 08.04.2014     | Viscous base solution (NRF p... | 1306F002    | 1       |
| Alliance Health 21.02.2... | Viscous base solution (NRF p... | 13229502    | 2       |
| Alliance Health.18.09.2... | Viscous base solution (NRF p... | 14109901    | 1       |
| Alliance Healthcare        | Viscous base solution (NRF p... | 20000004002 | 1       |
| Anzag                      | Viscous base solution (NRF p... | 17098401    | 2       |
| Caelo                      | Viscous base solution (NRF p... | 3x14058901  | 1       |
| Apomix / 11                | Viscous base solution (NRF p... | 12309201    | 1       |
| Apomix / 11                | Viscous base solution (NRF p... | 13229501    | 1       |
| Apomix/Phönix              | Viscous base solution (NRF p... | 16217601    | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 160818001   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 160818002   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190409002   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190409003   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190430001   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190507001   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190507002   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190520001   | 1       |
| Bahnhof Apotheke           | Viscous base solution (NRF p... | 190520002   | 1       |

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| Supplier           | Substance                       | Batch      | Spectra |
|--------------------|---------------------------------|------------|---------|
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190625004  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190625001  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190709001  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190709002  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190903003  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190903005  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190924002  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 190924001  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 191219003  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 191121003  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 191219004  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 200123004  | 1       |
| Bahnhof Apotheke   | Viscous base solution (NRF p... | 200123005  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 160823001  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 160825002  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 160825001  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 190314003  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 190314004  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 190806001  | 1       |
| Bahnhof-Apotheke   | Viscous base solution (NRF p... | 190806002  | 1       |
| Bombastus          | Viscous base solution (NRF p... | 15265501   | 1       |
| Bumbastus/Sanacorp | Viscous base solution (NRF p... | 18206201   | 2       |
| Caelo              | Viscous base solution (NRF p... | 15031804   | 1       |
| Caelo              | Viscous base solution (NRF p... | 11140501   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12093901   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12093701   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12231101   | 5       |
| Caelo              | Viscous base solution (NRF p... | 12093801   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12231002   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12094101   | 2       |
| Caelo              | Viscous base solution (NRF p... | 12231201   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12127501   | 1       |
| Caelo              | Viscous base solution (NRF p... | 12249901   | 3       |
| Caelo              | Viscous base solution (NRF p... | 1224991    | 1       |
| Caelo              | Viscous base solution (NRF p... | 12249801   | 1       |
| Caelo              | Viscous base solution (NRF p... | 11176401   | 1       |
| Caelo              | Viscous base solution (NRF p... | 20250113-1 | 1       |
| Caelo              | Viscous base solution (NRF p... | 12309101   | 11      |
| Caelo              | Viscous base solution (NRF p... | 12309202   | 3       |
| Caelo              | Viscous base solution (NRF p... | 13006401   | 6       |
| Caelo              | Viscous base solution (NRF p... | 13006501   | 1       |
| Caelo              | Viscous base solution (NRF p... | 13071302   | 1       |
| Caelo              | Viscous base solution (NRF p... | 13150802   | 2       |
| Caelo              | Viscous base solution (NRF p... | 13096001   | 2       |
| Caelo              | Viscous base solution (NRF p... | 13220101   | 1       |
| Caelo              | Viscous base solution (NRF p... | 13246401   | 5       |
| Caelo              | Viscous base solution (NRF p... | 13246101   | 1       |
| Caelo              | Viscous base solution (NRF p... | 14020402   | 5       |
| Caelo              | Viscous base solution (NRF p... | 14059001   | 2       |
| Caelo              | Viscous base solution (NRF p... | 14059101   | 5       |
| Caelo              | Viscous base solution (NRF p... | 14110001   | 2       |
| Caelo              | Viscous base solution (NRF p... | 14188001   | 6       |
| Caelo              | Viscous base solution (NRF p... | 14187801   | 13      |
| Caelo              | Viscous base solution (NRF p... | 14266101   | 1       |
| Caelo              | Viscous base solution (NRF p... | 14187601   | 5       |
| Caelo              | Viscous base solution (NRF p... | 14368401   | 6       |
| Caelo              | Viscous base solution (NRF p... | 15093801   | 2       |
| Caelo              | Viscous base solution (NRF p... | 15093602   | 4       |
| Caelo              | Viscous base solution (NRF p... | 6101705    | 1       |
| Caelo              | Viscous base solution (NRF p... | 14266601   | 2       |

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| Supplier | Substance                       | Batch        | Spectra |
|----------|---------------------------------|--------------|---------|
| Caelo    | Viscous base solution (NRF p... | 14354304     | 3       |
| Caelo    | Viscous base solution (NRF p... | 14109701     | 1       |
| Caelo    | Viscous base solution (NRF p... | 14368601     | 8       |
| Caelo    | Viscous base solution (NRF p... | 5051502      | 1       |
| Caelo    | Viscous base solution (NRF p... | 15093401     | 4       |
| Caelo    | Viscous base solution (NRF p... | 1071501      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18071502     | 1       |
| Caelo    | Viscous base solution (NRF p... | 15180101     | 4       |
| Caelo    | Viscous base solution (NRF p... | 20081501     | 1       |
| Caelo    | Viscous base solution (NRF p... | 15264801     | 7       |
| Caelo    | Viscous base solution (NRF p... | 15264901     | 1       |
| Caelo    | Viscous base solution (NRF p... | 15196601     | 1       |
| Caelo    | Viscous base solution (NRF p... | 152364901    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15265101     | 2       |
| Caelo    | Viscous base solution (NRF p... | 15265801     | 3       |
| Caelo    | Viscous base solution (NRF p... | 15412101     | 2       |
| Caelo    | Viscous base solution (NRF p... | 16108901     | 11      |
| Caelo    | Viscous base solution (NRF p... | 16107901     | 2       |
| Caelo    | Viscous base solution (NRF p... | 16159401     | 1       |
| Caelo    | Viscous base solution (NRF p... | 16217401     | 1       |
| Caelo    | Viscous base solution (NRF p... | 16217201     | 1       |
| Caelo    | Viscous base solution (NRF p... | 11031709     | 1       |
| Caelo    | Viscous base solution (NRF p... | 17017801     | 7       |
| Caelo    | Viscous base solution (NRF p... | 17041703     | 1       |
| Caelo    | Viscous base solution (NRF p... | 19041709     | 1       |
| Caelo    | Viscous base solution (NRF p... | 16265301     | 2       |
| Caelo    | Viscous base solution (NRF p... | 17097801     | 4       |
| Caelo    | Viscous base solution (NRF p... | 17098401     | 4       |
| Caelo    | Viscous base solution (NRF p... | 17098501     | 1       |
| Caelo    | Viscous base solution (NRF p... | 16265501     | 1       |
| Caelo    | Viscous base solution (NRF p... | 21081704     | 1       |
| Caelo    | Viscous base solution (NRF p... | 17138701     | 6       |
| Caelo    | Viscous base solution (NRF p... | 16091702     | 1       |
| Caelo    | Viscous base solution (NRF p... | 17138601     | 2       |
| Caelo    | Viscous base solution (NRF p... | 17194101     | 3       |
| Caelo    | Viscous base solution (NRF p... | 4111704      | 1       |
| Caelo    | Viscous base solution (NRF p... | 27121703     | 1       |
| Caelo    | Viscous base solution (NRF p... | 17231601     | 13      |
| Caelo    | Viscous base solution (NRF p... | 13011807     | 1       |
| Caelo    | Viscous base solution (NRF p... | 17232101     | 23      |
| Caelo    | Viscous base solution (NRF p... | 17231401     | 5       |
| Caelo    | Viscous base solution (NRF p... | 25041801     | 1       |
| Caelo    | Viscous base solution (NRF p... | 20180528-01P | 1       |
| Caelo    | Viscous base solution (NRF p... | 26051801     | 1       |
| Caelo    | Viscous base solution (NRF p... | 23061811     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18031101     | 4       |
| Caelo    | Viscous base solution (NRF p... | 16081804     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18031301     | 6       |
| Caelo    | Viscous base solution (NRF p... | 18124402     | 6       |
| Caelo    | Viscous base solution (NRF p... | 8091809      | 1       |
| Caelo    | Viscous base solution (NRF p... | 1723101      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18124301     | 10      |
| Caelo    | Viscous base solution (NRF p... | 20101802     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18124401     | 2       |
| Caelo    | Viscous base solution (NRF p... | 7111803      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18206101     | 4       |
| Caelo    | Viscous base solution (NRF p... | 22121809     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18206701     | 2       |
| Caelo    | Viscous base solution (NRF p... | 19011901     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18267901     | 1       |

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| Supplier | Substance                       | Batch         | Spectra |
|----------|---------------------------------|---------------|---------|
| Caelo    | Viscous base solution (NRF p... | 18268502      | 2       |
| Caelo    | Viscous base solution (NRF p... | 18030801      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18321301      | 2       |
| Caelo    | Viscous base solution (NRF p... | 18321501      | 2       |
| Caelo    | Viscous base solution (NRF p... | 19041601      | 3       |
| Caelo    | Viscous base solution (NRF p... | 1478319041301 | 1       |
| Caelo    | Viscous base solution (NRF p... | 18321601      | 1       |
| Caelo    | Viscous base solution (NRF p... | 19193101      | 2       |
| Caelo    | Viscous base solution (NRF p... | 19042001      | 1       |
| Caelo    | Viscous base solution (NRF p... | 19192401      | 3       |
| Caelo    | Viscous base solution (NRF p... | 19193001      | 2       |
| Caelo    | Viscous base solution (NRF p... | 19258501      | 12      |
| Caelo    | Viscous base solution (NRF p... | 19258302      | 7       |
| Caelo    | Viscous base solution (NRF p... | 19258701      | 2       |
| Caelo    | Viscous base solution (NRF p... | 19528302      | 2       |
| Caelo    | Viscous base solution (NRF p... | 19000856001   | 2       |
| Caelo    | Viscous base solution (NRF p... | 19000855001   | 2       |
| Caelo    | Viscous base solution (NRF p... | 19000857001   | 1       |
| Caelo    | Viscous base solution (NRF p... | 20000004002   | 8       |
| Caelo    | Viscous base solution (NRF p... | 20000008001   | 2       |
| Caelo    | Viscous base solution (NRF p... | 20001917001   | 1       |
| Caelo    | Viscous base solution (NRF p... | 20000183001   | 1       |
| Caelo    | Viscous base solution (NRF p... | 20001923001   | 1       |
| Caelo    | Viscous base solution (NRF p... | 20001923002   | 3       |
| Caelo    | Viscous base solution (NRF p... | 15093601      | 4       |
| Caelo    | Viscous base solution (NRF p... | 15265501      | 7       |
| Caelo    | Viscous base solution (NRF p... | 15265601      | 3       |
| Caelo    | Viscous base solution (NRF p... | 20001922001   | 7       |
| Caelo    | Viscous base solution (NRF p... | 14187901      | 4       |
| Caelo    | Viscous base solution (NRF p... | 1803060137/18 | 1       |
| Caelo    | Viscous base solution (NRF p... | 13158001      | 9       |
| Caelo    | Viscous base solution (NRF p... | 16230001      | 5       |
| Caelo    | Viscous base solution (NRF p... | 17289501      | 1       |
| Caelo    | Viscous base solution (NRF p... | 19258401      | 12      |
| Caelo    | Viscous base solution (NRF p... | AP200721-02   | 1       |
| Caelo    | Viscous base solution (NRF p... | 16108301      | 3       |
| Caelo    | Viscous base solution (NRF p... | 20000012001   | 2       |
| Caelo    | Viscous base solution (NRF p... | 20000011101   | 1       |
| Caelo    | Viscous base solution (NRF p... | 15265301      | 9       |
| Caelo    | Viscous base solution (NRF p... | 17138401      | 9       |
| Caelo    | Viscous base solution (NRF p... | 13150801      | 3       |
| Caelo    | Viscous base solution (NRF p... | 7(18124501)   | 1       |
| Caelo    | Viscous base solution (NRF p... | 8(18268601)   | 1       |
| Caelo    | Viscous base solution (NRF p... | 19041201      | 17      |
| Caelo    | Viscous base solution (NRF p... | 14368801      | 2       |
| Caelo    | Viscous base solution (NRF p... | 18124001      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18321401      | 1       |
| Caelo    | Viscous base solution (NRF p... | 17231501      | 11      |
| Caelo    | Viscous base solution (NRF p... | 13006001      | 3       |
| Caelo    | Viscous base solution (NRF p... | 14354401      | 5       |
| Caelo    | Viscous base solution (NRF p... | 15389501      | 2       |
| Caelo    | Viscous base solution (NRF p... | 16217601      | 5       |
| Caelo    | Viscous base solution (NRF p... | 18030701      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18124201      | 1       |
| Caelo    | Viscous base solution (NRF p... | 18268401      | 1       |
| Caelo    | Viscous base solution (NRF p... | 12127601      | 2       |
| Caelo    | Viscous base solution (NRF p... | 13229201      | 2       |
| Caelo    | Viscous base solution (NRF p... | 17193501      | 7       |
| Caelo    | Viscous base solution (NRF p... | 1723001       | 1       |
| Caelo    | Viscous base solution (NRF p... | 18030602      | 17      |

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| Supplier | Substance                       | Batch       | Spectra |
|----------|---------------------------------|-------------|---------|
| Caelo    | Viscous base solution (NRF p... | 13006201    | 3       |
| Caelo    | Viscous base solution (NRF p... | 13246701    | 4       |
| Caelo    | Viscous base solution (NRF p... | 14109402    | 4       |
| Caelo    | Viscous base solution (NRF p... | 14187701    | 2       |
| Caelo    | Viscous base solution (NRF p... | 15196701    | 2       |
| Caelo    | Viscous base solution (NRF p... | 16108101    | 1       |
| Caelo    | Viscous base solution (NRF p... | 16108601    | 4       |
| Caelo    | Viscous base solution (NRF p... | 17289301    | 3       |
| Caelo    | Viscous base solution (NRF p... | 19042101    | 2       |
| Caelo    | Viscous base solution (NRF p... | 18321001    | 8       |
| Caelo    | Viscous base solution (NRF p... | 12019001    | 1       |
| Caelo    | Viscous base solution (NRF p... | 1418730     | 2       |
| Caelo    | Viscous base solution (NRF p... | 16315201    | 5       |
| Caelo    | Viscous base solution (NRF p... | 16159101    | 1       |
| Caelo    | Viscous base solution (NRF p... | 6(17193501) | 1       |
| Caelo    | Viscous base solution (NRF p... | 19193301    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15265701    | 10      |
| Caelo    | Viscous base solution (NRF p... | 18207001    | 5       |
| Caelo    | Viscous base solution (NRF p... | 13158002    | 2       |
| Caelo    | Viscous base solution (NRF p... | 14058901    | 3       |
| Caelo    | Viscous base solution (NRF p... | 14109501    | 5       |
| Caelo    | Viscous base solution (NRF p... | 15265402    | 2       |
| Caelo    | Viscous base solution (NRF p... | 16229801    | 2       |
| Caelo    | Viscous base solution (NRF p... | 17023901    | 20      |
| Caelo    | Viscous base solution (NRF p... | 17193901    | 2       |
| Caelo    | Viscous base solution (NRF p... | 18030601    | 19      |
| Caelo    | Viscous base solution (NRF p... | 17231901    | 13      |
| Caelo    | Viscous base solution (NRF p... | 1789201     | 1       |
| Caelo    | Viscous base solution (NRF p... | 19041501    | 3       |
| Caelo    | Viscous base solution (NRF p... | 20000142001 | 5       |
| Caelo    | Viscous base solution (NRF p... | 21000680003 | 1       |
| Caelo    | Viscous base solution (NRF p... | 17290101    | 7       |
| Caelo    | Viscous base solution (NRF p... | 17018001    | 2       |
| Caelo    | Viscous base solution (NRF p... | 5(17138401) | 1       |
| Caelo    | Viscous base solution (NRF p... | 18090601    | 2       |
| Caelo    | Viscous base solution (NRF p... | 18268301    | 1       |
| Caelo    | Viscous base solution (NRF p... | 9(19041301) | 1       |
| Caelo    | Viscous base solution (NRF p... | 16229901    | 12      |
| Caelo    | Viscous base solution (NRF p... | 16265001    | 11      |
| Caelo    | Viscous base solution (NRF p... | 17017901    | 4       |
| Caelo    | Viscous base solution (NRF p... | 17289201    | 9       |
| Caelo    | Viscous base solution (NRF p... | 13229101    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15093501    | 2       |
| Caelo    | Viscous base solution (NRF p... | 15389401    | 4       |
| Caelo    | Viscous base solution (NRF p... | 16108701    | 1       |
| Caelo    | Viscous base solution (NRF p... | 16265201    | 2       |
| Caelo    | Viscous base solution (NRF p... | 16230101    | 1       |
| Caelo    | Viscous base solution (NRF p... | 16315202    | 1       |
| Caelo    | Viscous base solution (NRF p... | 17097901    | 1       |
| Caelo    | Viscous base solution (NRF p... | 17193502    | 2       |
| Caelo    | Viscous base solution (NRF p... | 17194301    | 1       |
| Caelo    | Viscous base solution (NRF p... | 177232001   | 1       |
| Caelo    | Viscous base solution (NRF p... | 17194201    | 2       |
| Caelo    | Viscous base solution (NRF p... | 17232010    | 1       |
| Caelo    | Viscous base solution (NRF p... | 17194501    | 1       |
| Caelo    | Viscous base solution (NRF p... | 18124501    | 23      |
| Caelo    | Viscous base solution (NRF p... | 18321002    | 23      |
| Caelo    | Viscous base solution (NRF p... | 19258901    | 2       |
| Caelo    | Viscous base solution (NRF p... | 20000009001 | 2       |
| Fagron   | Viscous base solution (NRF p... | 1820601     | 1       |

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| Supplier | Substance                       | Batch       | Spectra |
|----------|---------------------------------|-------------|---------|
| Fagron   | Viscous base solution (NRF p... | 18268601    | 1       |
| Caelo    | Viscous base solution (NRF p... | 13151201    | 4       |
| Caelo    | Viscous base solution (NRF p... | 13096101    | 6       |
| Caelo    | Viscous base solution (NRF p... | 12309201    | 6       |
| Caelo    | Viscous base solution (NRF p... | 13151101    | 5       |
| Caelo    | Viscous base solution (NRF p... | 13228901    | 8       |
| Caelo    | Viscous base solution (NRF p... | 13229501    | 4       |
| Caelo    | Viscous base solution (NRF p... | 13246501    | 6       |
| Caelo    | Viscous base solution (NRF p... | 13229502    | 3       |
| Caelo    | Viscous base solution (NRF p... | 14109901    | 11      |
| Caelo    | Viscous base solution (NRF p... | 14059301    | 1       |
| Caelo    | Viscous base solution (NRF p... | 14354501    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15093301    | 10      |
| Caelo    | Viscous base solution (NRF p... | 15141901    | 2       |
| Caelo    | Viscous base solution (NRF p... | 15141601    | 2       |
| Caelo    | Viscous base solution (NRF p... | 17024001    | 2       |
| Caelo    | Viscous base solution (NRF p... | 18268601    | 29      |
| Caelo    | Viscous base solution (NRF p... | 19041203    | 4       |
| Caelo    | Viscous base solution (NRF p... | 20000004001 | 4       |
| Caelo    | Viscous base solution (NRF p... | 13246901    | 1       |
| Caelo    | Viscous base solution (NRF p... | 14000901    | 1       |
| Caelo    | Viscous base solution (NRF p... | 14187501    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15093701    | 5       |
| Caelo    | Viscous base solution (NRF p... | 15142001    | 1       |
| Caelo    | Viscous base solution (NRF p... | 15179401    | 1       |
| Caelo    | Viscous base solution (NRF p... | 16108001    | 4       |
| Caelo    | Viscous base solution (NRF p... | 16108501    | 3       |
| Caelo    | Viscous base solution (NRF p... | 16108201    | 3       |
| Caelo    | Viscous base solution (NRF p... | 16108401    | 3       |
| Caelo    | Viscous base solution (NRF p... | 16107601    | 6       |
| Caelo    | Viscous base solution (NRF p... | 16315301    | 13      |
| Caelo    | Viscous base solution (NRF p... | 17098102    | 8       |
| Caelo    | Viscous base solution (NRF p... | 17138501    | 2       |
| Caelo    | Viscous base solution (NRF p... | 17231201    | 11      |
| Caelo    | Viscous base solution (NRF p... | 17232001    | 14      |
| Caelo    | Viscous base solution (NRF p... | 17231301    | 3       |
| Caelo    | Viscous base solution (NRF p... | 17289401    | 2       |
| Caelo    | Viscous base solution (NRF p... | 18031201    | 10      |
| Caelo    | Viscous base solution (NRF p... | 18124202    | 1       |
| Caelo    | Viscous base solution (NRF p... | 18031401    | 5       |
| Caelo    | Viscous base solution (NRF p... | 18031501    | 4       |
| Caelo    | Viscous base solution (NRF p... | 1814403     | 1       |
| Caelo    | Viscous base solution (NRF p... | 18206201    | 19      |
| Caelo    | Viscous base solution (NRF p... | 18206901    | 6       |
| Caelo    | Viscous base solution (NRF p... | 18206801    | 4       |
| Caelo    | Viscous base solution (NRF p... | 18268001    | 6       |
| Caelo    | Viscous base solution (NRF p... | 18268201    | 2       |
| Caelo    | Viscous base solution (NRF p... | 19041301    | 17      |
| Caelo    | Viscous base solution (NRF p... | 19223101    | 11      |
| Caelo    | Viscous base solution (NRF p... | 19258301    | 13      |
| Caelo    | Viscous base solution (NRF p... | 20000011001 | 1       |
| Caelo    | Viscous base solution (NRF p... | 20000010001 | 6       |
| Caelo    | Viscous base solution (NRF p... | 18268602    | 1       |
| Caelo    | Viscous base solution (NRF p... | 14368701    | 3       |
| Caelo    | Viscous base solution (NRF p... | 15105701    | 4       |
| Caelo    | Viscous base solution (NRF p... | 18268101    | 5       |
| Caelo    | Viscous base solution (NRF p... | 18321101    | 3       |
| Caelo    | Viscous base solution (NRF p... | 183211601   | 1       |
| Caelo    | Viscous base solution (NRF p... | 19193201    | 3       |
| Caelo    | Viscous base solution (NRF p... | 19259001    | 1       |

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| Supplier             | Substance                       | Batch       | Spectra |
|----------------------|---------------------------------|-------------|---------|
| Caelo                | Viscous base solution (NRF p... | 20000013001 | 2       |
| Caelo                | Viscous base solution (NRF p... | 13158201    | 4       |
| Caelo                | Viscous base solution (NRF p... | 13158101    | 2       |
| Caelo                | Viscous base solution (NRF p... | 13229001    | 4       |
| Caelo                | Viscous base solution (NRF p... | 14000801    | 8       |
| Caelo                | Viscous base solution (NRF p... | 14020502    | 5       |
| Caelo                | Viscous base solution (NRF p... | 15265201    | 4       |
| Caelo                | Viscous base solution (NRF p... | 15265001    | 1       |
| Caelo                | Viscous base solution (NRF p... | 15265901    | 8       |
| Caelo                | Viscous base solution (NRF p... | 15389701    | 8       |
| Caelo                | Viscous base solution (NRF p... | 16265101    | 4       |
| Caelo                | Viscous base solution (NRF p... | 17017701    | 5       |
| Caelo                | Viscous base solution (NRF p... | 17098101    | 16      |
| Caelo                | Viscous base solution (NRF p... | 17194401    | 5       |
| Caelo                | Viscous base solution (NRF p... | 18124403    | 11      |
| Caelo                | Viscous base solution (NRF p... | 18206602    | 6       |
| Caelo                | Viscous base solution (NRF p... | 3013A-03142 | 1       |
| Caelo                | Viscous base solution (NRF p... | 18206301    | 2       |
| Caelo/Gehe           | Viscous base solution (NRF p... | 17194101    | 1       |
| Caesar & Loretz      | Viscous base solution (NRF p... | 17098101    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 13158201    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18268201    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18268502    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18267901    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18321201    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18268601    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18321301    | 5       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18321002    | 3       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18321501    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19041801    | 4       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19041701    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19042001    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19041301    | 5       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 18321001    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19192401    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19223101    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19193001    | 4       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19258302    | 5       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19258601    | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19193401    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19258701    | 3       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19258301    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19000856001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19000855001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19258401    | 4       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 192584      | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 19259001    | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000013001 | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000012001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000004001 | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000009001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000004002 | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000011001 | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000008001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000142001 | 3       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000181001 | 1       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20000184001 | 3       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20001917001 | 2       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20001922001 | 3       |
| Caesar & Loretz GmbH | Viscous base solution (NRF p... | 20001923001 | 3       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Caesar & Loretz GmbH       | Viscous base solution (NRF p... | 20001920001      | 1       |
| Caesar & Loretz GmbH       | Viscous base solution (NRF p... | 20001923002      | 2       |
| Caesar & Loretz GmbH       | Viscous base solution (NRF p... | 20003324001      | 1       |
| Caesar & Loretz GmbH       | Viscous base solution (NRF p... | 20001916001      | 1       |
| Caesar & Loretz GmbH       | Viscous base solution (NRF p... | 21000680002      | 1       |
| Caesar & Loretz GmbH / ... | Viscous base solution (NRF p... | 18321301         | 2       |
| Caesar & Loretz GmbH/GEHE  | Viscous base solution (NRF p... | 20001923002      | 1       |
| Caesar & Loretz GmbH/Ge... | Viscous base solution (NRF p... | 19258501         | 1       |
| Caesar & Loretz GmbH/Ge... | Viscous base solution (NRF p... | 20000142001      | 3       |
| Caesar & Loretz GmbH/He... | Viscous base solution (NRF p... | 19258302         | 1       |
| Caesar & Loretz GmbH/No... | Viscous base solution (NRF p... | 20000004002      | 2       |
| Caesar & Loretz GmbH/Ph... | Viscous base solution (NRF p... | 20001922001      | 3       |
| Caesar & Loretz GmbH/Sana  | Viscous base solution (NRF p... | 18321501         | 2       |
| Caesar & Loretz GmbH/Sa... | Viscous base solution (NRF p... | 18268201         | 3       |
| Caesar u. Loretz / Gehe... | Viscous base solution (NRF p... | 19041301         | 1       |
| Caesar und Loretz          | Viscous base solution (NRF p... | 14109401         | 1       |
| Caesar&Loretz GmbH         | Viscous base solution (NRF p... | 15265701         | 1       |
| Caesar&Loretz GmbH         | Viscous base solution (NRF p... | 16108901         | 1       |
| Caesar&Loretz GmbH         | Viscous base solution (NRF p... | 16107601         | 3       |
| Caesar&Loretz GmbH         | Viscous base solution (NRF p... | 16217301         | 1       |
| Caesar&Loretz GmbH         | Viscous base solution (NRF p... | 16229701         | 1       |
| Caleo/Phönix               | Viscous base solution (NRF p... | 14368701         | 1       |
| Cealo                      | Viscous base solution (NRF p... | 17098302         | 1       |
| Cealo/ Anzag               | Viscous base solution (NRF p... | 17098101         | 1       |
| Cealo/ Phoenix             | Viscous base solution (NRF p... | 18124501         | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160630007        | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160630008        | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160719002        | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160718007        | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160805001        | 1       |
| Defektur Bahnhof Apotheke  | Viscous base solution (NRF p... | 160805002        | 1       |
| Ebert & Jacobi             | Viscous base solution (NRF p... | 18124501         | 1       |
| Eigenherstellung           | Viscous base solution (NRF p... | 5320A-03142      | 1       |
| Eigenherstellung           | Viscous base solution (NRF p... | 421A-03142       | 1       |
| Euro OTC                   | Viscous base solution (NRF p... | 17232001         | 1       |
| Euro OTC                   | Viscous base solution (NRF p... | 17231801         | 1       |
| Euro OTC                   | Viscous base solution (NRF p... | 15141601         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1206F003         | 3       |
| Fagron                     | Viscous base solution (NRF p... | 31101205         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1111F003         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1203C004         | 2       |
| Fagron                     | Viscous base solution (NRF p... | 1301F003         | 3       |
| Fagron                     | Viscous base solution (NRF p... | 22041304         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1301F002         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1111F001         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1214509          | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1302F002         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 13J22-T05-007729 | 2       |
| Fagron                     | Viscous base solution (NRF p... | 1301F001         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 13J22-T05-007720 | 1       |
| Fagron                     | Viscous base solution (NRF p... | 28111402         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 10031502         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 14K24-T03-031283 | 9       |
| Fagron                     | Viscous base solution (NRF p... | 16159501         | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1705701          | 2       |
| Fagron                     | Viscous base solution (NRF p... | 1813226/1        | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1813226/2        | 2       |
| Fagron                     | Viscous base solution (NRF p... | 1813227          | 1       |
| Fagron                     | Viscous base solution (NRF p... | 1906667          | 1       |
| Fagron                     | Viscous base solution (NRF p... | 20004752         | 2       |

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| <b>Supplier</b>    | <b>Substance</b>                | <b>Batch</b>     | <b>Spectra</b> |
|--------------------|---------------------------------|------------------|----------------|
| Fagron             | Viscous base solution (NRF p... | 20011969         | 1              |
| Fagron             | Viscous base solution (NRF p... | 1310F006         | 1              |
| Fagron             | Viscous base solution (NRF p... | 1509255          | 2              |
| Fagron             | Viscous base solution (NRF p... | 18030601         | 7              |
| Fagron             | Viscous base solution (NRF p... | 14K24-021166     | 1              |
| Fagron             | Viscous base solution (NRF p... | 1604682          | 4              |
| Fagron             | Viscous base solution (NRF p... | 1705702          | 2              |
| Fagron             | Viscous base solution (NRF p... | 1802062          | 1              |
| Fagron             | Viscous base solution (NRF p... | 14059001         | 2              |
| Fagron             | Viscous base solution (NRF p... | 15093701         | 1              |
| Fagron             | Viscous base solution (NRF p... | 14K24-T03-021166 | 1              |
| Fagron             | Viscous base solution (NRF p... | 1409164          | 2              |
| Fishar             | Viscous base solution (NRF p... | 15265401         | 1              |
| gehe               | Viscous base solution (NRF p... | 17097801         | 1              |
| gehe               | Viscous base solution (NRF p... | 17194101         | 1              |
| gehe               | Viscous base solution (NRF p... | 17194401         | 2              |
| Gehe               | Viscous base solution (NRF p... | 12019201         | 1              |
| Gehe               | Viscous base solution (NRF p... | 18030601         | 1              |
| Gehe 19.12.14      | Viscous base solution (NRF p... | 14187601         | 1              |
| GEHE am 27.05.2014 | Viscous base solution (NRF p... | 14020502         | 1              |
| Caelo              | Viscous base solution (NRF p... | 16217501         | 3              |
| Caelo              | Viscous base solution (NRF p... | 17231510         | 1              |
| Caelo              | Viscous base solution (NRF p... | 17193801         | 1              |
| Caelo              | Viscous base solution (NRF p... | 17231701         | 6              |
| Caelo              | Viscous base solution (NRF p... | 18321201         | 3              |
| Caelo              | Viscous base solution (NRF p... | 19041901         | 3              |
| Gutenberg-Apotheke | Viscous base solution (NRF p... | 14020502         | 1              |
| Gutenberg-Apotheke | Viscous base solution (NRF p... | 14059101         | 2              |
| Herstellung        | Viscous base solution (NRF p... | 20040113-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20040113-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20090113-1       | 2              |
| Herstellung        | Viscous base solution (NRF p... | 20150213-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20010213-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20080213-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20220213-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20080313-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 2150313-1        | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20220213-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20130313-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20260313-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20260313-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20210313-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20210313-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20190413-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20190413-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20030513-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20160513-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20280513-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20220513-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20100513-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20100613-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20050613-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20140613-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20130613-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20280613-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20050713-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20280613-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20050713-2       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20120713-1       | 1              |
| Herstellung        | Viscous base solution (NRF p... | 20260713-2       | 1              |

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| Supplier           | Substance                       | Batch        | Spectra |
|--------------------|---------------------------------|--------------|---------|
| Herstellung        | Viscous base solution (NRF p... | 20260713-1   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20300713-2   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20150813-4   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20150813-3   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20060913-2   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 2030913-1    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20060913-1   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20200913-1   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131030005    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20041013-1   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131018001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131018004    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 20270913-2   | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131030004    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131025001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131115001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131211002    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131203012    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131206001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131211001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131220001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131218006    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 131126002    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 140108003    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 140108002    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 140117001    | 1       |
| Herstellung        | Viscous base solution (NRF p... | 240114       | 1       |
| Jenne              | Viscous base solution (NRF p... | 16108901     | 1       |
| Klosterring        | Viscous base solution (NRF p... | 17098102     | 1       |
| Klosterring        | Viscous base solution (NRF p... | 17138401     | 2       |
| Klosterring        | Viscous base solution (NRF p... | 19098302     | 1       |
| Klosterring        | Viscous base solution (NRF p... | 19223101     | 6       |
| Nachprüfung        | Viscous base solution (NRF p... | 13158001     | 1       |
| Noweda             | Viscous base solution (NRF p... | 11176201     | 1       |
| Noweda             | Viscous base solution (NRF p... | 12093601     | 2       |
| Noweda             | Viscous base solution (NRF p... | 12019401     | 1       |
| Noweda             | Viscous base solution (NRF p... | 17098101     | 3       |
| Noweda             | Viscous base solution (NRF p... | 18206102     | 1       |
| Noweda             | Viscous base solution (NRF p... | 18321002     | 1       |
| Noweda             | Viscous base solution (NRF p... | 19223101     | 1       |
| Caelo              | Viscous base solution (NRF p... | 19041801     | 1       |
| Caelo              | Viscous base solution (NRF p... | 19041701     | 1       |
| Caelo              | Viscous base solution (NRF p... | 200000182001 | 1       |
| Caelo              | Viscous base solution (NRF p... | 20001919001  | 1       |
| Caelo              | Viscous base solution (NRF p... | 20001918001  | 1       |
| Caelo              | Viscous base solution (NRF p... | 14187301     | 8       |
| Caelo              | Viscous base solution (NRF p... | 17098302     | 2       |
| Caelo              | Viscous base solution (NRF p... | 19192901     | 3       |
| Caelo              | Viscous base solution (NRF p... | 19193401     | 1       |
| Phoenix            | Viscous base solution (NRF p... | 17098101     | 2       |
| Phoenix            | Viscous base solution (NRF p... | 18030601     | 2       |
| Phoenix 08.07.2014 | Viscous base solution (NRF p... | 14110001     | 1       |
| Caelo              | Viscous base solution (NRF p... | 12019002     | 2       |
| Caelo              | Viscous base solution (NRF p... | 14020601     | 3       |
| Caelo              | Viscous base solution (NRF p... | 14187201     | 9       |
| Phönix             | Viscous base solution (NRF p... | 18030601     | 1       |
| PHÖNIX             | Viscous base solution (NRF p... | 17232001     | 2       |
| Caelo              | Viscous base solution (NRF p... | 18206102     | 14      |
| Caelo              | Viscous base solution (NRF p... | 17194001     | 3       |
| Caelo              | Viscous base solution (NRF p... | 16109001     | 1       |

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| <b>Supplier</b>              | <b>Substance</b>                | <b>Batch</b> | <b>Spectra</b> |
|------------------------------|---------------------------------|--------------|----------------|
| Post Apotheke                | Viscous base solution (NRF p... | 219I-03142   | 1              |
| Post Apotheke                | Viscous base solution (NRF p... | 2220I-03142  | 1              |
| Post Apotheke                | Viscous base solution (NRF p... | 4720-03142   | 1              |
| Post Aptotheke               | Viscous base solution (NRF p... | 1306F002     | 2              |
| Sanacorp                     | Viscous base solution (NRF p... | 12231301     | 4              |
| Sanacorp                     | Viscous base solution (NRF p... | 12127401     | 2              |
| Sanacorp                     | Viscous base solution (NRF p... | 14109402     | 1              |
| Sanacorp                     | Viscous base solution (NRF p... | 15265201     | 1              |
| Sanacorp                     | Viscous base solution (NRF p... | 15265601     | 1              |
| Sanacorp                     | Viscous base solution (NRF p... | 18268601     | 1              |
| Sanacorp                     | Viscous base solution (NRF p... | 19041203     | 1              |
| Caelo                        | Viscous base solution (NRF p... | 20003322001  | 1              |
| Sanacorp, 22.02.17, 32,...   | Viscous base solution (NRF p... | 16265101     | 1              |
| sanacorp, 32,14EUR, 15.09... | Viscous base solution (NRF p... | 16108601     | 1              |
| Caelo                        | Viscous base solution (NRF p... | 14266501     | 7              |
| Fagron                       | Viscous base solution (NRF p... | 17098302     | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 270515       | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 300615       | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 90915        | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 71015        | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 30216        | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 150616       | 1              |
| Sonnenberg Apotheke          | Viscous base solution (NRF p... | 220616       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 91213        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 60114        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 100214       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 100314       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 90414        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 70514        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 110614       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 90714        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 10814        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 100914       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 131014       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 111114       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 11214        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 2012015      | 2              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 260115       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 250215       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 230315       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 160415       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 100715       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 111115       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 161215       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 110116       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 220216       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 160316       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 130416       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 20516        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 110516       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 250716       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 290716       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 290716-2     | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 70916        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 280916       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 121016       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 261016       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 91116        | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 231116       | 1              |
| Sonnenberg-Apotheke          | Viscous base solution (NRF p... | 71216        | 1              |

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| Supplier            | Substance                       | Batch    | Spectra |
|---------------------|---------------------------------|----------|---------|
| Sonnenberg-Apotheke | Viscous base solution (NRF p... | 211216   | 1       |
| Sonnenberg-Apotheke | Viscous base solution (NRF p... | 40117    | 1       |
| Caelo               | Viscous base solution (NRF p... | 14020301 | 5       |
| VDL 17.10.14        | Viscous base solution (NRF p... | 14109401 | 1       |
| VDL 24.05.14        | Viscous base solution (NRF p... | 14020401 | 2       |
| Caelo               | Viscous base solution (NRF p... | 12127301 | 1       |
| Caelo               | Viscous base solution (NRF p... | 14109401 | 7       |
| Caelo               | Viscous base solution (NRF p... | 15265401 | 11      |
| Caelo               | Viscous base solution (NRF p... | 14020401 | 10      |
| Caelo               | Viscous base solution (NRF p... |          | 1       |

- 239 623 spectra from 1121 *Apo-Ident* customers from a total of 46 492 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Viscous base solution (NRF p. 20)* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Viscous base solution (NRF p. 20)* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1120          | 0              | 62 819        |
| <b>Type B</b> | 0              | 2540          | 0              | 88 951        |
| <b>Type C</b> | 0              | 1733          | 7              | 239 623       |

The substance/substance group *Viscous base solution (NRF p. 20)* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.4643 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.7638 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 99.5977 % (> 99.4253 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Viscous base solution (NRF p. 20)* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                            | Distance in<br>main model | Distance in<br>second-stage model |
|--------------------------------------|---------------------------|-----------------------------------|
| Liquorice juice purified, diluted    | 15.73                     | —                                 |
| Lotio Cordes®                        | 16.49                     | —                                 |
| Raspberry syrup (conserved)          | 20.38                     | —                                 |
| Chest elixir                         | 22.11                     | —                                 |
| Condurango wine                      | 24.40                     | —                                 |
| Fortified wine                       | 24.52                     | —                                 |
| Gel basis Audor®                     | 26.03                     | —                                 |
| Ribwort plantain syrup (conserved)   | 27.28                     | —                                 |
| Marshmallow syrup (conserved)        | 27.83                     | —                                 |
| Hydrophilic base emulsion (NRF p.25) | 32.93                     | —                                 |
| Sugar syrup DAB                      | 36.22                     | —                                 |
| Cherry syrup (conserved)             | 41.37                     | —                                 |
| Polyhexanide solution 20%            | 42.97                     | —                                 |
| Ipecacuanha syrup (NRF 19.1)         | 46.01                     | —                                 |
| Chlorhexidine digluconate solution   | 48.74                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Viscous base solution (NRF p. 20)* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30659     | 30659                  | 0.00                            | 20.52                              |
| 31354     | 31888                  | 2.02                            | 16.58                              |
| 31658     | 31658                  | 0.00                            | 18.60                              |
| 31790     | 31888                  | 3.01                            | 20.89                              |
| 31882     | 31882                  | 0.00                            | 19.21                              |
| 31883     | 31883                  | 0.00                            | 20.38                              |
| 31884     | 31884                  | 0.00                            | 18.90                              |
| 31885     | 31885                  | 0.00                            | 19.23                              |
| 31886     | 31886                  | 0.00                            | 18.68                              |
| 31887     | 31887                  | 0.00                            | 20.37                              |
| 31888     | 31888                  | 0.00                            | 20.44                              |
| 31889     | 31889                  | 0.00                            | 19.00                              |
| 31890     | 31890                  | 0.00                            | 21.52                              |
| 31893     | 31893                  | 0.00                            | 21.05                              |
| 31894     | 31894                  | 0.00                            | 19.05                              |
| 31895     | 31895                  | 0.00                            | 20.75                              |
| 31896     | 31896                  | 0.00                            | 19.74                              |
| 34775     | 34775                  | 0.00                            | 20.45                              |
| 35483     | 35483                  | 0.00                            | 15.41                              |
| 35484     | 35484                  | 0.00                            | 16.14                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by

laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.



# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | <b>Water and aqueous solutions</b>                               |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30869-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Water and aqueous solutions; Aluminii acetatis tartratis solutio; Aluminium acetotartrate solution; Aqua; Chlorhexidine digluconate solution; Chlorhexidini digluconatis solutio; Oral suspension base; Water

### Special notes

When selecting the *Water and aqueous solutions* substance/substance group, the following information is displayed to the user:

- Advice for the identification of water: Preserved, purified and distilled water can not be conclusively distinguished by spectral analysis. An additional analysis of identity may be required.

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]

Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]

AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group   | Type A | Type B | Type C |
|-----------------------------|--------|--------|--------|
| Water and aqueous solutions | 29     | 50     | 1858   |



## Second-stage model

For differentiation of the substance/substance group *Water and aqueous solutions* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Water and aqueous solutions*:

| Supplier | Substance           | Batch            | Sample ID | Spectra | Certificate        |
|----------|---------------------|------------------|-----------|---------|--------------------|
| Caelo    | Aluminium acetot... | 12233502         | 30869     | 40      | 20120810           |
| Caelo    | Aluminium acetot... | 13378704         | 31342     | 40      | AR-14-FG-012698-01 |
| Caelo    | Aluminium acetot... | 15299901         | 31959     | 60      | 20151001           |
| Hedinger | Aluminium acetot... | 020160B          | 32921     | 40      | 20150818           |
| Hedinger | Aluminium acetot... | 020165B          | 34690     | 40      | 20180903           |
| Caelo    | Chlorhexidine di... | 14011009         | 31463     | 60      | AR-15-FG-010164-03 |
| Caelo    | Chlorhexidine di... | 15131504         | 31705     | 60      | 20150424           |
| Caelo    | Chlorhexidine di... | 15292508         | 32308     | 40      | 20151109           |
| Euro OTC | Chlorhexidine di... | 1508022          | 31735     | 60      | 20150916*          |
| Euro OTC | Chlorhexidine di... | 1511039          | 31846     | 60      | 20160114*          |
| Euro OTC | Chlorhexidine di... | 1511033-01       | 32732     | 40      | 20160114           |
| Euro OTC | Chlorhexidine di... | 1610021          | 32831     | 40      | 20161121*          |
| Euro OTC | Chlorhexidine di... | 1610022          | 32832     | 40      | 20161121*          |
| Fagron   | Chlorhexidine di... | 13H19-B01        | 31240     | 30      | 20130906           |
| Fagron   | Chlorhexidine di... | 15I03-B02-315213 | 31829     | 45      | 20151027           |
| Caelo    | Oral suspension ... | 20001875         | 35112     | 40      | 20200805*          |
| Caelo    | Oral suspension ... | 20003180         | 35163     | 40      | 20201116*          |
| Caelo    | Oral suspension ... | 21000759         | 35315     | 40      | 20210308*          |
| Caelo    | Oral suspension ... | 21001227         | 35555     | 50      | 20210518*          |
| Caelo    | Oral suspension ... | 21001228         | 35556     | 50      | 20210518*          |
| Caelo    | Oral suspension ... | 21002023         | 35599     | 50      | 20210629*          |
| Caelo    | Water               | 13176101         | 31057     | 40      | 20130627           |
| Caelo    | Water               | 14253301         | 31624     | 60      | 20140923           |
| Caelo    | Water               | 15142501         | 31718     | 60      | 1510212            |
| Caelo    | Water               | 161975           | 32354     | 30      | 20160725*          |
| Caelo    | Water               | 20002379         | 35113     | 40      | 20200814*          |
| Caelo    | Water               | 21001791         | 35539     | 50      | 20210607*          |
| Fagron   | Water               | 14K05-T02-016775 | 31676     | 60      | 20150225           |
| Fagron   | Water               | 15D01-C20-16500  | 31809     | 60      | 20151105           |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 1365 spectra of 29 reference samples from the substance/substance group *Water and aqueous solutions*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 29 different batches.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

- 62 574 spectra from a total of 1278 batches from further 220 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 2050 spectra of 50 reference samples from the substance/substance group *Water and aqueous solutions*.
- Among them are spectra of independent samples from 50 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                       | Batch    | Sample ID | Spectra |
|----------|---------------------------------|----------|-----------|---------|
| Caelo    | Aluminium acetotartrate solu... | 16004505 | 33490     | 40      |
| Hedinger | Aluminium acetotartrate solu... | 020166B  | 35262     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 163088   | 33089     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 172101   | 33693     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 190808   | 34470     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 192972   | 34762     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 20003241 | 35252     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 21000177 | 35302     | 40      |
| Caelo    | Chlorhexidine digluconate so... | 21001487 | 35550     | 60      |
| Euro OTC | Chlorhexidine digluconate so... | 1701037  | 33230     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1708006  | 33843     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1712002  | 33927     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1807014  | 34191     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1811026  | 34351     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1902010  | 34425     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1908014  | 34695     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 1912015  | 34811     | 40      |
| Euro OTC | Chlorhexidine digluconate so... | 2007044  | 35085     | 40      |
| Caelo    | Oral suspension base            | 20003178 | 35162     | 40      |
| Caelo    | Oral suspension base            | 21000757 | 35313     | 40      |
| Caelo    | Oral suspension base            | 21000758 | 35314     | 40      |
| Caelo    | Oral suspension base            | 21002200 | 35600     | 50      |
| Caelo    | Water                           | 153714   | 32080     | 40      |
| Caelo    | Water                           | 153945   | 32082     | 40      |
| Caelo    | Water                           | 162119   | 32353     | 40      |
| Caelo    | Water                           | 162230   | 32355     | 40      |
| Caelo    | Water                           | 163133   | 32893     | 40      |
| Caelo    | Water                           | 162554   | 32894     | 40      |
| Caelo    | Water                           | 170020   | 33178     | 40      |
| Caelo    | Water                           | 170324   | 33179     | 40      |
| Caelo    | Water                           | 171731   | 33575     | 40      |
| Caelo    | Water                           | 171451   | 33576     | 40      |
| Caelo    | Water                           | 171773   | 33577     | 40      |
| Caelo    | Water                           | 172534   | 33738     | 40      |

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| Supplier | Substance | Batch           | Sample ID | Spectra |
|----------|-----------|-----------------|-----------|---------|
| Caelo    | Water     | 172535          | 33739     | 40      |
| Caelo    | Water     | 172532          | 33740     | 40      |
| Caelo    | Water     | 170988          | 33976     | 40      |
| Caelo    | Water     | 172958          | 33979     | 40      |
| Caelo    | Water     | 180004          | 34135     | 40      |
| Caelo    | Water     | 181355          | 34138     | 40      |
| Caelo    | Water     | 181951          | 34240     | 40      |
| Caelo    | Water     | 181352          | 34241     | 40      |
| Caelo    | Water     | 182287          | 34242     | 40      |
| Caelo    | Water     | 182399          | 34245     | 40      |
| Caelo    | Water     | 182288          | 34315     | 40      |
| Caelo    | Water     | 191967          | 34766     | 40      |
| Caelo    | Water     | 192270          | 34768     | 40      |
| Caelo    | Water     | 21001790        | 35540     | 50      |
| Caelo    | Water     | 21001792        | 35541     | 50      |
| Fagron   | Water     | 16K25-C20-17409 | 32963     | 40      |

- 89 441 spectra from a total of 1966 batches from further 342 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 9852 spectra from 976 *Apo-Ident* customers from 1948 batches from the substance/substance group *Water and aqueous solutions*.
- Among them are spectra of independent samples from 1854 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier                   | Substance                       | Batch    | Spectra |
|----------------------------|---------------------------------|----------|---------|
| A. Hedinger/Noweda         | Aluminium acetotartrate solu... | 201628   | 1       |
| aetenstaedt GmbH-AHD       | Aluminium acetotartrate solu... | 190036   | 1       |
| AHD                        | Aluminium acetotartrate solu... | 20162B   | 1       |
| AHD                        | Aluminium acetotartrate solu... | 201628   | 1       |
| AHD                        | Aluminium acetotartrate solu... | 20164B   | 1       |
| AHD/Hedinger               | Aluminium acetotartrate solu... | 20159B   | 1       |
| Alliance Healthcare        | Aluminium acetotartrate solu... | 12318705 | 2       |
| Anzag                      | Aluminium acetotartrate solu... | 20152B   | 2       |
| Anzag 17.04.13 ek: 5,43EUR | Aluminium acetotartrate solu... | 20152B   | 1       |
| Anzag/                     | Aluminium acetotartrate solu... | 20151B   | 1       |
| Anzag/ Hedinger            | Aluminium acetotartrate solu... | 20153B   | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 160030   | 1       |
| Apoth. E. Bartel           | Aluminium acetotartrate solu... | 20164B   | 1       |
| Apoth. E. bertel/sanacorp  | Aluminium acetotartrate solu... | 20161B   | 1       |
| Apoth. Elisabeth Bartel    | Aluminium acetotartrate solu... | 20165B   | 1       |
| athenstaed                 | Aluminium acetotartrate solu... | 180041   | 1       |
| athenstaed                 | Aluminium acetotartrate solu... | 180043   | 2       |
| athenstaedt                | Aluminium acetotartrate solu... | 110024   | 1       |
| athenstaedt                | Aluminium acetotartrate solu... | 160036   | 1       |
| athenstaedt                | Aluminium acetotartrate solu... | 160030   | 1       |
| athenstaedt                | Aluminium acetotartrate solu... | 180041   | 1       |
| athenstaedt                | Aluminium acetotartrate solu... | 190036   | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Athenstaedt                | Aluminium acetotartrate solu... | 900108      | 3       |
| Athenstaedt                | Aluminium acetotartrate solu... | 160036      | 2       |
| Athenstaedt                | Aluminium acetotartrate solu... | 160029      | 1       |
| Athenstaedt                | Aluminium acetotartrate solu... | 180044      | 1       |
| Athenstaedt                | Aluminium acetotartrate solu... | 180041      | 1       |
| Athenstaedt                | Aluminium acetotartrate solu... | 180043      | 2       |
| athenstaedt / Gehe         | Aluminium acetotartrate solu... | 160036      | 1       |
| athenstaedt GmbH           | Aluminium acetotartrate solu... | 900107      | 2       |
| athenstaedt GmbH           | Aluminium acetotartrate solu... | 160030      | 2       |
| athenstaedt GmbH & Co K... | Aluminium acetotartrate solu... | 180043      | 1       |
| athenstaedt GmbH / Noweda  | Aluminium acetotartrate solu... | 110024      | 1       |
| athenstaedt GmbH CoKG      | Aluminium acetotartrate solu... | 180043      | 1       |
| athenstaedt GmbH/Allaen... | Aluminium acetotartrate solu... | 180043      | 1       |
| athenstaedt GmbH/Phönix    | Aluminium acetotartrate solu... | 160030      | 1       |
| Athenstaedt/ Gehe          | Aluminium acetotartrate solu... | 180041      | 1       |
| athenstaedt/AllianceHC     | Aluminium acetotartrate solu... | 160029      | 1       |
| athenstaedt/GEHE           | Aluminium acetotartrate solu... | 160030      | 1       |
| athenstaedt/Noweda         | Aluminium acetotartrate solu... | 160030      | 1       |
| Athenstaedt/P              | Aluminium acetotartrate solu... | 180041      | 1       |
| athenstaedt/Phönix         | Aluminium acetotartrate solu... | 180041      | 1       |
| athenstaedt/Phönix         | Aluminium acetotartrate solu... | 190036      | 1       |
| athenstaedtFiebig          | Aluminium acetotartrate solu... | 180044      | 1       |
| athenstaedtGmbH            | Aluminium acetotartrate solu... | 180044      | 1       |
| Athensteadt                | Aluminium acetotartrate solu... | 180041      | 1       |
| athenstedt                 | Aluminium acetotartrate solu... | 110029      | 1       |
| Aug. Hedinger GmbH & Co... | Aluminium acetotartrate solu... | 20161B      | 1       |
| Aug. Hedinger GmbH&Co. ... | Aluminium acetotartrate solu... | 20165B      | 1       |
| Aug.Hedinger               | Aluminium acetotartrate solu... | 20164B      | 2       |
| Aug.Hedinger/Phoenix       | Aluminium acetotartrate solu... | 20158B      | 1       |
| Bombastus                  | Aluminium acetotartrate solu... | 160029      | 1       |
| Bombastus                  | Aluminium acetotartrate solu... | 18078602    | 1       |
| Bombastus                  | Aluminium acetotartrate solu... | 18078606    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 13101105    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 10114803    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 4071201     | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 12116803    | 3       |
| Caelo                      | Aluminium acetotartrate solu... | 12116804    | 4       |
| Caelo                      | Aluminium acetotartrate solu... | 17081201    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 12318702    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 2713M-01793 | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 12318704    | 3       |
| Caelo                      | Aluminium acetotartrate solu... | 13101102    | 5       |
| Caelo                      | Aluminium acetotartrate solu... | 13101104    | 5       |
| Caelo                      | Aluminium acetotartrate solu... | 13261304    | 3       |
| Caelo                      | Aluminium acetotartrate solu... | 13261302    | 2       |
| Caelo                      | Aluminium acetotartrate solu... | 6031415     | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 20155B      | 4       |
| Caelo                      | Aluminium acetotartrate solu... | 19052014A   | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 13261306    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 13378701    | 3       |
| Caelo                      | Aluminium acetotartrate solu... | 13378702    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 13378708    | 2       |
| Caelo                      | Aluminium acetotartrate solu... | 20156B      | 4       |
| Caelo                      | Aluminium acetotartrate solu... | 110024      | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 14252008    | 3       |
| Caelo                      | Aluminium acetotartrate solu... | 14252005    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 110029      | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 14071503    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 15045404    | 2       |
| Caelo                      | Aluminium acetotartrate solu... | 15045406    | 19      |

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| Supplier | Substance                       | Batch         | Spectra |
|----------|---------------------------------|---------------|---------|
| Caelo    | Aluminium acetotartrate solu... | 15045405      | 5       |
| Caelo    | Aluminium acetotartrate solu... | 1504506       | 1       |
| Caelo    | Aluminium acetotartrate solu... | 15054405      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 1529901       | 1       |
| Caelo    | Aluminium acetotartrate solu... | 15299902      | 5       |
| Caelo    | Aluminium acetotartrate solu... | 15299601      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 16004501      | 4       |
| Caelo    | Aluminium acetotartrate solu... | 1031706       | 1       |
| Caelo    | Aluminium acetotartrate solu... | 2016B         | 1       |
| Caelo    | Aluminium acetotartrate solu... | 16004525      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 16004504      | 3       |
| Caelo    | Aluminium acetotartrate solu... | 2058179       | 2       |
| Caelo    | Aluminium acetotartrate solu... | 16342001      | 28      |
| Caelo    | Aluminium acetotartrate solu... | 16091704      | 1       |
| Caelo    | Aluminium acetotartrate solu... | (020)020      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 17051804      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 18078606      | 28      |
| Caelo    | Aluminium acetotartrate solu... | 18078608      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 18078607      | 7       |
| Caelo    | Aluminium acetotartrate solu... | 18078611      | 6       |
| Caelo    | Aluminium acetotartrate solu... | 19010901      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 18288404      | 9       |
| Caelo    | Aluminium acetotartrate solu... | 15299904      | 4       |
| Caelo    | Aluminium acetotartrate solu... | 18288408      | 9       |
| Caelo    | Aluminium acetotartrate solu... | 19000719003   | 9       |
| Caelo    | Aluminium acetotartrate solu... | 14252009      | 3       |
| Caelo    | Aluminium acetotartrate solu... | 13261301      | 3       |
| Caelo    | Aluminium acetotartrate solu... | 163420001     | 1       |
| Caelo    | Aluminium acetotartrate solu... | 16342006      | 20      |
| Caelo    | Aluminium acetotartrate solu... | 190007190003  | 1       |
| Caelo    | Aluminium acetotartrate solu... | 201598        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20154B        | 4       |
| Caelo    | Aluminium acetotartrate solu... | 20152B        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20151B        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20152b        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 2560335       | 1       |
| Caelo    | Aluminium acetotartrate solu... | 117(18078602) | 1       |
| Caelo    | Aluminium acetotartrate solu... | 118(18288401) | 1       |
| Caelo    | Aluminium acetotartrate solu... | 201538        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20161B        | 11      |
| Caelo    | Aluminium acetotartrate solu... | 163420006     | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20159B        | 2       |
| Caelo    | Aluminium acetotartrate solu... | 20150B        | 2       |
| Caelo    | Aluminium acetotartrate solu... | 18288401      | 19      |
| Caelo    | Aluminium acetotartrate solu... | 18288409      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 1425010       | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20158B        | 3       |
| Caelo    | Aluminium acetotartrate solu... | 20159b        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 12233501      | 3       |
| Caelo    | Aluminium acetotartrate solu... | 12318701      | 5       |
| Caelo    | Aluminium acetotartrate solu... | 11315004      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 13101101      | 2       |
| Caelo    | Aluminium acetotartrate solu... | 12318703      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 20162B        | 2       |
| Caelo    | Aluminium acetotartrate solu... | 20163B        | 4       |
| Caelo    | Aluminium acetotartrate solu... | 18078602      | 35      |
| Caelo    | Aluminium acetotartrate solu... | 20164B        | 2       |
| Caelo    | Aluminium acetotartrate solu... | 16260201      | 1       |
| Caelo    | Aluminium acetotartrate solu... | 190037        | 1       |
| Caelo    | Aluminium acetotartrate solu... | 11315007      | 1       |

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| Supplier                   | Substance                         | Batch       | Spectra |
|----------------------------|-----------------------------------|-------------|---------|
| Caelo                      | Aluminium acetotartrate solu. ... | 16004505    | 23      |
| Caelo                      | Aluminium acetotartrate solu. ... | 1828402     | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 14252004    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 12318705    | 2       |
| Caelo                      | Aluminium acetotartrate solu. ... | 13378709    | 4       |
| Caelo                      | Aluminium acetotartrate solu. ... | 13378706    | 3       |
| Caelo                      | Aluminium acetotartrate solu. ... | 16342003    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 201563      | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 20160B      | 3       |
| Caelo                      | Aluminium acetotartrate solu. ... | 16342007    | 4       |
| Caelo                      | Aluminium acetotartrate solu. ... | 1425006     | 2       |
| Caelo                      | Aluminium acetotartrate solu. ... | 15045403    | 10      |
| Caelo                      | Aluminium acetotartrate solu. ... | 20153B      | 3       |
| Caelo                      | Aluminium acetotartrate solu. ... | 13261303    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 13378703    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 14252007    | 2       |
| Caelo                      | Aluminium acetotartrate solu. ... | 20157B      | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 14252006    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 14252010    | 10      |
| Caelo                      | Aluminium acetotartrate solu. ... | 15299909    | 12      |
| Caelo                      | Aluminium acetotartrate solu. ... | 16342005    | 17      |
| Caelo                      | Aluminium acetotartrate solu. ... | 19002202    | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 184288404   | 1       |
| Caelo                      | Aluminium acetotartrate solu. ... | 16004512    | 12      |
| Caelo                      | Aluminium acetotartrate solu. ... | 201618      | 1       |
| Caesolo/Phoenix            | Aluminium acetotartrate solu. ... | 18078606    | 1       |
| Caesa / Alliance Health... | Aluminium acetotartrate solu. ... | 20164B      | 2       |
| Caesar & Lorenz            | Aluminium acetotartrate solu. ... | 12318703    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 16004505    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 16004504    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 16342006    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18078606    | 5       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18078602    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18078611    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18288401    | 6       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18288408    | 4       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 18288404    | 1       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 19000719003 | 6       |
| Caesar & Loretz GmbH       | Aluminium acetotartrate solu. ... | 19000719007 | 2       |
| Caesar & Loretz GmbH/ P... | Aluminium acetotartrate solu. ... | 18288401    | 1       |
| Caesar & Loretz GmbH/AEP   | Aluminium acetotartrate solu. ... | 18288408    | 1       |
| Caesar & Loretz GmbH/Go... | Aluminium acetotartrate solu. ... | 18288404    | 1       |
| Caesar & Loretz GmbH/Je... | Aluminium acetotartrate solu. ... | 18288408    | 1       |
| Caesar & Loretz GmbH/No... | Aluminium acetotartrate solu. ... | 18288408    | 2       |
| Caesar & Loretz GmbH/Ph... | Aluminium acetotartrate solu. ... | 18078606    | 1       |
| Caesar & Loretz GmbH/Ph... | Aluminium acetotartrate solu. ... | 18078611    | 1       |
| Caesar & Loretz GmbH/Ph... | Aluminium acetotartrate solu. ... | 18288401    | 1       |
| Caesar & Loretz GmbH/Sa... | Aluminium acetotartrate solu. ... | 19000719003 | 1       |
| Caesar u Loretz            | Aluminium acetotartrate solu. ... | 14252005    | 1       |
| Caesar&Loretz GmbH/Anzag   | Aluminium acetotartrate solu. ... | 13101105    | 1       |
| Caesar&Loretz GmbH/Anzag   | Aluminium acetotartrate solu. ... | 14252010    | 1       |
| Caesar&lorenz,Phoenix      | Aluminium acetotartrate solu. ... | 12116804    | 1       |
| Caleo/Fiebig               | Aluminium acetotartrate solu. ... | 1634        | 1       |
| Calo/AHD                   | Aluminium acetotartrate solu. ... | 13101105    | 1       |
| Cealo/AHD                  | Aluminium acetotartrate solu. ... | 15299909    | 1       |
| Cealo/Anzag                | Aluminium acetotartrate solu. ... | 15299901    | 1       |
| Cealo/Anzag                | Aluminium acetotartrate solu. ... | 18078606    | 1       |
| Cealo/Gehe                 | Aluminium acetotartrate solu. ... | 1800041     | 1       |
| Dr. Seeger                 | Aluminium acetotartrate solu. ... | 20153B      | 1       |
| Dr. Seeger GmbH/Noweda     | Aluminium acetotartrate solu. ... | 20146B      | 1       |

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| Supplier                   | Substance                       | Batch       | Spectra |
|----------------------------|---------------------------------|-------------|---------|
| Dr.Seeger GmbH             | Aluminium acetotartrate solu... | 20153B      | 1       |
| E Plus                     | Aluminium acetotartrate solu... | 16342005    | 1       |
| E-Plus                     | Aluminium acetotartrate solu... | 18078602    | 1       |
| EuRho/Noweda               | Aluminium acetotartrate solu... | 20163B      | 2       |
| Euro OTC                   | Aluminium acetotartrate solu... | 20157B      | 1       |
| Euro OTC                   | Aluminium acetotartrate solu... | 13378701    | 1       |
| Euro OTC                   | Aluminium acetotartrate solu... | 20154B      | 1       |
| Euro OTC                   | Aluminium acetotartrate solu... | 11172602    | 1       |
| Euro OTC                   | Aluminium acetotartrate solu... | 16004512    | 1       |
| FA.Hedinger                | Aluminium acetotartrate solu... | 20159B      | 1       |
| Fagron                     | Aluminium acetotartrate solu... | 20163B      | 1       |
| Fagron                     | Aluminium acetotartrate solu... | 20164B      | 4       |
| Fiebig                     | Aluminium acetotartrate solu... | 20163B      | 5       |
| Fiebig                     | Aluminium acetotartrate solu... | 20165B      | 1       |
| Fischar/Anzag              | Aluminium acetotartrate solu... | 20152B      | 1       |
| Franz / Anzag              | Aluminium acetotartrate solu... | (020)020    | 1       |
| franz gmbh                 | Aluminium acetotartrate solu... | 201538      | 1       |
| franz GmbH                 | Aluminium acetotartrate solu... | 20155B      | 1       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 20153B      | 2       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 20155B      | 3       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 20152B      | 2       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 20161B      | 2       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 20163B      | 2       |
| Franz GmbH                 | Aluminium acetotartrate solu... | 2163B       | 1       |
| Franz GmbH / Phoenix       | Aluminium acetotartrate solu... | 201538      | 1       |
| Franz GmbH / Phoenix       | Aluminium acetotartrate solu... | 20161B      | 1       |
| Franz GmbH/Phönix          | Aluminium acetotartrate solu... | 20151B      | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 201528      | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 20153B      | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 20155B      | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 15045406    | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 15045403    | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 20160B      | 2       |
| Gehe                       | Aluminium acetotartrate solu... | 20163B      | 4       |
| Gehe                       | Aluminium acetotartrate solu... | 18078602    | 2       |
| Gehe                       | Aluminium acetotartrate solu... | 180041      | 1       |
| Gehe                       | Aluminium acetotartrate solu... | 20166B      | 2       |
| GEHE                       | Aluminium acetotartrate solu... | 20161B      | 1       |
| GEHE                       | Aluminium acetotartrate solu... | 20163B      | 1       |
| GEHE                       | Aluminium acetotartrate solu... | 20164B      | 2       |
| GEHE                       | Aluminium acetotartrate solu... | 20165B      | 3       |
| GEHE 08.05                 | Aluminium acetotartrate solu... | 20157B      | 1       |
| Gehe amax                  | Aluminium acetotartrate solu... | 20160B      | 1       |
| Gehe Kassel                | Aluminium acetotartrate solu... | 201568B     | 1       |
| Gehe/Athenstaedt GmbH&C... | Aluminium acetotartrate solu... | 180041      | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 12233503    | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 19000719007 | 3       |
| Gehe/Hed/08.06.19          | Aluminium acetotartrate solu... | 20164B      | 1       |
| Gehe/Hedinger              | Aluminium acetotartrate solu... | 20153B      | 1       |
| Gehe/Hedinger              | Aluminium acetotartrate solu... | 20156B      | 1       |
| Gehe/Hedinger              | Aluminium acetotartrate solu... | 201648      | 1       |
| Gehe/Hedinger              | Aluminium acetotartrate solu... | 20165B      | 1       |
| Gehe/Hedinger              | Aluminium acetotartrate solu... | 20166B      | 1       |
| Geibo/Hedinger             | Aluminium acetotartrate solu... | 20160B      | 1       |
| geile                      | Aluminium acetotartrate solu... | 20154B      | 1       |
| Haedinger                  | Aluminium acetotartrate solu... | 20160B      | 1       |
| Hediger/Phönix             | Aluminium acetotartrate solu... | 20156B      | 1       |
| hedingen                   | Aluminium acetotartrate solu... | 20162b      | 1       |
| hedinger                   | Aluminium acetotartrate solu... | 20151B      | 1       |
| hedinger                   | Aluminium acetotartrate solu... | 201528      | 1       |

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| Supplier                   | Substance                         | Batch       | Spectra |
|----------------------------|-----------------------------------|-------------|---------|
| hedinger                   | Aluminium acetotartrate solu. ... | 20156B      | 4       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20157B      | 2       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20158B      | 3       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20159B      | 1       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20160B      | 1       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20161B      | 1       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20163B      | 1       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20164B      | 1       |
| hedinger                   | Aluminium acetotartrate solu. ... | 20165B      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 402211793   | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 1002211793  | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20149B      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20150B      | 4       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20151B      | 8       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 2015B       | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 2021302     | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 1111        | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20152B      | 8       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 26041301    | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 2153B       | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20153B      | 9       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 201538      | 2       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20154B      | 10      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20155B      | 9       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 201548      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20156B      | 18      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 201568      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 5081403     | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20158B      | 7       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20159B      | 9       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20161B      | 27      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20157B      | 9       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20160B      | 14      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 201608      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 2016B       | 2       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 2016b       | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20162B      | 10      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20161       | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20163B      | 17      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20163b      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 201638      | 3       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20164B      | 6       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20165B      | 13      |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20164B0     | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20165b      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20166B      | 8       |
| HEDINGER                   | Aluminium acetotartrate solu. ... | 20151B      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20150B      | 1       |
| Hedinger                   | Aluminium acetotartrate solu. ... | 20151B      | 1       |
| Hedinger , Noweda          | Aluminium acetotartrate solu. ... | 20153B      | 1       |
| Hedinger , Stuttgart       | Aluminium acetotartrate solu. ... | 20154B      | 1       |
| Hedinger / 40              | Aluminium acetotartrate solu. ... | 20166B      | 1       |
| Hedinger / AHD             | Aluminium acetotartrate solu. ... | 20163B      | 2       |
| Hedinger / Alliance Hea... | Aluminium acetotartrate solu. ... | 20165B      | 1       |
| Hedinger / Anzag           | Aluminium acetotartrate solu. ... | 20160B      | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu. ... | 20152B      | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu. ... | 3958/V09/15 | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu. ... | 20154B      | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu. ... | 20155B      | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu. ... | 20156B      | 4       |

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| Supplier                   | Substance                       | Batch      | Spectra |
|----------------------------|---------------------------------|------------|---------|
| Hedinger / Gehe            | Aluminium acetotartrate solu... | 20157B     | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu... | 20161B     | 1       |
| Hedinger / Gehe            | Aluminium acetotartrate solu... | 20163B     | 3       |
| Hedinger / Gehe            | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger / Noweda          | Aluminium acetotartrate solu... | 20159B     | 1       |
| Hedinger / Noweda          | Aluminium acetotartrate solu... | 20161B     | 1       |
| Hedinger / Noweda          | Aluminium acetotartrate solu... | 20160B     | 1       |
| Hedinger / Noweda          | Aluminium acetotartrate solu... | 20166B     | 1       |
| Hedinger / Phoenix         | Aluminium acetotartrate solu... | 20163B     | 2       |
| Hedinger / Sanacorp        | Aluminium acetotartrate solu... | 20155B     | 1       |
| Hedinger / Sanacorp        | Aluminium acetotartrate solu... | 20156B     | 1       |
| Hedinger AHD 10.08.17 E... | Aluminium acetotartrate solu... | 20162B     | 1       |
| Hedinger Gehe              | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger GmbH              | Aluminium acetotartrate solu... | 20160B     | 1       |
| Hedinger GmbH              | Aluminium acetotartrate solu... | 20161B     | 1       |
| Hedinger GmbH & Co.KG      | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger GmbH, Phoenix     | Aluminium acetotartrate solu... | 20162B     | 2       |
| Hedinger GmbH/Noweda       | Aluminium acetotartrate solu... | 20166B     | 1       |
| Hedinger GmbH/Sanacorp     | Aluminium acetotartrate solu... | 20165B     | 4       |
| Hedinger GmbH/Sanacorp     | Aluminium acetotartrate solu... | 20166B     | 4       |
| Hedinger Phönix            | Aluminium acetotartrate solu... | 20152B     | 1       |
| Hedinger Phönix            | Aluminium acetotartrate solu... | 20153B     | 1       |
| Hedinger Phönix            | Aluminium acetotartrate solu... | 20162B     | 1       |
| Hedinger Phönix            | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger Phönix            | Aluminium acetotartrate solu... | 20164B     | 2       |
| Hedinger über Phoenix      | Aluminium acetotartrate solu... | 20155B     | 1       |
| Hedinger über Phoenix      | Aluminium acetotartrate solu... | 20157B     | 1       |
| Hedinger, Heiligenwiese... | Aluminium acetotartrate solu... | 20150B     | 1       |
| Hedinger, Noweda           | Aluminium acetotartrate solu... | 20154B     | 1       |
| Hedinger/ AHD              | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger/ G                | Aluminium acetotartrate solu... | 20164B     | 1       |
| Hedinger/ Gehe             | Aluminium acetotartrate solu... | 20162B     | 1       |
| Hedinger/ Gehe             | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger/ Gehe             | Aluminium acetotartrate solu... | 20164B     | 1       |
| Hedinger/ Gehe             | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger/ Jenne            | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger/ Noweda           | Aluminium acetotartrate solu... | 20149B     | 1       |
| Hedinger/ Noweda           | Aluminium acetotartrate solu... | 20156B     | 1       |
| Hedinger/ Noweda           | Aluminium acetotartrate solu... | 20157B     | 1       |
| Hedinger/ Noweda           | Aluminium acetotartrate solu... | 20159B     | 1       |
| Hedinger/ Phönix           | Aluminium acetotartrate solu... | 20159B     | 1       |
| hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20163B5693 | 1       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20150B     | 1       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20154B     | 1       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20159B     | 1       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20161B     | 2       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20163B     | 2       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger/ Sanacorp WE...   | Aluminium acetotartrate solu... | 20158B     | 1       |
| Hedinger/ VDL              | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger/2                 | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger/2                 | Aluminium acetotartrate solu... | 20165B     | 1       |
| Hedinger/2                 | Aluminium acetotartrate solu... | 20166B     | 1       |
| Hedinger/AHCA              | Aluminium acetotartrate solu... | 20163B     | 2       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20152B     | 2       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 201153B    | 1       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20146B     | 1       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20160B     | 1       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20163B     | 1       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20163B     | 1       |

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| Supplier                   | Substance                       | Batch   | Spectra |
|----------------------------|---------------------------------|---------|---------|
| Hedinger/AHD               | Aluminium acetotartrate solu... | 2164B   | 1       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20165B  | 2       |
| Hedinger/AHD               | Aluminium acetotartrate solu... | 20166B  | 1       |
| Hedinger/Alliance          | Aluminium acetotartrate solu... | 20161B  | 2       |
| Hedinger/Alliance          | Aluminium acetotartrate solu... | 20166B  | 1       |
| Hedinger/Alliance Healt... | Aluminium acetotartrate solu... | 20159B  | 1       |
| hedinger/anzag             | Aluminium acetotartrate solu... | 20152B  | 1       |
| hedinger/anzag             | Aluminium acetotartrate solu... | 20153b  | 1       |
| Hedinger/Anzag             | Aluminium acetotartrate solu... | 20157B  | 1       |
| Hedinger/Anzag             | Aluminium acetotartrate solu... | 20159B  | 1       |
| Hedinger/Anzag             | Aluminium acetotartrate solu... | 20160B  | 1       |
| Hedinger/Anzag             | Aluminium acetotartrate solu... | 20161B  | 2       |
| Hedinger/Ebert             | Aluminium acetotartrate solu... | 20157B  | 1       |
| Hedinger/Ebert             | Aluminium acetotartrate solu... | 20162B  | 1       |
| Hedinger/Ebert             | Aluminium acetotartrate solu... | 20163B  | 1       |
| Hedinger/EJ                | Aluminium acetotartrate solu... | 20163B  | 2       |
| Hedinger/Fiebig            | Aluminium acetotartrate solu... | 20161B  | 1       |
| Hedinger/Fiebig            | Aluminium acetotartrate solu... | 20162B  | 4       |
| Hedinger/G                 | Aluminium acetotartrate solu... | 20162B  | 1       |
| hedinger/gehe              | Aluminium acetotartrate solu... | 20154B  | 1       |
| hedinger/gehe              | Aluminium acetotartrate solu... | 20159B  | 1       |
| hedinger/gehe              | Aluminium acetotartrate solu... | 20162B  | 1       |
| hedinger/gehe              | Aluminium acetotartrate solu... | 20163B  | 1       |
| hedinger/Gehe              | Aluminium acetotartrate solu... | 20155B  | 1       |
| hedinger/Gehe              | Aluminium acetotartrate solu... | 20156B  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20152B  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20153B  | 4       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 201548  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20157B  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20158B  | 3       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20159B  | 3       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20160B  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20161B  | 7       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20162B  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20163B  | 8       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 201638  | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20164B  | 3       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20165B  | 4       |
| Hedinger/GEHE              | Aluminium acetotartrate solu... | 20155B  | 1       |
| Hedinger/Gehe/19.09.2019   | Aluminium acetotartrate solu... | 20165B  | 2       |
| Hedinger/Holdermann        | Aluminium acetotartrate solu... | 20150B  | 1       |
| Hedinger/Jenne 16.08.14    | Aluminium acetotartrate solu... | 20156B  | 1       |
| Hedinger/Krieger           | Aluminium acetotartrate solu... | 20161B  | 1       |
| Hedinger/Krieger           | Aluminium acetotartrate solu... | 20162B  | 1       |
| Hedinger/Krieger           | Aluminium acetotartrate solu... | 201658  | 1       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20151B  | 2       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20156B  | 3       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20158B  | 2       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20160B  | 2       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 200161B | 1       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20161B  | 3       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20162B  | 2       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20163B  | 3       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20165B  | 1       |
| Hedinger/Noweda            | Aluminium acetotartrate solu... | 20166B  | 2       |
| HEDINGER/NOWEDA            | Aluminium acetotartrate solu... | 20159B  | 1       |
| Hedinger/Otto              | Aluminium acetotartrate solu... | 201538  | 1       |
| Hedinger/Ph                | Aluminium acetotartrate solu... | 20162B  | 2       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20154B  | 1       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20159B  | 1       |

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| Supplier                   | Substance                       | Batch    | Spectra |
|----------------------------|---------------------------------|----------|---------|
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 201578   | 1       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20158B   | 2       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20160B   | 3       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20020    | 1       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20162B   | 2       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20163B   | 4       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20165B   | 6       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20164B   | 1       |
| Hedinger/Phoenix           | Aluminium acetotartrate solu... | 20166B   | 1       |
| hedinger/phönix            | Aluminium acetotartrate solu... | 20155B   | 1       |
| hedinger/phönix            | Aluminium acetotartrate solu... | 20157B   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20152B   | 2       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20153B   | 2       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | (020)020 | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 2015B    | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20155B   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20156B   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20157B   | 4       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20159B   | 4       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20158B   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20161B   | 3       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20160B   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20163B   | 5       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 201638   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20164B   | 6       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20165B   | 4       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 20166B   | 4       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 201658   | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... | 201668   | 1       |
| Hedinger/Px                | Aluminium acetotartrate solu... | 20159B   | 1       |
| Hedinger/Sana              | Aluminium acetotartrate solu... | 20159B   | 1       |
| Hedinger/Sana              | Aluminium acetotartrate solu... | 20164B   | 1       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20153B   | 2       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20154B   | 1       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20158B   | 3       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20159B   | 2       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20162B   | 1       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20163B   | 8       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20164B   | 3       |
| Hedinger/Sanacorp          | Aluminium acetotartrate solu... | 20165B   | 1       |
| Spangropharm               | Aluminium acetotartrate solu... | 20156B   | 1       |
| Hedinger/V.d.L.            | Aluminium acetotartrate solu... | 20154B   | 1       |
| Hedinger/VDL               | Aluminium acetotartrate solu... | 20161B   | 1       |
| Hedinger/VDL               | Aluminium acetotartrate solu... | 20166B   | 1       |
| Hedinger-Phoenix           | Aluminium acetotartrate solu... | 201608   | 1       |
| Hedinger/Gehe              | Aluminium acetotartrate solu... | 20162B   | 1       |
| heidinger/gehe             | Aluminium acetotartrate solu... | 201618   | 1       |
| heidinger/noweda           | Aluminium acetotartrate solu... | 20156B   | 1       |
| heidinger/phönix           | Aluminium acetotartrate solu... | 20159B   | 2       |
| Heidinger/Phönix           | Aluminium acetotartrate solu... | 20163B   | 1       |
| Hedinger/ Sanacorp         | Aluminium acetotartrate solu... | 20161B   | 2       |
| Henry Lamotte GmbH/ San... | Aluminium acetotartrate solu... | 16004505 | 1       |
| HenryLamotte               | Aluminium acetotartrate solu... | 20163B   | 2       |
| Jenne                      | Aluminium acetotartrate solu... | 20161B   | 1       |
| Jenne                      | Aluminium acetotartrate solu... | 20162B   | 1       |
| Jenne                      | Aluminium acetotartrate solu... | 20165B   | 2       |
| Kehr/gepepharm             | Aluminium acetotartrate solu... | 20160B   | 1       |
| L 20/Hedinger              | Aluminium acetotartrate solu... | 201618   | 1       |
| L10/Apoth.E.Bartel         | Aluminium acetotartrate solu... | 20161B   | 1       |
| L12                        | Aluminium acetotartrate solu... | 20163B   | 2       |

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| Supplier                  | Substance                       | Batch      | Spectra |
|---------------------------|---------------------------------|------------|---------|
| Leyh Pharma               | Aluminium acetotartrate solu... | 18078606   | 1       |
| Marktapotheke             | Aluminium acetotartrate solu... | 20161B     | 2       |
| Noweda                    | Aluminium acetotartrate solu... | 20150B     | 1       |
| Noweda                    | Aluminium acetotartrate solu... | 13261304   | 1       |
| Noweda                    | Aluminium acetotartrate solu... | 16342005   | 1       |
| Noweda                    | Aluminium acetotartrate solu... | 16342006   | 1       |
| Noweda                    | Aluminium acetotartrate solu... | 18078606   | 2       |
| Noweda                    | Aluminium acetotartrate solu... | 18078602   | 2       |
| Noweda/hedinger           | Aluminium acetotartrate solu... | 20165B     | 1       |
| Noweda/Hedinger           | Aluminium acetotartrate solu... | 20153B     | 1       |
| Noweda/Hedinger           | Aluminium acetotartrate solu... | 20156B     | 1       |
| Ph/Hedinger               | Aluminium acetotartrate solu... | 201648     | 2       |
| Ph/Hedinger               | Aluminium acetotartrate solu... | 20165B     | 1       |
| Phoenix WE 11.03.17 EK... | Aluminium acetotartrate solu... | 20161B     | 1       |
| Phoenix/Cealo             | Aluminium acetotartrate solu... | 20155B     | 1       |
| phönix                    | Aluminium acetotartrate solu... | 18078611   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 12116805   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 12318703   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 12318705   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 20153b     | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 13101101   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 15299909   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 16004505   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 16342001   | 1       |
| Phönix                    | Aluminium acetotartrate solu... | 18078602   | 2       |
| Phönix                    | Aluminium acetotartrate solu... | 18288401   | 1       |
| Caelo                     | Aluminium acetotartrate solu... | 180043     | 2       |
| Phönix Gotha              | Aluminium acetotartrate solu... | 900108     | 2       |
| Phönix Gotha              | Aluminium acetotartrate solu... | 13261304   | 1       |
| Phönix/Hedinger           | Aluminium acetotartrate solu... | 20155B     | 3       |
| Phönix/Hedinger           | Aluminium acetotartrate solu... | 201638     | 1       |
| PX/Hedinger               | Aluminium acetotartrate solu... | 20158B     | 1       |
| Raben-Apotheke Mildenau   | Aluminium acetotartrate solu... | 20156B     | 2       |
| Sanacorp                  | Aluminium acetotartrate solu... | 20150B     | 2       |
| Sanacorp                  | Aluminium acetotartrate solu... | 20152B     | 1       |
| Sanacorp                  | Aluminium acetotartrate solu... | 20155B     | 1       |
| Caelo                     | Aluminium acetotartrate solu... | 14252011   | 1       |
| Sanacorp/ Hedinger        | Aluminium acetotartrate solu... | 20162B     | 1       |
| Sanacorp/ Hedinger        | Aluminium acetotartrate solu... | 20163B     | 2       |
| sanacorp/Hedinger         | Aluminium acetotartrate solu... | 20157B     | 1       |
| Sanacorp/Hedinger         | Aluminium acetotartrate solu... | 20157B     | 2       |
| Sanacorp/HEDINGER         | Aluminium acetotartrate solu... | 20161B     | 1       |
| Spangr/Hedinger           | Aluminium acetotartrate solu... | 201538     | 1       |
| Spangro/Hedinger          | Aluminium acetotartrate solu... | 20158B     | 1       |
| Spangropharm              | Aluminium acetotartrate solu... | 20161B     | 1       |
| Stumpf                    | Aluminium acetotartrate solu... | 20151B     | 1       |
| WE:21.03.2016 Sanacor...  | Aluminium acetotartrate solu... | 20160B     | 1       |
| 18c05-b04-352123          | Chlorhexidine digluconate so... | 17210105   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 12114012   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 1206023-02 | 3       |
| AHD                       | Chlorhexidine digluconate so... | 13136115   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 17210112   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 18215601   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 18215610   | 1       |
| AHD                       | Chlorhexidine digluconate so... | 1811026-01 | 1       |
| AHD 08.04.20              | Chlorhexidine digluconate so... | 1912015-01 | 1       |
| Euro OTC                  | Chlorhexidine digluconate so... | 1508022-22 | 1       |
| ALH                       | Chlorhexidine digluconate so... | 1610021-01 | 1       |
| Euro OTC                  | Chlorhexidine digluconate so... | 1508022-02 | 13      |
| Alliance                  | Chlorhexidine digluconate so... | 11811026   | 1       |

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| Supplier                  | Substance                       | Batch            | Spectra |
|---------------------------|---------------------------------|------------------|---------|
| Alliance Healthcare       | Chlorhexidine digluconate so... | 1206023          | 1       |
| Fagron                    | Chlorhexidine digluconate so... | 18C05B04346797   | 1       |
| Allianz Healthcare        | Chlorhexidine digluconate so... | 1721110          | 1       |
| anzag                     | Chlorhexidine digluconate so... | 15131504         | 1       |
| Anzag                     | Chlorhexidine digluconate so... | 1206023-01       | 2       |
| Anzag                     | Chlorhexidine digluconate so... | 1708006-02       | 1       |
| Anzag                     | Chlorhexidine digluconate so... | 18215610         | 1       |
| Anzag                     | Chlorhexidine digluconate so... | 1811026-01       | 1       |
| Anzag                     | Chlorhexidine digluconate so... | 19080808         | 2       |
| ANZAG                     | Chlorhexidine digluconate so... | 11353012         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 1508022-22       | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 16002506         | 10      |
| Fagron                    | Chlorhexidine digluconate so... | 15I03B02317319   | 2       |
| Anzag; 3.80EUR; 7.10.2015 | Chlorhexidine digluconate so... | 1412018-02       | 1       |
| apo-ident                 | Chlorhexidine digluconate so... | 17E09-B01-335136 | 1       |
| Apo-ident                 | Chlorhexidine digluconate so... | 1508022-01       | 1       |
| Apo-ident                 | Chlorhexidine digluconate so... | 1701037-02       | 1       |
| apo-ident.                | Chlorhexidine digluconate so... | 1511033-01       | 6       |
| apo-ident.                | Chlorhexidine digluconate so... | 1610021-01       | 1       |
| apomix                    | Chlorhexidine digluconate so... | 18215601         | 1       |
| Apomix / Noweda           | Chlorhexidine digluconate so... | 18C05-B04-352123 | 1       |
| Apomix / Phönix           | Chlorhexidine digluconate so... | 17210105         | 1       |
| Audor Pharma              | Chlorhexidine digluconate so... | 13K26-B06-289365 | 2       |
| Bajaj Healthcare/Phönix   | Chlorhexidine digluconate so... | 1908014-01       | 2       |
| Berkel AHK                | Chlorhexidine digluconate so... | 13136115         | 1       |
| Bombastus                 | Chlorhexidine digluconate so... | 12H14-N06        | 1       |
| Bombastus                 | Chlorhexidine digluconate so... | 18045911         | 1       |
| Bombastus                 | Chlorhexidine digluconate so... | 1412018-02       | 1       |
| Bombastus                 | Chlorhexidine digluconate so... | 1508022-02       | 1       |
| Bombastus                 | Chlorhexidine digluconate so... | 18C05-B04-352124 | 1       |
| Cael/Nowda                | Chlorhexidine digluconate so... | 13136115         | 1       |
| Cael0/ Fiebig             | Chlorhexidine digluconate so... | 17210106         | 1       |
| Caeleo/ Krieger           | Chlorhexidine digluconate so... | 17230801         | 2       |
| Caeli/Fiebig              | Chlorhexidine digluconate so... | 17210112         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 15f30-b05-309829 | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 10200303         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 11135107         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 11353004         | 2       |
| Caelo                     | Chlorhexidine digluconate so... | 11353001         | 3       |
| Caelo                     | Chlorhexidine digluconate so... | 12H14-N06        | 2       |
| Caelo                     | Chlorhexidine digluconate so... | 12114001         | 4       |
| Caelo                     | Chlorhexidine digluconate so... | 12114008         | 4       |
| Caelo                     | Chlorhexidine digluconate so... | 20031301         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 12114012         | 10      |
| Caelo                     | Chlorhexidine digluconate so... | 1206023-01       | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 12114013         | 3       |
| Caelo                     | Chlorhexidine digluconate so... | 12H14-N016       | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 12114014         | 3       |
| Caelo                     | Chlorhexidine digluconate so... | 10200308         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 13136101         | 4       |
| Caelo                     | Chlorhexidine digluconate so... | 13136112         | 4       |
| Caelo                     | Chlorhexidine digluconate so... | 13136015         | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 13136114         | 7       |
| Caelo                     | Chlorhexidine digluconate so... | 13136115         | 3       |
| Caelo                     | Chlorhexidine digluconate so... | 140111009        | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 14011011         | 3       |
| Caelo                     | Chlorhexidine digluconate so... | 14011015         | 5       |
| Caelo                     | Chlorhexidine digluconate so... | 1401105          | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 140111011        | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 14011017         | 4       |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Caelo    | Chlorhexidine digluconate so... | 10213441         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14011018         | 3       |
| Caelo    | Chlorhexidine digluconate so... | 14331308         | 2       |
| Caelo    | Chlorhexidine digluconate so... | 14331306         | 4       |
| Caelo    | Chlorhexidine digluconate so... | 14331313         | 9       |
| Caelo    | Chlorhexidine digluconate so... | 1412018-01       | 3       |
| Caelo    | Chlorhexidine digluconate so... | 15131505         | 20      |
| Caelo    | Chlorhexidine digluconate so... | 26A080415        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 13081502         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 141201802        | 2       |
| Caelo    | Chlorhexidine digluconate so... | 15131510         | 14      |
| Caelo    | Chlorhexidine digluconate so... | 15F30-B05-309829 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15292507         | 6       |
| Caelo    | Chlorhexidine digluconate so... | 15292509         | 6       |
| Caelo    | Chlorhexidine digluconate so... | 15i03-b02        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 2828             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 141201801        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1529511          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1529509          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1529504          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 16002505         | 27      |
| Caelo    | Chlorhexidine digluconate so... | 16E09-B03        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1511033-02       | 4       |
| Caelo    | Chlorhexidine digluconate so... | 16308812         | 26      |
| Caelo    | Chlorhexidine digluconate so... | 17210105         | 38      |
| Caelo    | Chlorhexidine digluconate so... | 17210106         | 20      |
| Caelo    | Chlorhexidine digluconate so... | 17210101         | 5       |
| Caelo    | Chlorhexidine digluconate so... | 172010105        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 17E09-B01-335140 | 2       |
| Caelo    | Chlorhexidine digluconate so... | BK17-CG-001      | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18045903         | 72      |
| Caelo    | Chlorhexidine digluconate so... | 1712002-01       | 3       |
| Caelo    | Chlorhexidine digluconate so... | 18A09-B05-344604 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18A09-B05-344605 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18215604         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 181102601        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19080810         | 2       |
| Caelo    | Chlorhexidine digluconate so... | 5017I-01262      | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19080815         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 192972003        | 9       |
| Caelo    | Chlorhexidine digluconate so... | 192972001        | 2       |
| Caelo    | Chlorhexidine digluconate so... | 192972006        | 23      |
| Caelo    | Chlorhexidine digluconate so... | 192972007        | 6       |
| Caelo    | Chlorhexidine digluconate so... | 20000960002      | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1929972008       | 1       |
| Caelo    | Chlorhexidine digluconate so... | 20000960004      | 11      |
| Caelo    | Chlorhexidine digluconate so... | 20000960005      | 4       |
| Caelo    | Chlorhexidine digluconate so... | 2000096005       | 1       |
| Caelo    | Chlorhexidine digluconate so... | 2000960009       | 1       |
| Caelo    | Chlorhexidine digluconate so... | 13136105         | 5       |
| Caelo    | Chlorhexidine digluconate so... | CH-B18215601     | 1       |
| Caelo    | Chlorhexidine digluconate so... | CHB192972008     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 17210102         | 4       |
| Caelo    | Chlorhexidine digluconate so... | 171002-02        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 11353013         | 2       |
| Caelo    | Chlorhexidine digluconate so... | 14011013         | 6       |
| Caelo    | Chlorhexidine digluconate so... | 14331309         | 3       |
| Caelo    | Chlorhexidine digluconate so... | 17210110         | 31      |
| Caelo    | Chlorhexidine digluconate so... | 1811026-01       | 3       |
| Caelo    | Chlorhexidine digluconate so... | 19080808         | 80      |

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| Supplier | Substance                       | Batch              | Spectra |
|----------|---------------------------------|--------------------|---------|
| Caelo    | Chlorhexidine digluconate so... | 16308802           | 25      |
| Caelo    | Chlorhexidine digluconate so... | 18215603           | 3       |
| Caelo    | Chlorhexidine digluconate so... | 15292504           | 22      |
| Caelo    | Chlorhexidine digluconate so... | 15131565           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 151361503          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18045906           | 45      |
| Caelo    | Chlorhexidine digluconate so... | 18107-B04          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 11135114           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 17230801           | 112     |
| Caelo    | Chlorhexidine digluconate so... | 38962710218        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 12055              | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1308002-02         | 7       |
| Caelo    | Chlorhexidine digluconate so... | 172300801          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 11353009           | 2       |
| Caelo    | Chlorhexidine digluconate so... | 11353012           | 3       |
| Caelo    | Chlorhexidine digluconate so... | 12114019           | 3       |
| Caelo    | Chlorhexidine digluconate so... | 1592509            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 13A29-N06          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 12114015           | 2       |
| Caelo    | Chlorhexidine digluconate so... | 1630881            | 3       |
| Caelo    | Chlorhexidine digluconate so... | 18215602           | 28      |
| Caelo    | Chlorhexidine digluconate so... | 15/03-B02-315213   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18215612           | 17      |
| Caelo    | Chlorhexidine digluconate so... | 19080809           | 2       |
| Caelo    | Chlorhexidine digluconate so... | 18215601           | 94      |
| Caelo    | Chlorhexidine digluconate so... | 16E09-B03-322465   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19080817           | 13      |
| Caelo    | Chlorhexidine digluconate so... | 15I03-B02-315213   | 4       |
| Caelo    | Chlorhexidine digluconate so... | 15/03-B02-315552   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1308002-01         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15103-b02-317319   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 171027CDG/17210105 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1712002-02         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14331312           | 9       |
| Caelo    | Chlorhexidine digluconate so... | 1912015-01         | 2       |
| Caelo    | Chlorhexidine digluconate so... | 3276               | 1       |
| Caelo    | Chlorhexidine digluconate so... | 3307               | 1       |
| Caelo    | Chlorhexidine digluconate so... | 3353               | 1       |
| Caelo    | Chlorhexidine digluconate so... | 7230801            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1708006-02         | 3       |
| Caelo    | Chlorhexidine digluconate so... | 15F30-B05-311700   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15109201           | 13      |
| Caelo    | Chlorhexidine digluconate so... | 13H19-B01-285451   | 1       |
| Caelo    | Chlorhexidine digluconate so... | BK13-CG-011        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 192972008          | 27      |
| Caelo    | Chlorhexidine digluconate so... | 2000960004         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 182156212          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 192972002          | 45      |
| Caelo    | Chlorhexidine digluconate so... | 21000177005        | 2       |
| Caelo    | Chlorhexidine digluconate so... | 12k22-n09          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1308002            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 217U-01262         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1708006-01         | 2       |
| Caelo    | Chlorhexidine digluconate so... | 19080816           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04-299289   | 1       |
| Caelo    | Chlorhexidine digluconate so... | 12114007           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14011020           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14331303           | 2       |
| Caelo    | Chlorhexidine digluconate so... | 14331310           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15131502           | 10      |

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| Supplier | Substance                       | Batch                | Spectra |
|----------|---------------------------------|----------------------|---------|
| Caelo    | Chlorhexidine digluconate so... | 15I03-B02-313663     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15292512             | 6       |
| Caelo    | Chlorhexidine digluconate so... | 17210112             | 48      |
| Caelo    | Chlorhexidine digluconate so... | 18045911             | 8       |
| Caelo    | Chlorhexidine digluconate so... | 1630881218c05b043521 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18055911             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1811026/01           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19297002             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 21000177003          | 2       |
| Caelo    | Chlorhexidine digluconate so... | 1721105              | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18I07-B04            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 20000960009          | 21      |
| Caelo    | Chlorhexidine digluconate so... | 1316103              | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1202010-01           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 11L05-N080040        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14011004             | 2       |
| Caelo    | Chlorhexidine digluconate so... | 10213458             | 2       |
| Caelo    | Chlorhexidine digluconate so... | 16002501             | 17      |
| Caelo    | Chlorhexidine digluconate so... | 16002510             | 6       |
| Caelo    | Chlorhexidine digluconate so... | 16308801             | 68      |
| Caelo    | Chlorhexidine digluconate so... | 161002101            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 16308811             | 67      |
| Caelo    | Chlorhexidine digluconate so... | 17G04-B01-341693     | 3       |
| Caelo    | Chlorhexidine digluconate so... | 1701037              | 2       |
| Caelo    | Chlorhexidine digluconate so... | 18A09-B05-344603     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18045909             | 10      |
| Caelo    | Chlorhexidine digluconate so... | 18215610             | 44      |
| Caelo    | Chlorhexidine digluconate so... | 19080812             | 19      |
| Caelo    | Chlorhexidine digluconate so... | 2000096004           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18045907             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 14331301             | 7       |
| Caelo    | Chlorhexidine digluconate so... | 12122222             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 13136103             | 12      |
| Caelo    | Chlorhexidine digluconate so... | 1412018-02           | 2       |
| Caelo    | Chlorhexidine digluconate so... | 16002502             | 6       |
| Caelo    | Chlorhexidine digluconate so... | 1610022-01           | 1       |
| Caelo    | Chlorhexidine digluconate so... | A-170472             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 191172310            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 13K26-B06-288849     | 2       |
| Caelo    | Chlorhexidine digluconate so... | 15109202             | 5       |
| Caelo    | Chlorhexidine digluconate so... | 15131509             | 25      |
| Caelo    | Chlorhexidine digluconate so... | 15131512             | 7       |
| Caelo    | Chlorhexidine digluconate so... | 1508022-01           | 3       |
| Caelo    | Chlorhexidine digluconate so... | 160308811            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1701037-02           | 8       |
| Caelo    | Chlorhexidine digluconate so... | 17G04-B01-341691     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 170103702            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18C05-B04-349429     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15110033-01          | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1908014-01           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19J09-T07-071043     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 19297006             | 1       |
| Caelo    | Chlorhexidine digluconate so... | 2000009600004        | 1       |
| Caelo    | Chlorhexidine digluconate so... | 180459035663         | 1       |
| Caelo    | Chlorhexidine digluconate so... | 18107-B04-354794     | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1206023-02-335731907 | 1       |
| Caelo    | Chlorhexidine digluconate so... | 1206023-02           | 3       |
| Caelo    | Chlorhexidine digluconate so... | 13K26-B06            | 1       |
| Caelo    | Chlorhexidine digluconate so... | 815I-01262           | 1       |
| Caelo    | Chlorhexidine digluconate so... | 15131503             | 16      |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Caelo                      | Chlorhexidine digluconate so... | 15131508         | 4       |
| Caelo                      | Chlorhexidine digluconate so... | 1511033-01       | 4       |
| Caelo                      | Chlorhexidine digluconate so... | 1508022-02       | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 17230811         | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 8215610          | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 19080818         | 19      |
| Caelo                      | Chlorhexidine digluconate so... | 19040001         | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 16E09-B03-320995 | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 19080807         | 15      |
| Caol/Noweda                | Chlorhexidine digluconate so... | 16308801         | 1       |
| Caolo/Krieger              | Chlorhexidine digluconate so... | 17210101         | 1       |
| Caolo/Krieger              | Chlorhexidine digluconate so... | 17210105         | 1       |
| Caolo/Krieger              | Chlorhexidine digluconate so... | 17230801         | 1       |
| Caolo/Krieger              | Chlorhexidine digluconate so... | 18045903         | 4       |
| Caesar & Lorenz GmbH       | Chlorhexidine digluconate so... | 17230801         | 2       |
| Caesar & Lorenz GmbH       | Chlorhexidine digluconate so... | 19080812         | 1       |
| Caesar & Lorenz GmbH       | Chlorhexidine digluconate so... | 192972006        | 1       |
| Caelo                      | Chlorhexidine digluconate so... | 20003241003      | 7       |
| Caesar & Loretz            | Chlorhexidine digluconate so... | 16002510         | 1       |
| Caesar & Loretz            | Chlorhexidine digluconate so... | 18215601         | 1       |
| Caesar & Loretz /Gehe      | Chlorhexidine digluconate so... | 192972008        | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18045903         | 2       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 17210112         | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18215601         | 6       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18215610         | 9       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 1811026-01       | 4       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18215602         | 3       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18215612         | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19080808         | 13      |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19080807         | 3       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 18107-B04-353642 | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19080818         | 3       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | CS00201018       | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19109-T07-071036 | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19080812         | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 192972002        | 5       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 192972006        | 2       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 19080817         | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 192972008        | 6       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 20000960004      | 4       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 20000960009      | 6       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 2000096009       | 1       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 20000960005      | 2       |
| Caesar & Loretz GmbH       | Chlorhexidine digluconate so... | 20003241003      | 2       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 19080808         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 17230801         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 19080808         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 18045903         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 18215601         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 18215610         | 1       |
| Caesar & Loretz GmbH / ... | Chlorhexidine digluconate so... | 192972002        | 1       |
| Caesar & Loretz GmbH/ A... | Chlorhexidine digluconate so... | 19080818         | 1       |
| Caesar & Loretz GmbH/ A... | Chlorhexidine digluconate so... | 15292508         | 1       |
| Caesar & Loretz GmbH/ N... | Chlorhexidine digluconate so... | 19080808         | 1       |
| Caesar & Loretz GmbH/ S... | Chlorhexidine digluconate so... | 192972002        | 1       |
| Caesar & Loretz GmbH/AHD   | Chlorhexidine digluconate so... | 19080818         | 1       |
| Caesar & Loretz GmbH/An... | Chlorhexidine digluconate so... | 19080807         | 1       |
| Caesar & Loretz GmbH/gehe  | Chlorhexidine digluconate so... | 18215610         | 1       |
| Caesar & Loretz GmbH/Ge... | Chlorhexidine digluconate so... | 192972006        | 3       |
| Caesar & Loretz GmbH/Je... | Chlorhexidine digluconate so... | 19080818         | 1       |

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| Supplier                   | Substance                       | Batch          | Spectra |
|----------------------------|---------------------------------|----------------|---------|
| Caesar & Loretz GmbH/Je... | Chlorhexidine digluconate so... | 192972002      | 1       |
| Caesar & Loretz GmbH/Kehr  | Chlorhexidine digluconate so... | 192972003      | 1       |
| Caesar & Loretz GmbH/No... | Chlorhexidine digluconate so... | 192972003      | 1       |
| Caesar & Loretz GmbH/No... | Chlorhexidine digluconate so... | 192972002      | 1       |
| Caesar & Loretz GmbH/Ph... | Chlorhexidine digluconate so... | 18215601       | 1       |
| Caesar & Loretz GmbH/Sa... | Chlorhexidine digluconate so... | 19080808       | 3       |
| Caesar & Loretz GmbH/Sa... | Chlorhexidine digluconate so... | 20000960009    | 1       |
| Caesar & Loretz GmbH/Sp... | Chlorhexidine digluconate so... | 19080808       | 1       |
| Caesar & Loretz Hilden     | Chlorhexidine digluconate so... | 192972002      | 1       |
| Caleo/Sanacorp             | Chlorhexidine digluconate so... | 15292507       | 1       |
| Cealo                      | Chlorhexidine digluconate so... | 14331307       | 1       |
| Cealo                      | Chlorhexidine digluconate so... | 16002505       | 1       |
| Cealo/ Sanacorp            | Chlorhexidine digluconate so... | 16308801       | 1       |
| Cealo/Noweda               | Chlorhexidine digluconate so... | 15292508       | 2       |
| Cealo/Sanacorp             | Chlorhexidine digluconate so... | 17230801       | 1       |
| Celo                       | Chlorhexidine digluconate so... | 110816-7       | 1       |
| Ebert & Jacobi             | Chlorhexidine digluconate so... | 18215601       | 1       |
| Engelhard                  | Chlorhexidine digluconate so... | 19L038A        | 1       |
| Eu Rho/ Gehe               | Chlorhexidine digluconate so... | 1412018-02     | 1       |
| Eurho                      | Chlorhexidine digluconate so... | 190801401      | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1105012-01     | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1206023-02     | 2       |
| EuRho                      | Chlorhexidine digluconate so... | 1308002-02     | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 141201801      | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1412018-02     | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1701037        | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1708006-01     | 4       |
| EuRho                      | Chlorhexidine digluconate so... | 1712002-01     | 1       |
| EuRho                      | Chlorhexidine digluconate so... | 1811026-01     | 3       |
| EuRho                      | Chlorhexidine digluconate so... | 1902010-01     | 1       |
| Eurho / Noweda             | Chlorhexidine digluconate so... | 1701037-01     | 2       |
| Eurho / Noweda             | Chlorhexidine digluconate so... | 1610022-01     | 2       |
| EuRho / Phoe               | Chlorhexidine digluconate so... | 1902010-01     | 1       |
| EuRho / Phoe               | Chlorhexidine digluconate so... | 1902010-02     | 1       |
| EuRho / Phönix             | Chlorhexidine digluconate so... | 1912015-01     | 1       |
| EuRho/ Noweda              | Chlorhexidine digluconate so... | CS00201018     | 1       |
| EuRho/AHD                  | Chlorhexidine digluconate so... | 1912015-01     | 1       |
| EuRho/Gehe                 | Chlorhexidine digluconate so... | 1708006-01     | 1       |
| EuRho/Noweda               | Chlorhexidine digluconate so... | 17230801       | 1       |
| EuRho/Phönix               | Chlorhexidine digluconate so... | 1708006-01     | 3       |
| EuRho/Sanacorp             | Chlorhexidine digluconate so... | 1811026-01     | 2       |
| Euro                       | Chlorhexidine digluconate so... | 1412018-0      | 1       |
| Euro OCT                   | Chlorhexidine digluconate so... | 3-8962-3-01-24 | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 130800201      | 4       |
| Euro OTC                   | Chlorhexidine digluconate so... | CS-00201018    | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 13KB062888448  | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 161002101      | 2       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1206023-01     | 14      |
| Euro OTC                   | Chlorhexidine digluconate so... | 1308002-02     | 29      |
| Euro OTC                   | Chlorhexidine digluconate so... | 1412018801     | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1412018-02     | 37      |
| Euro OTC                   | Chlorhexidine digluconate so... | 15008022-01    | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1508072-02     | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 2802           | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1511033-02     | 20      |
| Euro OTC                   | Chlorhexidine digluconate so... | 1701037-01     | 12      |
| Euro OTC                   | Chlorhexidine digluconate so... | 3-8962-03-21   | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1708006-01     | 41      |
| Euro OTC                   | Chlorhexidine digluconate so... | 3896260321     | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 17080006-01    | 1       |

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| Supplier | Substance                       | Batch            | Spectra |
|----------|---------------------------------|------------------|---------|
| Euro OTC | Chlorhexidine digluconate so... | 1703006-01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1811026-01       | 88      |
| Euro OTC | Chlorhexidine digluconate so... | 1825601          | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 181102601        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1900201001       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1902010-02       | 19      |
| Euro OTC | Chlorhexidine digluconate so... | 1908014-01       | 29      |
| Euro OTC | Chlorhexidine digluconate so... | 1902014-01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 912015-01        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 15131505         | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 150822-02        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1712002-01       | 48      |
| Euro OTC | Chlorhexidine digluconate so... | 141218-01        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1708006_02       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1811026_01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1110012-01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 150802202        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1902010-01       | 37      |
| Euro OTC | Chlorhexidine digluconate so... | 1912015-01       | 38      |
| Euro OTC | Chlorhexidine digluconate so... | 120602301        | 3       |
| Euro OTC | Chlorhexidine digluconate so... | 282215           | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 141201801        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1701037-02       | 47      |
| Euro OTC | Chlorhexidine digluconate so... | 3-8962-6-03-21   | 3       |
| Euro OTC | Chlorhexidine digluconate so... | 1505022-01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1708006          | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 170800602        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1712002-02       | 26      |
| Euro OTC | Chlorhexidine digluconate so... | 151103           | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1610022-01       | 22      |
| Euro OTC | Chlorhexidine digluconate so... | 3896270218-01    | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 18C05-B04-349427 | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1701037          | 3       |
| Euro OTC | Chlorhexidine digluconate so... | 13D16-N04        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1308002          | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 17080006-02      | 2       |
| Euro OTC | Chlorhexidine digluconate so... | 171200201        | 2       |
| Euro OTC | Chlorhexidine digluconate so... | 1308002-01       | 26      |
| Euro OTC | Chlorhexidine digluconate so... | 1811026          | 2       |
| Euro OTC | Chlorhexidine digluconate so... | 37(1708006-02)   | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 38(1811026-01)   | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 17080006         | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 190210-01        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 15110343-02      | 1       |
| Euro OTC | Chlorhexidine digluconate so... | cs00201018       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 18215601         | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 171002-02        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 36(1701037-02)   | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1902010          | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1712002          | 2       |
| Euro OTC | Chlorhexidine digluconate so... | 1206023-02       | 26      |
| Euro OTC | Chlorhexidine digluconate so... | 130002-01        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 1508022-01       | 33      |
| Euro OTC | Chlorhexidine digluconate so... | 150802-01        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 18045906         | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 171200202        | 2       |
| Euro OTC | Chlorhexidine digluconate so... | 1811028-01       | 1       |
| Euro OTC | Chlorhexidine digluconate so... | s-8962-6-03-21   | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 12K22-N09        | 1       |
| Euro OTC | Chlorhexidine digluconate so... | 200704401        | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| Euro OTC                   | Chlorhexidine digluconate so... | 120355           | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 16089222         | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 161002201        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | CS00170420       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 3896250214       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 3-8962-7-02-39   | 5       |
| Euro/ Phönix               | Chlorhexidine digluconate so... | 1610021-01       | 1       |
| euro//Noweda               | Chlorhexidine digluconate so... | 1708006-02       | 1       |
| Euro/Anzag                 | Chlorhexidine digluconate so... | 1701037-02       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1508022_02       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1610021_01       | 1       |
| Euro/Phönix                | Chlorhexidine digluconate so... | 161002101        | 2       |
| Euro/Phönix                | Chlorhexidine digluconate so... | 18215610         | 1       |
| Euro/Phönix                | Chlorhexidine digluconate so... | 181102601        | 1       |
| Euro/Phönix                | Chlorhexidine digluconate so... | 1908014          | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1202010-01       | 8       |
| Euro OTC                   | Chlorhexidine digluconate so... | 170103702        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 170800601        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | CS00201018       | 2       |
| Euro OTC                   | Chlorhexidine digluconate so... | 120201001        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 106023-02        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | A-180063         | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 19080817         | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 17E09-B01-335137 | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 16E09-B03-320995 | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 3896270218       | 4       |
| Euro OTC                   | Chlorhexidine digluconate so... | 130800202        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 151103-01        | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 150802201        | 3       |
| Euro OTC                   | Chlorhexidine digluconate so... | 3896220404       | 1       |
| EuroPTC/Phönix             | Chlorhexidine digluconate so... | 1412018-01       | 1       |
| Evonic                     | Chlorhexidine digluconate so... | 1308002-02       | 2       |
| Evonik                     | Chlorhexidine digluconate so... | 3896220404       | 1       |
| Evonik                     | Chlorhexidine digluconate so... | 1511033-01       | 1       |
| Evonik Technochem          | Chlorhexidine digluconate so... | 1412018-01       | 1       |
| Evonik Technochem. GmbH    | Chlorhexidine digluconate so... | 1610021-01       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1708006-02       | 40      |
| Evonik/Technochem-Sanac... | Chlorhexidine digluconate so... | 1412018-02       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 15I03-B02-314177 | 1       |
| Fagon / AHD                | Chlorhexidine digluconate so... | 18C05-B04-349428 | 1       |
| Fagon / AHD                | Chlorhexidine digluconate so... | 18C05-B04-349541 | 1       |
| Fagro/ Noweda              | Chlorhexidine digluconate so... | 13K26-B06-289365 | 1       |
| Fagro/AHD                  | Chlorhexidine digluconate so... | 1412018-02       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 12K0355          | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 18C5-B04-346799  | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 204211262        | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 12A02-N11        | 7       |
| Fagon                      | Chlorhexidine digluconate so... | 11L05-N08        | 5       |
| Fagon                      | Chlorhexidine digluconate so... | 11K09-N05        | 4       |
| Fagon                      | Chlorhexidine digluconate so... | 12a02-n11        | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 13081204         | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 6111210          | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 20200112-1       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 12H14-No6        | 4       |
| Fagon                      | Chlorhexidine digluconate so... | 17011310         | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 2612M01262       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 12F01-N021       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 2512M01262       | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 103311262        | 1       |
| Fagon                      | Chlorhexidine digluconate so... | 12H-14-N06       | 1       |

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| Supplier | Substance                       | Batch             | Spectra |
|----------|---------------------------------|-------------------|---------|
| Fagron   | Chlorhexidine digluconate so... | 1213E-01262       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 120201001         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 12K22-N09         | 20      |
| Fagron   | Chlorhexidine digluconate so... | 12k22-n09         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 12H14N06          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 25051304          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 11L05-N080069/262 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 120355-ooo4       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13A29-N060155/228 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 9081302           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 12f01-N21         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13D16-N04         | 9       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-801         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1112013D          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 4111303           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13d16-n04         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-285453  | 9       |
| Fagron   | Chlorhexidine digluconate so... | 23121307          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-285451  | 6       |
| Fagron   | Chlorhexidine digluconate so... | 13H19B01          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13H19B01285451    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13h19b01285447    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-CG-011  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13K26-B06         | 8       |
| Fagron   | Chlorhexidine digluconate so... | 13K-26-B06-288853 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13k26-b06         | 2       |
| Fagron   | Chlorhexidine digluconate so... | 1081403           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 26091402          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04-294673  | 5       |
| Fagron   | Chlorhexidine digluconate so... | 13K26B06289366    | 1       |
| Fagron   | Chlorhexidine digluconate so... | BK14-CG-003       | 2       |
| Fagron   | Chlorhexidine digluconate so... | 13K26-B06-289366  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15121406          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 10031503          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 11081502          | 1       |
| Fagron   | Chlorhexidine digluconate so... | BK14-CG-023       | 2       |
| Fagron   | Chlorhexidine digluconate so... | 15F30-B05-309829  | 4       |
| Fagron   | Chlorhexidine digluconate so... | 15F30-B05-30929   | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15F30-B05-311700  | 5       |
| Fagron   | Chlorhexidine digluconate so... | 15103-B02-313663  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15131509          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-315552  | 8       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-314177  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15/03-B02-315213  | 2       |
| Fagron   | Chlorhexidine digluconate so... | BK15-CG-001       | 3       |
| Fagron   | Chlorhexidine digluconate so... | 15J03-B02         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15103B02-315212   | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03B02          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15/03-B02-315212  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16b25-b98-318800  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-320995  | 6       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-320996  | 3       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-317320  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-0006        | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16B25-B98         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16e09-b03         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-322465  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16002510          | 2       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02317319   | 1       |

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| Supplier | Substance                       | Batch             | Spectra |
|----------|---------------------------------|-------------------|---------|
| Fagron   | Chlorhexidine digluconate so... | 16H-23-B03-329123 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-322464  | 2       |
| Fagron   | Chlorhexidine digluconate so... | 1511033-02        | 2       |
| Fagron   | Chlorhexidine digluconate so... | 16H23-B03-329123  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 8041712           | 1       |
| Fagron   | Chlorhexidine digluconate so... | BK16-CG-011       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 10071703          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1610022-01        | 1       |
| Fagron   | Chlorhexidine digluconate so... | 17E09-B01         | 5       |
| Fagron   | Chlorhexidine digluconate so... | 17E09-B01335140   | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1701037-02        | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1701037-01        | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13111704          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1708006-01        | 2       |
| Fagron   | Chlorhexidine digluconate so... | 12021823          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-B05-344414  | 2       |
| Fagron   | Chlorhexidine digluconate so... | 7051804           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 8051814           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A009-B05-344415 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09B05          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04349430   | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-349429  | 3       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-b05-344414  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 6101801           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-351140  | 6       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-352123  | 5       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-346798  | 2       |
| Fagron   | Chlorhexidine digluconate so... | A-180063          | 2       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-349541  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-B04-351138  | 2       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04         | 2       |
| Fagron   | Chlorhexidine digluconate so... | 18C05-804         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07_B04_3565825 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1807-B04-356582   | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07B04353642    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-356581  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1902010-01        | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19109-T07-071037  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19109-T07-071036  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19109-T07-071039  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19109-T07-071037  | 1       |
| Fagron   | Chlorhexidine digluconate so... | T04-0771705       | 1       |
| Fagron   | Chlorhexidine digluconate so... | B/127/20          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 14332309          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-B05-344415  | 4       |
| Fagron   | Chlorhexidine digluconate so... | 1807B04355534     | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19109-T07-071035  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13K26-B06-288848  | 2       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-356583  | 6       |
| Fagron   | Chlorhexidine digluconate so... | 16002501          | 1       |
| Fagron   | Chlorhexidine digluconate so... | BK17-CG-001       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18/07-B04-353642  | 2       |
| Fagron   | Chlorhexidine digluconate so... | 12F01-N21         | 37      |
| Fagron   | Chlorhexidine digluconate so... | 15103-B02-315213  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I31-B02-313663  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15E13-B07-309826  | 5       |
| Fagron   | Chlorhexidine digluconate so... | 15103-B02-315552  | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1511033-01        | 2       |
| Fagron   | Chlorhexidine digluconate so... | 16B25-B98-318800  | 5       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-322382  | 2       |

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| Supplier | Substance                       | Batch               | Spectra |
|----------|---------------------------------|---------------------|---------|
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-323873    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-B05-344605    | 1       |
| Fagron   | Chlorhexidine digluconate so... | A-180378            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15/03-B02-316428    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-b04-356580    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18c05804            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 12H14-No06          | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-285447    | 2       |
| Fagron   | Chlorhexidine digluconate so... | 13K26-B06-289365    | 6       |
| Fagron   | Chlorhexidine digluconate so... | BK16CG005           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04356582     | 1       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04-294674    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-313663    | 5       |
| Fagron   | Chlorhexidine digluconate so... | BK15CG001           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-353642    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 1807-Berta04-356580 | 1       |
| Fagron   | Chlorhexidine digluconate so... | 16E09-B03-324024    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 17E09B01335140      | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-B05-344604    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-356580    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 1909T07-071036      | 1       |
| Fagron   | Chlorhexidine digluconate so... | 12114007            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18045903            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1503-802            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15/03-B02-315211    | 2       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-285448    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 13H19-B01-285452    | 4       |
| Fagron   | Chlorhexidine digluconate so... | 13K26-B06-288853    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04-299288    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15C03-B02-306308    | 2       |
| Fagron   | Chlorhexidine digluconate so... | 15E13B07309826      | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03B02314176      | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1503-B02-316428     | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1503B02316428       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19I09-T07-071035    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 19I09-T07-071040    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18107-B04-356582    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13A29-N06           | 14      |
| Fagron   | Chlorhexidine digluconate so... | 13K16B06288853      | 1       |
| Fagron   | Chlorhexidine digluconate so... | 2614Q-01262         | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1503B02314176       | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18A09-B05           | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18107-B04-353643    | 1       |
| Fagron   | Chlorhexidine digluconate so... | A180-630            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 1909-T07-071035     | 1       |
| Fagron   | Chlorhexidine digluconate so... | 20K24-T04-077175    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-356582    | 3       |
| Fagron   | Chlorhexidine digluconate so... | 18C05B04            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18c05-b04-349430    | 1       |
| Fagron   | Chlorhexidine digluconate so... | A180630             | 1       |
| Fagron   | Chlorhexidine digluconate so... | 18I07-B04-354794    | 7       |
| Fagron   | Chlorhexidine digluconate so... | 12A02-11            | 1       |
| Fagron   | Chlorhexidine digluconate so... | 13d16-N04           | 2       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04           | 4       |
| Fagron   | Chlorhexidine digluconate so... | 1503-B02-315213     | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-316428    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15I03-B02-0006      | 1       |
| Fagron   | Chlorhexidine digluconate so... | BK13-CG-018         | 2       |
| Fagron   | Chlorhexidine digluconate so... | 14D25-B04-294675    | 1       |
| Fagron   | Chlorhexidine digluconate so... | 15F30-B05           | 3       |

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| Supplier          | Substance                       | Batch            | Spectra |
|-------------------|---------------------------------|------------------|---------|
| Fagron            | Chlorhexidine digluconate so... | 4513U1262        | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15C03B02         | 2       |
| Fagron            | Chlorhexidine digluconate so... | 15F30B05         | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15I03-B01-314176 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 16E09-B03        | 5       |
| Fagron            | Chlorhexidine digluconate so... | 17E09-B01-335140 | 13      |
| Fagron            | Chlorhexidine digluconate so... | 17E09-B01-335137 | 2       |
| Fagron            | Chlorhexidine digluconate so... | 17G04-B01        | 3       |
| Fagron            | Chlorhexidine digluconate so... | 15L03-B02-315552 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 12H14-N06        | 19      |
| Fagron            | Chlorhexidine digluconate so... | 12K22-0005       | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15/03-B02-313663 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15J03-B02-31555  | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15I03-B02315552  | 1       |
| Fagron            | Chlorhexidine digluconate so... | 17609-801-355140 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 17e09-b01-335140 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 17G04-B01-341690 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18045906         | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18C05-B04        | 5       |
| Fagron            | Chlorhexidine digluconate so... | 18C05-B04-349430 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18C05-B04-351141 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18C05-B04-349427 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18C05-B04-352124 | 2       |
| Fagron            | Chlorhexidine digluconate so... | 18I07-B          | 1       |
| Fagron            | Chlorhexidine digluconate so... | 13K26-B06-288849 | 1       |
| Fagron            | Chlorhexidine digluconate so... | BK13-CG-011      | 3       |
| Fagron            | Chlorhexidine digluconate so... | 13K26-B06_289365 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 13H19-B01-285449 | 1       |
| Fagron            | Chlorhexidine digluconate so... | BK13-CG-285447   | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15F30-B05-309827 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 16B25-B98-318799 | 1       |
| Fagron            | Chlorhexidine digluconate so... | 1708006-02       | 1       |
| Fagron            | Chlorhexidine digluconate so... | 18A09-B05-344604 | 9       |
| Fagron            | Chlorhexidine digluconate so... | 18I07-B04-353643 | 2       |
| Fagron            | Chlorhexidine digluconate so... | 19I09-T07-071038 | 10      |
| Fagron            | Chlorhexidine digluconate so... | 19109-T07-071038 | 1       |
| Fagron            | Chlorhexidine digluconate so... | T07-0710403      | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15I03-B02-315212 | 1       |
| Fagron            | Chlorhexidine digluconate so... | BK16-CG-005      | 1       |
| Fagron            | Chlorhexidine digluconate so... | 17E09-B01-335136 | 3       |
| Fargon            | Chlorhexidine digluconate so... | 12F01-N21        | 1       |
| Fargon            | Chlorhexidine digluconate so... | 18A09-Bo5-344604 | 1       |
| Fargon/ Noweda    | Chlorhexidine digluconate so... | 12f01n21         | 1       |
| Fargon/AHD        | Chlorhexidine digluconate so... | 18C05-B04        | 1       |
| Fargon/ Sanacorp  | Chlorhexidine digluconate so... | 17E09-B01335140  | 1       |
| Caelo             | Chlorhexidine digluconate so... | 171200202        | 1       |
| Fiebig            | Chlorhexidine digluconate so... | 1110012-01       | 1       |
| Fiebig            | Chlorhexidine digluconate so... | 15I03-B02-313663 | 1       |
| Fiebig            | Chlorhexidine digluconate so... | 1511033-02       | 1       |
| Fiebig            | Chlorhexidine digluconate so... | 1610022-01       | 2       |
| Fiebig            | Chlorhexidine digluconate so... | 17230801         | 2       |
| Fiebig            | Chlorhexidine digluconate so... | 18215610         | 1       |
| Fiebig            | Chlorhexidine digluconate so... | 1811026-01       | 3       |
| Fiebig            | Chlorhexidine digluconate so... | 1912015-01       | 1       |
| Fagron            | Chlorhexidine digluconate so... | 15F30-B05-311700 | 1       |
| Finteler Apotheke | Chlorhexidine digluconate so... | 1701037-01       | 1       |
| Fragon/ Phönix    | Chlorhexidine digluconate so... | 15C03-B02-306308 | 1       |
| Fragon/Phoenix    | Chlorhexidine digluconate so... | 18C05-B04-349428 | 1       |
| Fragron /Gehe     | Chlorhexidine digluconate so... | 18B09-B05        | 1       |
| Frau Brinn-Holtz  | Chlorhexidine digluconate so... | 15292507         | 1       |

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| Supplier                  | Substance                       | Batch            | Spectra |
|---------------------------|---------------------------------|------------------|---------|
| Galderma                  | Chlorhexidine digluconate so... | 1511033-02       | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 12h14-n06        | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 1206023-02       | 2       |
| Gehe                      | Chlorhexidine digluconate so... | 13136105         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 13136114         | 4       |
| Gehe                      | Chlorhexidine digluconate so... | 13136109         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 14331309         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 15131505         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 15131512         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 15292502         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 15292509         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 151103301        | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 16308802         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 16308801         | 2       |
| Gehe                      | Chlorhexidine digluconate so... | 17210112         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 18C05-B04-351141 | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 18045906         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 18C05-B04-349427 | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 17210105         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 18215610         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 18107b04354794   | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 19080808         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 1902010-01       | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 19080812         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 19080807         | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 1908014-01       | 1       |
| Gehe                      | Chlorhexidine digluconate so... | 1912015-01       | 1       |
| GEHE                      | Chlorhexidine digluconate so... | 1610022-01       | 1       |
| GEHE                      | Chlorhexidine digluconate so... | 17210110         | 1       |
| GEHE                      | Chlorhexidine digluconate so... | 1811026-01       | 1       |
| GEHE                      | Chlorhexidine digluconate so... | CS-00201018      | 1       |
| GEHE                      | Chlorhexidine digluconate so... | 18215612         | 2       |
| GEHE                      | Chlorhexidine digluconate so... | 1902010-02       | 1       |
| Gehe / Euroh              | Chlorhexidine digluconate so... | 2007044-01       | 1       |
| GEHE 08.12.2014           | Chlorhexidine digluconate so... | BK14-CG-003      | 1       |
| GEHE 20.05.2014           | Chlorhexidine digluconate so... | 13136114         | 1       |
| Gehe amax                 | Chlorhexidine digluconate so... | 18I07-B04-356580 | 1       |
| gehe/Apoident             | Chlorhexidine digluconate so... | 1508022-02       | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 151103301        | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 15292511         | 2       |
| Gehe/EuRo                 | Chlorhexidine digluconate so... | 1712002-01       | 1       |
| Euro OTC                  | Chlorhexidine digluconate so... | 1412018-01       | 26      |
| Geilenkirchen             | Chlorhexidine digluconate so... | 15131503         | 1       |
| Hedinger                  | Chlorhexidine digluconate so... | 18045906         | 1       |
| Hedinger/Sanacorp6.5.2014 | Chlorhexidine digluconate so... | 1234             | 1       |
| hochhaus-Apotheke         | Chlorhexidine digluconate so... | 16002510         | 1       |
| Ichthyol/Phönix           | Chlorhexidine digluconate so... | 16002506         | 2       |
| Industries AG / Phoenix   | Chlorhexidine digluconate so... | 1308002-02       | 1       |
| Jenne                     | Chlorhexidine digluconate so... | 17230801         | 1       |
| Jenne                     | Chlorhexidine digluconate so... | 18215610         | 1       |
| JENNE                     | Chlorhexidine digluconate so... | 1712002-01       | 1       |
| Kehr                      | Chlorhexidine digluconate so... | 1610022-01       | 1       |
| Klenk                     | Chlorhexidine digluconate so... | 13D16-N04        | 1       |
| Klenk                     | Chlorhexidine digluconate so... | 1511033-01       | 1       |
| Klosterring               | Chlorhexidine digluconate so... | 17210110         | 1       |
| Klosterring               | Chlorhexidine digluconate so... | 18215601         | 1       |
| Kögl                      | Chlorhexidine digluconate so... | 1802507          | 1       |
| Krieger                   | Chlorhexidine digluconate so... | 17210105         | 1       |
| Krieger                   | Chlorhexidine digluconate so... | 18045903         | 1       |
| L10                       | Chlorhexidine digluconate so... | 1511033-02       | 1       |

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| Supplier                  | Substance                       | Batch            | Spectra |
|---------------------------|---------------------------------|------------------|---------|
| L10                       | Chlorhexidine digluconate so... | 1708006-01       | 2       |
| Euro OTC                  | Chlorhexidine digluconate so... | 151103301        | 2       |
| L12                       | Chlorhexidine digluconate so... | 1712002-02       | 1       |
| L12                       | Chlorhexidine digluconate so... | 1811026-01       | 2       |
| Caelo                     | Chlorhexidine digluconate so... | 1511033/02       | 1       |
| L30                       | Chlorhexidine digluconate so... | 1511033-01       | 1       |
| Laborchemie Apolda        | Chlorhexidine digluconate so... | 1511033-01       | 2       |
| Lamotte / Gehe            | Chlorhexidine digluconate so... | 14011017         | 1       |
| Land PVT.LTD/AHD          | Chlorhexidine digluconate so... | 19080807         | 1       |
| Fagron                    | Chlorhexidine digluconate so... | 18C05-B04-346797 | 3       |
| Nachprüfung 19.9.17.      | Chlorhexidine digluconate so... | 1610022-01       | 2       |
| Noweda                    | Chlorhexidine digluconate so... | 11353004         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1202010-01       | 3       |
| Noweda                    | Chlorhexidine digluconate so... | 12114012         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1308002-01       | 2       |
| Noweda                    | Chlorhexidine digluconate so... | 1508022-01       | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 15131510         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 15292508         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 16308811         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 17210105         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 17210112         | 3       |
| Noweda                    | Chlorhexidine digluconate so... | 18A09-B05-344605 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18045903         | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1708006-02       | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18C05-B04-351140 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18C05-B04-349430 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18C05-B04-352123 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18I07-B04-354794 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1811026-01       | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 18/07-B04-354794 | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1811026          | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1908014-01       | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 192972008        | 1       |
| Noweda                    | Chlorhexidine digluconate so... | 1912015-01       | 1       |
| Caelo                     | Chlorhexidine digluconate so... | 16309902         | 1       |
| Noweda/apoident           | Chlorhexidine digluconate so... | 1912015-01       | 1       |
| Euro OTC                  | Chlorhexidine digluconate so... | 2007044-01       | 17      |
| Noweda18.12.2014          | Chlorhexidine digluconate so... | 14331303         | 1       |
| Euro OTC                  | Chlorhexidine digluconate so... | 1105012-01       | 1       |
| P.W. Beyvers / Noweda     | Chlorhexidine digluconate so... | 17210106         | 1       |
| Pala                      | Chlorhexidine digluconate so... | 1511033-01       | 1       |
| Pala                      | Chlorhexidine digluconate so... | 18A09-B05-344604 | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 13H19-B01-285452 | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 14331307         | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 1511033-01       | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 3053             | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 3091             | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 1712002-02       | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 1811026-01       | 1       |
| Phoenix                   | Chlorhexidine digluconate so... | 201011210        | 1       |
| PHOENIX 25.07.2014        | Chlorhexidine digluconate so... | 13k26-b06-288849 | 1       |
| Phoenix WE: 01.09.17 E... | Chlorhexidine digluconate so... | 1701037-02       | 3       |
| phönix                    | Chlorhexidine digluconate so... | 1511033-01       | 2       |
| phönix                    | Chlorhexidine digluconate so... | 17230801         | 1       |
| Phönix                    | Chlorhexidine digluconate so... | 11353004         | 1       |
| Phönix                    | Chlorhexidine digluconate so... | 1206023-01       | 1       |
| Phönix                    | Chlorhexidine digluconate so... | 12H14-N06        | 1       |
| Phönix                    | Chlorhexidine digluconate so... | 1206023-02       | 2       |
| Phönix                    | Chlorhexidine digluconate so... | 13K26-B06-28965  | 1       |
| Phönix                    | Chlorhexidine digluconate so... | 1610021-01       | 1       |

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| Supplier                | Substance                       | Batch                | Spectra |
|-------------------------|---------------------------------|----------------------|---------|
| Phönix                  | Chlorhexidine digluconate so... | 16308812             | 1       |
| Phönix                  | Chlorhexidine digluconate so... | 1610022-01           | 2       |
| Phönix                  | Chlorhexidine digluconate so... | 17001037-02          | 1       |
| Phönix                  | Chlorhexidine digluconate so... | 1708006-02           | 1       |
| Phönix                  | Chlorhexidine digluconate so... | 1712002-01           | 2       |
| Phönix                  | Chlorhexidine digluconate so... | 18215601             | 1       |
| Phönix                  | Chlorhexidine digluconate so... | 1811026-01           | 4       |
| Phönix                  | Chlorhexidine digluconate so... | 2007044-01           | 1       |
| PHÖNIX                  | Chlorhexidine digluconate so... | 1708006-01           | 1       |
| Phönix 28.01.2014       | Chlorhexidine digluconate so... | 1206023-02           | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 12A02-N11            | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 12H14-N06            | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 13A29-N06            | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 13K26-B06-288853     | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 14120189-01          | 1       |
| Phönix Gotha            | Chlorhexidine digluconate so... | 1412018-01           | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 16E09-B03-324024     | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 190341303            | 1       |
| Phönix/EuRho            | Chlorhexidine digluconate so... | 1206023-01           | 2       |
| Euro OTC                | Chlorhexidine digluconate so... | 1610021-01           | 30      |
| Fagron                  | Chlorhexidine digluconate so... | 5x15I03-B02-3152120  | 1       |
| R.N./Noweda             | Chlorhexidine digluconate so... | RN/CHGCOS/20/18/024  | 1       |
| R.N./Noweda             | Chlorhexidine digluconate so... | RN1/CHCCOS/20/18/024 | 1       |
| R.N./Noweda             | Chlorhexidine digluconate so... | RN1/CHGCOS/20/20/065 | 1       |
| R.N./Phoenix            | Chlorhexidine digluconate so... | RN1/CHGCOS/20/19/026 | 1       |
| R.N./Phoenix            | Chlorhexidine digluconate so... | RN1/CHGCEP/20/20/147 | 1       |
| RN Laboratories/Noweda  | Chlorhexidine digluconate so... | RN1/CHGCOS/20/19/061 | 1       |
| sanacorp                | Chlorhexidine digluconate so... | 14011015             | 1       |
| sanacorp                | Chlorhexidine digluconate so... | 14331312             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 1206023-01           | 4       |
| Sanacorp                | Chlorhexidine digluconate so... | 12K22-N09            | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 12114001             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 13136103             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 13136115             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 14011004             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 14331312             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 15131509             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 15292508             | 3       |
| Sanacorp                | Chlorhexidine digluconate so... | 16002501             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 1701037-02           | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 18A09-B05-344605     | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 17230801             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 18045906             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 18215601             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 1811026-01           | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 18215610             | 2       |
| Sanacorp                | Chlorhexidine digluconate so... | 19080807             | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 19080808             | 5       |
| Sanacorp                | Chlorhexidine digluconate so... | 192972002            | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 192972003            | 1       |
| Sanacorp                | Chlorhexidine digluconate so... | 192972006            | 2       |
| Sanacorp EK:5,70 EUR... | Chlorhexidine digluconate so... | 1701037              | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 172101110            | 1       |
| Sanacorp 17.07.2015     | Chlorhexidine digluconate so... | 15131504             | 1       |
| Euro OTC                | Chlorhexidine digluconate so... | 811026-01            | 1       |
| Fagron                  | Chlorhexidine digluconate so... | AC05-B04-346798      | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 32/AD1               | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 14331307             | 9       |
| Caelo                   | Chlorhexidine digluconate so... | 1701037-01           | 1       |
| Caelo                   | Chlorhexidine digluconate so... | 1909-T07-071038      | 1       |

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| <b>Supplier</b>            | <b>Substance</b>                | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|---------------------------------|------------------|----------------|
| Fagron                     | Chlorhexidine digluconate so... | 15131505         | 2              |
| Fagron                     | Chlorhexidine digluconate so... | 16H23-B03        | 1              |
| Schütz Dishman Biotech ... | Chlorhexidine digluconate so... | 15E13-B07        | 1              |
| Schütz Dishman Biotech ... | Chlorhexidine digluconate so... | 15I03-B02        | 1              |
| Sonnen-Apotheke Wefensl... | Chlorhexidine digluconate so... | 16002501         | 1              |
| Symbiotica                 | Chlorhexidine digluconate so... | 1412018-02       | 1              |
| VDL                        | Chlorhexidine digluconate so... | 130800201        | 1              |
| VDL; 13.7.15; 3,83EUR      | Chlorhexidine digluconate so... | 1412018-01       | 1              |
| Wepa                       | Chlorhexidine digluconate so... | 18215612         | 1              |
| Caelo                      | Oral suspension base            | 21002023002      | 1              |
| Caelo                      | Oral suspension base            | 210007577001     | 1              |
| Caelo                      | Water                           | 17B13-T02-041604 | 1              |
| Fagron                     | Water                           | 18C19T29054007   | 1              |
| AEP/Krieger                | Water                           | 20001119001      | 1              |
| AHD                        | Water                           | 18156201         | 1              |
| AHD                        | Water                           | 20C19-T13-077809 | 1              |
| AHD                        | Water                           | 20C17-T19-077613 | 1              |
| AHD 10.07.2020             | Water                           | 20001293001      | 1              |
| Fagron                     | Water                           | 19D01-T08065551  | 1              |
| Fagron                     | Water                           | 18E09-T02-05511  | 1              |
| AHL                        | Water                           | 17291301         | 2              |
| Fagron                     | Water                           | 19A18-T08-063538 | 17             |
| Alliance Healthcare        | Water                           | 19D01-T11-065565 | 1              |
| Alliance Healthcare        | Water                           | 19F27-T12-068906 | 2              |
| Alliance Healthcare        | Water                           | 19J14-T06-072685 | 1              |
| Alliance Healthcare        | Water                           | 20C31-T19-078892 | 1              |
| Alliance Healthcare        | Water                           | 20F16-T06-081160 | 2              |
| Caelo                      | Water                           | 18G16-T02-058123 | 2              |
| Caelo                      | Water                           | 19A18-T06-063528 | 1              |
| Alte Apotheke              | Water                           | 16022202         | 1              |
| Alte Apotheke              | Water                           | 16223601         | 1              |
| Caelo                      | Water                           | 17E05T11044076   | 1              |
| Caelo                      | Water                           | 16L12T25039642   | 1              |
| Anzag                      | Water                           | LOTAP0103        | 1              |
| Fagron                     | Water                           | 17K27-T10-050547 | 13             |
| Anzag/23.12.19             | Water                           | LOTAP-SP0006     | 1              |
| Anzag/Anzag 31.08.18       | Water                           | LOTAP0083        | 1              |
| Caelo                      | Water                           | 16F14-T07-034326 | 1              |
| Anzag/fargon               | Water                           | 19C29T02065500   | 1              |
| apomix/ Fiebig             | Water                           | 17E05-T03-044051 | 1              |
| apomix/Noweda              | Water                           | 17114501         | 1              |
| AUG.HEDINGER GMBH          | Water                           | 219151           | 1              |
| B. Braun Melsungen/Jenne   | Water                           | 20073296         | 1              |
| B.Braun Melsungen AG / ... | Water                           | 17081017         | 1              |
| B.Braun Melsungen AG / ... | Water                           | 17436012         | 1              |
| B.Braun Melsungen AG / ... | Water                           | 18074014         | 1              |
| Beiersdorf/Gehe            | Water                           | 17K27-T15-050585 | 1              |
| Bionorica ethics           | Water                           | 18G16-T03-058126 | 1              |
| Bombastus                  | Water                           | AP0093           | 1              |
| Bombastus                  | Water                           | 17295701         | 1              |
| Bombastus                  | Water                           | 18178302         | 1              |
| Braun/Noweda               | Water                           | 19403013         | 1              |
| Braun/Phoenix              | Water                           | 18074014         | 1              |
| Braun/Phoenix              | Water                           | 18272011         | 1              |
| Caelo                      | Water                           | 16065101         | 2              |
| Caelo                      | Water                           | 15220602         | 7              |
| Caelo                      | Water                           | 15013001         | 1              |
| Caelo                      | Water                           | 15068702         | 4              |
| Caelo                      | Water                           | 14321201         | 1              |
| Caelo                      | Water                           | 15235201         | 1              |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Water            | 1524101          | 1              |
| Caelo           | Water            | 15336501         | 5              |
| Caelo           | Water            | 15287302         | 3              |
| Caelo           | Water            | 15317101         | 1              |
| Caelo           | Water            | 17011603         | 1              |
| Caelo           | Water            | 15355201         | 1              |
| Caelo           | Water            | 15317401         | 1              |
| Caelo           | Water            | 15355301         | 2              |
| Caelo           | Water            | 15G09-T04-024368 | 2              |
| Caelo           | Water            | 15H25T18025678   | 1              |
| Caelo           | Water            | 16002901         | 1              |
| Caelo           | Water            | 15371202         | 4              |
| Caelo           | Water            | 16065001         | 1              |
| Caelo           | Water            | 16093301         | 3              |
| Caelo           | Water            | 15D13-T09-021469 | 1              |
| Caelo           | Water            | 16041701         | 1              |
| Caelo           | Water            | 1615201          | 1              |
| Caelo           | Water            | 16127901         | 4              |
| Caelo           | Water            | 16065201         | 2              |
| Caelo           | Water            | 23081606         | 1              |
| Caelo           | Water            | 16151201         | 2              |
| Caelo           | Water            | 16171301         | 1              |
| Caelo           | Water            | 16127902         | 7              |
| Caelo           | Water            | 16223501         | 1              |
| Caelo           | Water            | 16F13-T14-034274 | 1              |
| Caelo           | Water            | 16340201         | 2              |
| Caelo           | Water            | 16F14-T05-034321 | 2              |
| Caelo           | Water            | 16286801         | 7              |
| Caelo           | Water            | 16291601         | 1              |
| Caelo           | Water            | 16F14-T05-03432  | 1              |
| Caelo           | Water            | 16313202         | 2              |
| Caelo           | Water            | 16218601         | 1              |
| Caelo           | Water            | 16353303         | 9              |
| Caelo           | Water            | 17002001         | 12             |
| Caelo           | Water            | 17035101         | 3              |
| Caelo           | Water            | LOTAP0044        | 2              |
| Caelo           | Water            | 17034801         | 1              |
| Caelo           | Water            | 17114501         | 5              |
| Caelo           | Water            | 14170717         | 1              |
| Caelo           | Water            | 17034901         | 1              |
| Caelo           | Water            | 16L12-T31-039661 | 1              |
| Caelo           | Water            | 17089401         | 3              |
| Caelo           | Water            | 17089301         | 2              |
| Caelo           | Water            | 17114801         | 6              |
| Caelo           | Water            | 39628            | 1              |
| Caelo           | Water            | 16334201         | 1              |
| Caelo           | Water            | 17179001         | 8              |
| Caelo           | Water            | 17173101         | 5              |
| Caelo           | Water            | 17211401         | 1              |
| Caelo           | Water            | 17177301         | 22             |
| Caelo           | Water            | 17277102         | 8              |
| Caelo           | Water            | 17291301         | 2              |
| Caelo           | Water            | 17C31-T05-043064 | 1              |
| Caelo           | Water            | 17295701         | 33             |
| Caelo           | Water            | 17320001         | 11             |
| Caelo           | Water            | 18061901         | 10             |
| Caelo           | Water            | 18019501         | 4              |
| Caelo           | Water            | 18000401         | 6              |
| Caelo           | Water            | 18030402         | 10             |
| Caelo           | Water            | 18065601         | 9              |

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| Supplier | Substance | Batch              | Spectra |
|----------|-----------|--------------------|---------|
| Caelo    | Water     | 170320001          | 1       |
| Caelo    | Water     | 17313801           | 2       |
| Caelo    | Water     | LOTAP0083          | 2       |
| Caelo    | Water     | 18093601           | 14      |
| Caelo    | Water     | 18210601           | 5       |
| Caelo    | Water     | 18156401           | 7       |
| Caelo    | Water     | 17317201           | 1       |
| Caelo    | Water     | 18093061           | 1       |
| Caelo    | Water     | 219184             | 1       |
| Caelo    | Water     | LOTAP-SP0001       | 2       |
| Caelo    | Water     | 1818302            | 1       |
| Caelo    | Water     | LOTAP0094          | 2       |
| Caelo    | Water     | 18148601           | 1       |
| Caelo    | Water     | 2191953x1000ml     | 1       |
| Caelo    | Water     | 18C19-T30-054012   | 2       |
| Caelo    | Water     | 18C19-T28-054003   | 1       |
| Caelo    | Water     | 18253301           | 1       |
| Caelo    | Water     | 19012801           | 4       |
| Caelo    | Water     | 19005501           | 11      |
| Caelo    | Water     | LOTAP0098          | 1       |
| Caelo    | Water     | LOTAP0104          | 1       |
| Caelo    | Water     | 19198501           | 5       |
| Caelo    | Water     | 19184102           | 9       |
| Caelo    | Water     | 19E20-T09-067576   | 1       |
| Caelo    | Water     | 19246201           | 3       |
| Caelo    | Water     | 19253301           | 3       |
| Caelo    | Water     | 2192222x           | 1       |
| Caelo    | Water     | 20000418001        | 2       |
| Caelo    | Water     | 20000409001        | 3       |
| Caelo    | Water     | 19J14-T12-072715x5 | 1       |
| Caelo    | Water     | 20000853001        | 5       |
| Caelo    | Water     | LOTAP0123          | 1       |
| Caelo    | Water     | 20001770001        | 2       |
| Caelo    | Water     | 20001628001        | 4       |
| Caelo    | Water     | 20002402001        | 3       |
| Caelo    | Water     | 20001629001        | 5       |
| Caelo    | Water     | LOTAP0134          | 3       |
| Caelo    | Water     | 20002912001        | 2       |
| Caelo    | Water     | 20002448001        | 5       |
| Caelo    | Water     | 20003300001        | 1       |
| Caelo    | Water     | 20003877001        | 3       |
| Caelo    | Water     | 2001770001         | 1       |
| Caelo    | Water     | 20003259001        | 1       |
| Caelo    | Water     | 21000319001        | 1       |
| Caelo    | Water     | 21001353001        | 1       |
| Caelo    | Water     | 18228701           | 10      |
| Caelo    | Water     | 18305401           | 4       |
| Caelo    | Water     | 20001036001        | 4       |
| Caelo    | Water     | 19C29-T05-065509   | 2       |
| Caelo    | Water     | 1728270127/18      | 1       |
| Caelo    | Water     | 15235301           | 2       |
| Caelo    | Water     | LOTAP0055          | 1       |
| Caelo    | Water     | LOTAB0084          | 1       |
| Caelo    | Water     | 20001377001        | 5       |
| Caelo    | Water     | 19152701           | 7       |
| Caelo    | Water     | 15394501           | 2       |
| Caelo    | Water     | 16223601           | 3       |
| Caelo    | Water     | 17032401           | 4       |
| Caelo    | Water     | 19229401           | 3       |
| Caelo    | Water     | 15H25-T21-025683   | 2       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Water            | 17B10-T18-041564 | 3              |
| Caelo           | Water            | 219167           | 1              |
| Caelo           | Water            | 17K01-T01-048440 | 1              |
| Caelo           | Water            | 18J10-T01-060845 | 1              |
| Caelo           | Water            | 19077801         | 16             |
| Caelo           | Water            | 20002911001      | 6              |
| Caelo           | Water            | 17098701         | 7              |
| Caelo           | Water            | 16065601         | 1              |
| Caelo           | Water            | 18305501         | 5              |
| Caelo           | Water            | 19029001         | 1              |
| Caelo           | Water            | 20001293001      | 6              |
| Caelo           | Water            | 2003259001       | 1              |
| Caelo           | Water            | 18178401         | 1              |
| Caelo           | Water            | 2x18030402       | 1              |
| Caelo           | Water            | 15287401         | 2              |
| Caelo           | Water            | 15355401         | 1              |
| Caelo           | Water            | 17K27-T09-050544 | 5              |
| Caelo           | Water            | 18004701         | 1              |
| Caelo           | Water            | 18265601         | 1              |
| Caelo           | Water            | 16223801         | 20             |
| Caelo           | Water            | 1806501          | 1              |
| Caelo           | Water            | 18093501         | 14             |
| Caelo           | Water            | 15H25-T18-025678 | 1              |
| Caelo           | Water            | 20000279001      | 2              |
| Caelo           | Water            | 15336502         | 1              |
| Caelo           | Water            | 16223901         | 2              |
| Caelo           | Water            | 16C23-T16-031436 | 3              |
| Caelo           | Water            | 17K27T14050581   | 1              |
| Caelo           | Water            | 18C19-T25-053991 | 1              |
| Caelo           | Water            | 18226701         | 6              |
| Caelo           | Water            | 19019801         | 6              |
| Caelo           | Water            | 19111601         | 4              |
| Caelo           | Water            | 19133401         | 4              |
| Caelo           | Water            | 1911601          | 1              |
| Caelo           | Water            | 19253601         | 1              |
| Caelo           | Water            | 20000410001      | 1              |
| Caelo           | Water            | 19199101         | 8              |
| Caelo           | Water            | 19110901         | 2              |
| Caelo           | Water            | 17092001         | 1              |
| Caelo           | Water            | 15394202         | 12             |
| Caelo           | Water            | 17317301         | 4              |
| Caelo           | Water            | 18156301         | 4              |
| Caelo           | Water            | 19198301         | 9              |
| Caelo           | Water            | 19112403         | 1              |
| Caelo           | Water            | 20001039001      | 7              |
| Caelo           | Water            | 4(18265001)      | 1              |
| Caelo           | Water            | 16F13-T11-034264 | 1              |
| Caelo           | Water            | 18109301         | 6              |
| Caelo           | Water            | L0T-AP-SP0001    | 1              |
| Caelo           | Water            | 19005601         | 29             |
| Caelo           | Water            | 19152801         | 24             |
| Caelo           | Water            | 19198401         | 10             |
| Caelo           | Water            | 19253401         | 5              |
| Caelo           | Water            | 20000072001      | 2              |
| Caelo           | Water            | 20000806001      | 5              |
| Caelo           | Water            | 2092001          | 1              |
| Caelo           | Water            | 20001518001      | 3              |
| Caelo           | Water            | Nachreichen      | 1              |
| Caelo           | Water            | 20002022001      | 2              |
| Caelo           | Water            | 1819201          | 1              |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Caelo    | Water     | 18110401          | 16      |
| Caelo    | Water     | 18228901          | 9       |
| Caelo    | Water     | 19065102          | 9       |
| Caelo    | Water     | 19274201          | 5       |
| Caelo    | Water     | 20001037001       | 7       |
| Caelo    | Water     | 1810401           | 1       |
| Caelo    | Water     | 190775501         | 1       |
| Caelo    | Water     | 16F14-T03-034317  | 1       |
| Caelo    | Water     | 18228801          | 10      |
| Caelo    | Water     | 192874001         | 1       |
| Caelo    | Water     | 2001119001        | 1       |
| Caelo    | Water     | 20001117001       | 2       |
| Caelo    | Water     | 18195201          | 11      |
| Caelo    | Water     | 18305101          | 10      |
| Caelo    | Water     | 18E09-T01-055708  | 1       |
| Caelo    | Water     | LOTAP0095         | 1       |
| Caelo    | Water     | 18109201          | 4       |
| Caelo    | Water     | 18E09-T02-0557711 | 1       |
| Caelo    | Water     | 20001416001       | 2       |
| Caelo    | Water     | 15254101          | 3       |
| Caelo    | Water     | 18178302          | 43      |
| Caelo    | Water     | 15394201          | 4       |
| Caelo    | Water     | 16C23-/08_031427  | 1       |
| Caelo    | Water     | 17282701          | 9       |
| Caelo    | Water     | 17L20-T02-051255  | 1       |
| Caelo    | Water     | 18240101          | 5       |
| Caelo    | Water     | 18I24-T15-060243  | 2       |
| Caelo    | Water     | 19077601          | 12      |
| Caelo    | Water     | 19077701          | 9       |
| Caelo    | Water     | 17089101          | 2       |
| Caelo    | Water     | 17114701          | 14      |
| Caelo    | Water     | 16F143-T09-034330 | 1       |
| Caelo    | Water     | 17E05-T11-044076  | 3       |
| Caelo    | Water     | 18226601          | 4       |
| Caelo    | Water     | 17233001          | 4       |
| Caelo    | Water     | 1723311           | 1       |
| Caelo    | Water     | 15025501          | 1       |
| Caelo    | Water     | 14364201          | 1       |
| Caelo    | Water     | 15253901          | 5       |
| Caelo    | Water     | 15427201          | 5       |
| Caelo    | Water     | 16211901          | 3       |
| Caelo    | Water     | 16255201          | 4       |
| Caelo    | Water     | 16L12-T11-039624  | 1       |
| Caelo    | Water     | 17B10-T27-041575  | 1       |
| Caelo    | Water     | 17E05-T07-044067  | 2       |
| Caelo    | Water     | 17319901          | 5       |
| Caelo    | Water     | 180619012x        | 1       |
| Caelo    | Water     | 18146801          | 3       |
| Caelo    | Water     | 1814801           | 1       |
| Caelo    | Water     | LOTAP0089         | 1       |
| Caelo    | Water     | LotAP0083         | 1       |
| Caelo    | Water     | 18E09-T02-055711  | 3       |
| Caelo    | Water     | 20001119001       | 10      |
| Caelo    | Water     | 17173001          | 5       |
| Caelo    | Water     | 16313201          | 5       |
| Caelo    | Water     | 180620012x        | 1       |
| Caelo    | Water     | 5(18265001)       | 1       |
| Caelo    | Water     | 15287501          | 2       |
| Caelo    | Water     | 16006001          | 3       |
| Caelo    | Water     | 16178101          | 1       |

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| <b>Supplier</b> | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|-----------------|------------------|------------------|----------------|
| Caelo           | Water            | 15K10-T06-027620 | 1              |
| Caelo           | Water            | 17098901         | 9              |
| Caelo           | Water            | 17219101         | 7              |
| Caelo           | Water            | 20000412001      | 3              |
| Caelo           | Water            | 20003260001      | 1              |
| Caelo           | Water            | 17E05-T13-044080 | 3              |
| Caelo           | Water            | 15220601         | 3              |
| Caelo           | Water            | 1542701          | 1              |
| Caelo           | Water            | 15L15-T05-028681 | 1              |
| Caelo           | Water            | 15F04-T05-023263 | 1              |
| Caelo           | Water            | 16F13-T11-34264  | 1              |
| Caelo           | Water            | 16F13-T18-034301 | 1              |
| Caelo           | Water            | 16K25-C20-17409  | 1              |
| Caelo           | Water            | 17211301         | 4              |
| Caelo           | Water            | 17H24-T13-047717 | 1              |
| Caelo           | Water            | 17K27-T15-050585 | 3              |
| Caelo           | Water            | 180936061        | 1              |
| Caelo           | Water            | 10893501         | 1              |
| Caelo           | Water            | LOTAP0091        | 1              |
| Caelo           | Water            | 18238601         | 10             |
| Caelo           | Water            | 18299501         | 5              |
| Caelo           | Water            | 18ho-T01-060845  | 1              |
| Caelo           | Water            | 18E28-T02-056491 | 1              |
| Caelo           | Water            | AP0099           | 1              |
| Caelo           | Water            | 19024301         | 6              |
| Caelo           | Water            | 18I24-T14-060239 | 2              |
| Caelo           | Water            | 200001039001     | 1              |
| Caelo           | Water            | 200000806001     | 1              |
| Caelo           | Water            | 20002379002      | 5              |
| Caelo           | Water            | 2002379002       | 1              |
| Caelo           | Water            | 20004435001      | 1              |
| Caelo           | Water            | 15D14-T06-021484 | 1              |
| Caelo           | Water            | 15154901         | 1              |
| Caelo           | Water            | 15L15T07028685   | 1              |
| Caelo           | Water            | 17149601         | 3              |
| Caelo           | Water            | 17H24-T11-047713 | 2              |
| Caelo           | Water            | 17249101         | 5              |
| Caelo           | Water            | 18062001         | 1              |
| Caelo           | Water            | 14LL26           | 3              |
| Caelo           | Water            | 18C19T053999     | 1              |
| Caelo           | Water            | 18178303         | 1              |
| Caelo           | Water            | 18265001         | 41             |
| Caelo           | Water            | 18C13T14053736   | 1              |
| Caelo           | Water            | 18035301         | 1              |
| Caelo           | Water            | 18/24-T14-060238 | 1              |
| Caelo           | Water            | 19005602         | 4              |
| Caelo           | Water            | 18G16-T04-058129 | 1              |
| Caelo           | Water            | 20003879001      | 2              |
| Caelo           | Water            | 21C23-T07-087188 | 1              |
| Caelo           | Water            | 17339701         | 1              |
| Caelo           | Water            | 18c19-T26-053995 | 1              |
| Caelo           | Water            | 19162701         | 6              |
| Caelo           | Water            | 16065701         | 1              |
| Caelo           | Water            | 16255101         | 2              |
| Caelo           | Water            | 16334301         | 1              |
| Caelo           | Water            | 16215202         | 1              |
| Caelo           | Water            | 17012002         | 1              |
| Caelo           | Water            | 17035001         | 1              |
| Caelo           | Water            | 17179101         | 7              |
| Caelo           | Water            | 17k27-t11-050552 | 1              |

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| Supplier             | Substance | Batch            | Spectra |
|----------------------|-----------|------------------|---------|
| Caelo                | Water     | 17339801         | 4       |
| Caelo                | Water     | 18109501         | 2       |
| Caelo                | Water     | 18E07-T08-055699 | 3       |
| Caelo                | Water     | 18C-T15-053741   | 1       |
| Caelo                | Water     | 18C19-T31-054017 | 1       |
| Caelo                | Water     | 18226901         | 2       |
| Caelo                | Water     | 18254801         | 2       |
| Caelo                | Water     | 18I24-T14-060238 | 1       |
| Caelo                | Water     | 18G16-T05-058132 | 2       |
| Caelo                | Water     | 18332901         | 3       |
| Caelo                | Water     | 19111701         | 4       |
| Caelo                | Water     | 19152501         | 3       |
| Caelo                | Water     | 191522801        | 1       |
| Caelo                | Water     | 19184201         | 4       |
| Caelo                | Water     | 19F27-T14-068914 | 2       |
| Caelo                | Water     | 20000526001      | 2       |
| Caelo                | Water     | AP-SP0002        | 1       |
| Caelo                | Water     | 18G16-T03-058126 | 2       |
| Caelo                | Water     | 15I10-T08-025964 | 1       |
| Caelo                | Water     | 16F13-T16-034297 | 1       |
| Caelo                | Water     | 17E05-T03-044051 | 3       |
| Caelo                | Water     | 17233101         | 5       |
| Caelo                | Water     | 219156           | 1       |
| Caelo                | Water     | 17H24-T09-047709 | 2       |
| Caelo                | Water     | 17304001         | 1       |
| Caelo                | Water     | 17304101         | 2       |
| Caelo                | Water     | 18062101         | 10      |
| Caelo                | Water     | 18042901         | 32      |
| Caelo                | Water     | 18109101         | 2       |
| Caelo                | Water     | 18138601         | 6       |
| Caelo                | Water     | LOTAP            | 1       |
| Caelo                | Water     | 17F23-T06-045760 | 1       |
| Caelo                | Water     | LOTAP0088        | 2       |
| Caelo                | Water     | 18156501         | 8       |
| Caelo                | Water     | 181468801        | 1       |
| Caelo                | Water     | 18239901         | 2       |
| Caelo                | Water     | 18227001         | 9       |
| Caelo                | Water     | LotAp0094        | 1       |
| Caelo                | Water     | 18325001         | 6       |
| Caelo                | Water     | LOTAP-SP0002     | 1       |
| Caelo                | Water     | 18305301         | 7       |
| Caelo                | Water     | 219196           | 1       |
| Caelo                | Water     | 19149201         | 1       |
| Caelo                | Water     | 18I24-T14-060243 | 1       |
| Caelo                | Water     | 18119-T06-062854 | 1       |
| Caelo                | Water     | 19253501         | 1       |
| Caelo                | Water     | 20002447001      | 2       |
| Caelo                | Water     | 19A18-T07-063531 | 1       |
| Caelo                | Water     | 18226801         | 1       |
| Caelo                | Water     | 182263401        | 1       |
| Caelo                | Water     | 18263401         | 5       |
| Caelo                | Water     | 3045919          | 1       |
| Caelo                | Water     | 19037701         | 7       |
| Caelo                | Water     | 2000418001       | 1       |
| Caelo                | Water     | 20000934001      | 3       |
| Caelo                | Water     | 17H24-T15-047721 | 8       |
| Caelo                | Water     | 18305201         | 7       |
| Caelo                | Water     | LOTAP0086        | 4       |
| Caelo                | Water     | 20000526002      | 9       |
| Caesar & Lorenz GmbH | Water     | 19152501         | 1       |

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| Supplier                   | Substance | Batch            | Spectra |
|----------------------------|-----------|------------------|---------|
| Caesar & Loretz            | Water     | 17145001         | 3       |
| Caesar & Loretz            | Water     | 17173001         | 1       |
| Caesar & Loretz /Sanacorp  | Water     | 20003268001      | 4       |
| Caesar & Loretz GmbH       | Water     | 18265001         | 7       |
| Caesar & Loretz GmbH       | Water     | LOTAP-SP0002     | 2       |
| Caesar & Loretz GmbH       | Water     | 18228801         | 1       |
| Caesar & Loretz GmbH       | Water     | 18299501         | 3       |
| Caesar & Loretz GmbH       | Water     | 18305301         | 3       |
| Caesar & Loretz GmbH       | Water     | 18240101         | 2       |
| Caesar & Loretz GmbH       | Water     | 18228901         | 1       |
| Caesar & Loretz GmbH       | Water     | 18305501         | 1       |
| Caesar & Loretz GmbH       | Water     | 19005602         | 1       |
| Caesar & Loretz GmbH       | Water     | 19005601         | 3       |
| Caesar & Loretz GmbH       | Water     | 19077501         | 4       |
| Caesar & Loretz GmbH       | Water     | 18305401         | 1       |
| Caesar & Loretz GmbH       | Water     | 19065102         | 2       |
| Caesar & Loretz GmbH       | Water     | 19077601         | 6       |
| Caesar & Loretz GmbH       | Water     | 18178302         | 1       |
| Caesar & Loretz GmbH       | Water     | 19077701         | 3       |
| Caesar & Loretz GmbH       | Water     | 19077801         | 6       |
| Caesar & Loretz GmbH       | Water     | 19097901         | 1       |
| Caesar & Loretz GmbH       | Water     | 19199101         | 1       |
| Caesar & Loretz GmbH       | Water     | 19111701         | 1       |
| Caesar & Loretz GmbH       | Water     | 19152501         | 2       |
| Caesar & Loretz GmbH       | Water     | 19077601x2       | 1       |
| Caesar & Loretz GmbH       | Water     | 19152801         | 8       |
| Caesar & Loretz GmbH       | Water     | 19184102         | 6       |
| Caesar & Loretz GmbH       | Water     | 19152701         | 2       |
| Caesar & Loretz GmbH       | Water     | 19229401         | 2       |
| Caesar & Loretz GmbH       | Water     | 19263601         | 5       |
| Caesar & Loretz GmbH       | Water     | 19253401         | 3       |
| Caesar & Loretz GmbH       | Water     | 19184201         | 1       |
| Caesar & Loretz GmbH       | Water     | 18L19-T06-062853 | 1       |
| Caesar & Loretz GmbH       | Water     | 19E20-T09-067576 | 2       |
| Caesar & Loretz GmbH       | Water     | 19H12-T14-070779 | 1       |
| Caesar & Loretz GmbH       | Water     | 20000526002      | 1       |
| Caesar & Loretz GmbH       | Water     | 20000853001      | 1       |
| Caesar & Loretz GmbH       | Water     | 19J10-T09-072607 | 1       |
| Caesar & Loretz GmbH       | Water     | 20001039001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20001293001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20001119001      | 1       |
| Caesar & Loretz GmbH       | Water     | 2001293001       | 1       |
| Caesar & Loretz GmbH       | Water     | 20002402001      | 6       |
| Caesar & Loretz GmbH       | Water     | 200002379002     | 1       |
| Caesar & Loretz GmbH       | Water     | 20003301001      | 3       |
| Caesar & Loretz GmbH       | Water     | 20002783001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20002910001      | 2       |
| Caesar & Loretz GmbH       | Water     | 20003300001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20004029001      | 2       |
| Caesar & Loretz GmbH       | Water     | 20003878001      | 4       |
| Caesar & Loretz GmbH       | Water     | 20003879001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20004435001      | 1       |
| Caesar & Loretz GmbH       | Water     | 20003876001      | 1       |
| Caesar & Loretz GmbH / ... | Water     | 18019501         | 1       |
| Caesar & Loretz GmbH / ... | Water     | 19152801         | 1       |
| Caesar & Loretz GmbH / ... | Water     | 20001119001      | 1       |
| Caesar & Loretz GmbH / ... | Water     | 20002402001      | 1       |
| Caesar & Loretz GmbH / ... | Water     | 19152801         | 1       |
| Caesar & Loretz GmbH Hi... | Water     | 15394202         | 1       |
| Caesar & Loretz GmbH Hi... | Water     | 16127902         | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>     | <b>Spectra</b> |
|----------------------------|------------------|------------------|----------------|
| Caesar & Loretz GmbH/ M... | Water            | 19207401         | 2              |
| Caesar & Loretz GmbH/AHD   | Water            | 19152801         | 1              |
| Caesar & Loretz GmbH/An... | Water            | 19077601         | 2              |
| Caesar & Loretz GmbH/Gehe  | Water            | 18228801         | 2              |
| Caesar & Loretz GmbH/Gehe  | Water            | 19152701         | 1              |
| Caesar & Loretz GmbH/Gehe  | Water            | 19184201         | 1              |
| Caesar & Loretz GmbH/Gehe  | Water            | 19242101         | 2              |
| Caesar & Loretz GmbH/Je... | Water            | 18299501         | 1              |
| Caesar & Loretz GmbH/Je... | Water            | 19005501         | 1              |
| Caesar & Loretz GmbH/Je... | Water            | 19077701         | 1              |
| Caesar & Loretz GmbH/Je... | Water            | 19152801         | 3              |
| Caesar & Loretz GmbH/Je... | Water            | 19152501         | 1              |
| Caesar & Loretz GmbH/Mi... | Water            | 18325001         | 3              |
| Caesar & Loretz GmbH/Mi... | Water            | 19037701         | 2              |
| Caesar & Loretz GmbH/Mi... | Water            | 19097801         | 1              |
| Caesar & Loretz GmbH/Mi... | Water            | 19149201         | 6              |
| Caesar & Loretz GmbH/No... | Water            | 21000522001      | 2              |
| Caesar & Loretz GmbH/Ph... | Water            | 20002911001      | 1              |
| Caesar & Loretz GmbH/Ph... | Water            | 18265001         | 1              |
| Caesar & Loretz GmbH/Ph... | Water            | 19077501         | 1              |
| Caesar & Loretz GmbH/Sa... | Water            | 19274201         | 1              |
| Caesar & Loretz GmbH/Sa... | Water            | 20001039001      | 2              |
| Caesar & Loretz Hilden     | Water            | 18G16-T03-058126 | 1              |
| Caesar&Loretz              | Water            | 19152801         | 1              |
| Caleo/ Noweda              | Water            | 16F13-T18-034301 | 1              |
| Caleo/Phönix               | Water            | 19077501         | 1              |
| Cealo/Gehe                 | Water            | LOTAP0086        | 1              |
| Cealo/Noweda               | Water            | 18210601         | 1              |
| Cealo/Noweda               | Water            | LOTAP0096        | 1              |
| Chiesi GmbH                | Water            | 16L12-T25-039642 | 1              |
| Cordes/Gehe                | Water            | 19077801         | 1              |
| Delta                      | Water            | 18C19-T25-053991 | 1              |
| Dr. Wolff/ Noweda          | Water            | 14K05-T02-016775 | 1              |
| E Plus                     | Water            | 18109101         | 6              |
| E Plus                     | Water            | 18156301         | 2              |
| Ebert & Jacobi             | Water            | 18042901         | 4              |
| Ebert 04.04.2014           | Water            | 15K10-T04-027614 | 1              |
| Ebert/Fragron              | Water            | T04-0781504      | 1              |
| Euro OCT/Noweda            | Water            | 16L12-T31-039661 | 2              |
| Euro OTC                   | Water            | 16F13-T18-034301 | 1              |
| Euro OTC                   | Water            | 18109201         | 1              |
| Euro OTC                   | Water            | 18E09-T01-055708 | 1              |
| Euro OTC                   | Water            | 17E05-T13-044080 | 2              |
| Euro OTC                   | Water            | 17295701         | 1              |
| Euro OTC                   | Water            | 18124-T14-060238 | 1              |
| Euro OTC                   | Water            | 20001119001      | 1              |
| Euro OTC                   | Water            | 16307601         | 1              |
| Euro OTC                   | Water            | 18C19T29054007   | 1              |
| Euro OTC                   | Water            | F180012          | 1              |
| Euro OTC                   | Water            | 15L15-T07-028685 | 1              |
| Euro OTC                   | Water            | 16L12-T11-039624 | 1              |
| Fagro/Gehe                 | Water            | 18C19-T29-054007 | 3              |
| Fagro/Gehe Verbund         | Water            | 19J14-T06-072685 | 1              |
| Fagron                     | Water            | 15L14T14028664   | 2              |
| Fagron                     | Water            | 16F14-T07-034326 | 14             |
| Fagron                     | Water            | 16L15-T07-028685 | 1              |
| Fagron                     | Water            | 17E05T05044063   | 2              |
| Fagron                     | Water            | 18042901         | 2              |
| Fagron                     | Water            | 14L03-T03-017773 | 1              |
| Fagron                     | Water            | 14L03T13017804   | 1              |

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| Supplier | Substance | Batch                | Spectra |
|----------|-----------|----------------------|---------|
| Fagron   | Water     | 14K05-T03-016779     | 1       |
| Fagron   | Water     | 17804                | 1       |
| Fagron   | Water     | 14L03-T07-017788     | 4       |
| Fagron   | Water     | 14L03-T11-017800     | 3       |
| Fagron   | Water     | 15D14-T09-021490     | 4       |
| Fagron   | Water     | 15D14-T10-021493     | 5       |
| Fagron   | Water     | 13K13-T08-008092     | 1       |
| Fagron   | Water     | 14L03-T13-017804     | 1       |
| Fagron   | Water     | 14K06-C20-16125      | 2       |
| Fagron   | Water     | 15D14-T06-021484     | 3       |
| Fagron   | Water     | 15D13-T07-021465     | 2       |
| Fagron   | Water     | 15F04-T05-023263     | 2       |
| Fagron   | Water     | 15I10-T08-025964     | 2       |
| Fagron   | Water     | 15H25-T14-025670     | 10      |
| Fagron   | Water     | 15D14-To5-021481     | 1       |
| Fagron   | Water     | 15G09-T02-024364     | 4       |
| Fagron   | Water     | 15F24-T03-023883     | 4       |
| Fagron   | Water     | 15E18-C20-16520      | 3       |
| Fagron   | Water     | 15G09-T04-024368     | 5       |
| Fagron   | Water     | 15L15-T03-028676     | 5       |
| Fagron   | Water     | 15L15-T03-0286761042 | 1       |
| Fagron   | Water     | 15L15-T05-028681     | 5       |
| Fagron   | Water     | 15h0-T09-025968      | 1       |
| Fagron   | Water     | 16C22-T09-031414     | 7       |
| Fagron   | Water     | 16C23-T08-031427     | 5       |
| Fagron   | Water     | 15K10-T06-027620     | 3       |
| Fagron   | Water     | 16F13-T14-034274     | 6       |
| Fagron   | Water     | 15K10-T05-027617     | 1       |
| Fagron   | Water     | 16C23-C20-17151      | 3       |
| Fagron   | Water     | 16f14-t07-034326     | 2       |
| Fagron   | Water     | 16C23-C20            | 1       |
| Fagron   | Water     | 15L15T07-028685      | 1       |
| Fagron   | Water     | 16F14T05-034321      | 1       |
| Fagron   | Water     | 16K25-C20            | 1       |
| Fagron   | Water     | 16C23-T14-031432     | 8       |
| Fagron   | Water     | 16L12-T11-039624     | 7       |
| Fagron   | Water     | 16L12-T27-039646     | 11      |
| Fagron   | Water     | 16K25-C20-17409      | 4       |
| Fagron   | Water     | 16L12-T31-039661     | 6       |
| Fagron   | Water     | L0TAP0048            | 1       |
| Fagron   | Water     | Ap0048               | 1       |
| Fagron   | Water     | 16B10-T04-030213     | 1       |
| Fagron   | Water     | 17B10-T27-041575     | 2       |
| Fagron   | Water     | 17C06-T09-042290     | 1       |
| Fagron   | Water     | 15K10-T08-027626     | 1       |
| Fagron   | Water     | 15K10-T07-027623     | 1       |
| Fagron   | Water     | 16H02-T01            | 1       |
| Fagron   | Water     | 16F13T14034274       | 1       |
| Fagron   | Water     | 17B10-T18-041564     | 3       |
| Fagron   | Water     | 17E05-T03-044051     | 10      |
| Fagron   | Water     | 16B10-T05-030216     | 2       |
| Fagron   | Water     | 17c31-t05            | 1       |
| Fagron   | Water     | 16B10-T03-030210     | 1       |
| Fagron   | Water     | 16B10-T02-030207     | 1       |
| Fagron   | Water     | 17H24-T09-047709     | 7       |
| Fagron   | Water     | 701679-0003          | 2       |
| Fagron   | Water     | 17C31-T05            | 1       |
| Fagron   | Water     | B17C31-T05-043064    | 1       |
| Fagron   | Water     | 17H24-T11-047713     | 10      |
| Fagron   | Water     | 17B10-T18            | 1       |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Fagron   | Water     | 16B10T02030207    | 1       |
| Fagron   | Water     | 17F23-T06045760   | 1       |
| Fagron   | Water     | 17H-24-T09-047709 | 1       |
| Fagron   | Water     | 17L20-T02-051255  | 6       |
| Fagron   | Water     | 17H4-T13-047717   | 1       |
| Fagron   | Water     | 17K27-T09         | 1       |
| Fagron   | Water     | 17K27-T14-050581  | 17      |
| Fagron   | Water     | 17F23_T06_045760  | 1       |
| Fagron   | Water     | 17K27-T11-050522  | 1       |
| Fagron   | Water     | 18C13-T14-053737  | 7       |
| Fagron   | Water     | 17L20-T03-051259  | 2       |
| Fagron   | Water     | 18C19-T25-05399   | 3       |
| Fagron   | Water     | 16F13-T14034274   | 1       |
| Fagron   | Water     | LOTAP0083         | 2       |
| Fagron   | Water     | 17K27-T16_050588  | 1       |
| Fagron   | Water     | 17k27-t11-050552  | 1       |
| Fagron   | Water     | 18C19-T27-053999  | 13      |
| Fagron   | Water     | 18C19-T29         | 1       |
| Fagron   | Water     | 18C19-T29-054007  | 12      |
| Fagron   | Water     | 18G16-T01-058118  | 20      |
| Fagron   | Water     | 16G16-T01-058118  | 1       |
| Fagron   | Water     | 54007             | 1       |
| Fagron   | Water     | 18E09-T02-055711  | 13      |
| Fagron   | Water     | 181019-T31-054017 | 1       |
| Fagron   | Water     | 18E09-T01-055708  | 8       |
| Fagron   | Water     | 18c19-T28-054003  | 1       |
| Fagron   | Water     | 18C18-T30-054012  | 1       |
| Fagron   | Water     | 18E09-T02-055771  | 1       |
| Fagron   | Water     | 18G16-T03-058126  | 11      |
| Fagron   | Water     | 18E28-T01-056487  | 6       |
| Fagron   | Water     | 18G16-T04-058129  | 21      |
| Fagron   | Water     | 54012             | 1       |
| Fagron   | Water     | AP0093            | 1       |
| Fagron   | Water     | 19A-18-T08-063538 | 1       |
| Fagron   | Water     | 19A18-T02-063515  | 23      |
| Fagron   | Water     | 19A18-To6-063528  | 1       |
| Fagron   | Water     | 19A18-T06-063528  | 1       |
| Fagron   | Water     | 18J10-T01-0606845 | 1       |
| Fagron   | Water     | 18E09-T01_055708  | 1       |
| Fagron   | Water     | 19C29-T06-065512  | 23      |
| Fagron   | Water     | 18/24-T14-060238  | 2       |
| Fagron   | Water     | 18J10             | 1       |
| Fagron   | Water     | Fragon-T10-065562 | 1       |
| Fagron   | Water     | 18g16-t03-058126  | 2       |
| Fagron   | Water     | 18L19-T062854     | 1       |
| Fagron   | Water     | 19C29-T08-065529  | 12      |
| Fagron   | Water     | 19C29T01065497    | 1       |
| Fagron   | Water     | 19001-T01_065562  | 1       |
| Fagron   | Water     | 19H12-T14-070779  | 3       |
| Fagron   | Water     | 18g16-t05-058126  | 1       |
| Fagron   | Water     | 19D01-T11-0655565 | 1       |
| Fagron   | Water     | 19F27-T14-068914  | 6       |
| Fagron   | Water     | 19D01T11065565    | 1       |
| Fagron   | Water     | 19D01             | 1       |
| Fagron   | Water     | 9C29T010654971    | 1       |
| Fagron   | Water     | 19g18-t11-063541  | 1       |
| Fagron   | Water     | 19F27-T13-068909  | 17      |
| Fagron   | Water     | 18124-T14-060239  | 1       |
| Fagron   | Water     | 19H16-T-070943    | 1       |
| Fagron   | Water     | 19H16-T15-070937  | 10      |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Fagron   | Water     | 19/14-T07-072690  | 3       |
| Fagron   | Water     | 19f27-T11-068903  | 1       |
| Fagron   | Water     | 19J14-T07-072690  | 4       |
| Fagron   | Water     | 19J14-T09-072696  | 4       |
| Fagron   | Water     | 19J10-T09-072608  | 5       |
| Fagron   | Water     | T15-0707804       | 2       |
| Fagron   | Water     | 19A18             | 2       |
| Fagron   | Water     | 19H16-T16_070940  | 1       |
| Fagron   | Water     | 19Do1-To9-o65554  | 1       |
| Fagron   | Water     | 20000418001       | 1       |
| Fagron   | Water     | T14-0707709       | 1       |
| Fagron   | Water     | 19J14-T06-072685  | 17      |
| Fagron   | Water     | T09-0675706       | 1       |
| Fagron   | Water     | 19F27-T11-068903  | 2       |
| Fagron   | Water     | 19a18-t08-063538  | 1       |
| Fagron   | Water     | 7-07269000        | 4       |
| Fagron   | Water     | 19H14T07072690    | 1       |
| Fagron   | Water     | 19G04-T02-069129  | 2       |
| Fagron   | Water     | T09-0726007       | 1       |
| Fagron   | Water     | 19J14             | 2       |
| Fagron   | Water     | LOTAP0120         | 1       |
| Fagron   | Water     | 19J14-To6-072685  | 1       |
| Fagron   | Water     | 19h4-T07-072690   | 1       |
| Fagron   | Water     | T14-0778103       | 1       |
| Fagron   | Water     | 20C27-T03-078151  | 2       |
| Fagron   | Water     | 19714-T03-072675  | 1       |
| Fagron   | Water     | 20E13-T02-080170  | 1       |
| Fagron   | Water     | T16-0776004       | 5       |
| Fagron   | Water     | 20C17-T19-077613  | 9       |
| Fagron   | Water     | 20F16-T06-081160  | 7       |
| Fagron   | Water     | 19d01-T09-065554  | 1       |
| Fagron   | Water     | 20C17-T16-0077604 | 1       |
| Fagron   | Water     | T15-0778109       | 2       |
| Fagron   | Water     | 20g14-t02-081559  | 1       |
| Fagron   | Water     | 20F16             | 1       |
| Fagron   | Water     | 20C17-T18-077610  | 2       |
| Fagron   | Water     | 20D06-T15-078567  | 2       |
| Fagron   | Water     | 20f16t05081157    | 1       |
| Fagron   | Water     | 20F16-T05-081157  | 2       |
| Fagron   | Water     | 7-0726900         | 1       |
| Fagron   | Water     | 20E04-T03-079941  | 3       |
| Fagron   | Water     | 20E04-T05-079944  | 2       |
| Fagron   | Water     | T07-0799407       | 1       |
| Fagron   | Water     | 20f16-t05-081157  | 1       |
| Fagron   | Water     | 21C23-T06-087185  | 2       |
| Fagron   | Water     | 20J14-T03-083242  | 2       |
| Fagron   | Water     | 17j20-T03-051260  | 1       |
| Fagron   | Water     | 18I24-T14-060238  | 3       |
| Fagron   | Water     | 19ho-T09-072607   | 1       |
| Fagron   | Water     | 17H14T15047721    | 1       |
| Fagron   | Water     | 19A19-T08-063538  | 1       |
| Fagron   | Water     | 20C19-T14-077813  | 2       |
| Fagron   | Water     | 18E25-T01-056423  | 12      |
| Fagron   | Water     | 17810-T18-041564  | 2       |
| Fagron   | Water     | 16810-T02-030206  | 1       |
| Fagron   | Water     | 17L20-T02-51254   | 1       |
| Fagron   | Water     | 20f16_t06_081160  | 1       |
| Fagron   | Water     | 16H02-T01-035743  | 9       |
| Fagron   | Water     | 16F13T18034301    | 2       |
| Fagron   | Water     | 18E07-T08-055699  | 31      |

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| Supplier | Substance | Batch              | Spectra |
|----------|-----------|--------------------|---------|
| Fagron   | Water     | 19J14-T03-072675   | 5       |
| Fagron   | Water     | 16L12-T25-039642   | 11      |
| Fagron   | Water     | 17k27-t16-050588   | 1       |
| Fagron   | Water     | 19F27-T12-068906   | 12      |
| Fagron   | Water     | 19F27-T12068906    | 1       |
| Fagron   | Water     | 20000853001        | 1       |
| Fagron   | Water     | 19H16-T15-0709372x | 1       |
| Fagron   | Water     | 14L03T09017794     | 1       |
| Fagron   | Water     | 17E05-T01-044045   | 11      |
| Fagron   | Water     | 18c19-T29-054007   | 1       |
| Fagron   | Water     | 19J14-T08-0726903  | 1       |
| Fagron   | Water     | 18L19-T06-062853   | 8       |
| Fagron   | Water     | 18124-T14-060238   | 2       |
| Fagron   | Water     | 15h25-t21-025683   | 1       |
| Fagron   | Water     | 16F13-T18-034301   | 15      |
| Fagron   | Water     | 16L12T29039657     | 2       |
| Fagron   | Water     | 15L15-T01-0208672  | 1       |
| Fagron   | Water     | 16L12-t29-039657   | 1       |
| Fagron   | Water     | 17H24-Tn-047713    | 1       |
| Fagron   | Water     | 19C29-T07-065526   | 7       |
| Fagron   | Water     | 19B06-T02-062861   | 2       |
| Fagron   | Water     | 19J14-T10-072699   | 17      |
| Fagron   | Water     | T08-0726903        | 4       |
| Fagron   | Water     | T08-072693         | 1       |
| Fagron   | Water     | 247025-0002        | 1       |
| Fagron   | Water     | 19F27-T11-0689003  | 1       |
| Fagron   | Water     | T03-0775201        | 2       |
| Fagron   | Water     | 18C19-T30-054012   | 27      |
| Fagron   | Water     | 19H16-T17-070943   | 9       |
| Fagron   | Water     | 20B2B-T03-076719   | 1       |
| Fagron   | Water     | 19J14-T04-07267    | 1       |
| Fagron   | Water     | 17L20-T02-051254   | 3       |
| Fagron   | Water     | T10-0726909        | 2       |
| Fagron   | Water     | 17F23-T06-045760   | 4       |
| Fagron   | Water     | 17B13-T02-04604    | 1       |
| Fagron   | Water     | 17K27T14-050581    | 1       |
| Fagron   | Water     | 18C19T31054017     | 2       |
| Fagron   | Water     | 19A18-T11-063541   | 15      |
| Fagron   | Water     | 16L12-T-31-039661  | 1       |
| Fagron   | Water     | 16C23-T08-31427    | 1       |
| Fagron   | Water     | 16F13-T16-034279   | 1       |
| Fagron   | Water     | 16L-T11-039624     | 1       |
| Fagron   | Water     | 17H24-T09-04773    | 1       |
| Fagron   | Water     | 2918E-03019        | 1       |
| Fagron   | Water     | 18J10-T01-060845   | 29      |
| Fagron   | Water     | 19A18-T01-063489   | 22      |
| Fagron   | Water     | 16B10-T02-030206   | 4       |
| Fagron   | Water     | 16F14T05034321     | 1       |
| Fagron   | Water     | 17B13-T02-041604   | 16      |
| Fagron   | Water     | 19G01-T02069130    | 1       |
| Fagron   | Water     | B19G04-T02-069129  | 2       |
| Fagron   | Water     | B19G04             | 1       |
| Fagron   | Water     | 20I03-T04-082478   | 2       |
| Fagron   | Water     | 17K27-T13-050552   | 1       |
| Fagron   | Water     | 19A18T-08-063538   | 1       |
| Fagron   | Water     | 20G14-T02-081559   | 3       |
| Fagron   | Water     | 15F24T03-023883    | 1       |
| Fagron   | Water     | 15L14-T14-028664   | 7       |
| Fagron   | Water     | 15L15-T07-028685   | 8       |
| Fagron   | Water     | 18G16-T03-0588126  | 1       |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Fagron   | Water     | 18E679-0002       | 1       |
| Fagron   | Water     | T14-0709304       | 2       |
| Fagron   | Water     | 9-07269006        | 1       |
| Fagron   | Water     | T09-0726906       | 1       |
| Fagron   | Water     | 6081160           | 1       |
| Fagron   | Water     | T06-0655102       | 1       |
| Fagron   | Water     | 19C29-01-065497   | 1       |
| Fagron   | Water     | 19A18-T07-063531  | 16      |
| Fagron   | Water     | 17K27T15050585    | 4       |
| Fagron   | Water     | 16L12-T29-039657  | 5       |
| Fagron   | Water     | 219167            | 1       |
| Fagron   | Water     | 19C29-T01-065497  | 22      |
| Fagron   | Water     | 17K27-T14-05081   | 1       |
| Fagron   | Water     | 17K01-T02-049669  | 1       |
| Fagron   | Water     | 18G16T04058129    | 1       |
| Fagron   | Water     | 19D01-T12-065568  | 10      |
| Fagron   | Water     | 20B28-T03-076719  | 11      |
| Fagron   | Water     | 20D06-T14-078564  | 6       |
| Fagron   | Water     | 20D14-T25-078895  | 1       |
| Fagron   | Water     | 20E04-T07-079947  | 4       |
| Fagron   | Water     | 14L03-T09-017794  | 2       |
| Fagron   | Water     | 15D14-T13-021499  | 2       |
| Fagron   | Water     | 1509-T02-024364   | 1       |
| Fagron   | Water     | 15H25-T16-025674  | 4       |
| Fagron   | Water     | 15H25-T18-025678  | 4       |
| Fagron   | Water     | 16C23-T06-31423   | 1       |
| Fagron   | Water     | 16L1-T27-039646   | 1       |
| Fagron   | Water     | 18C19-T25-053991  | 16      |
| Fagron   | Water     | 18g16-t01-058118  | 1       |
| Fagron   | Water     | 19D01-T10-065562  | 20      |
| Fagron   | Water     | 19D01-T09-065554  | 6       |
| Fagron   | Water     | T13-0689009       | 1       |
| Fagron   | Water     | 20E04-T02-079938  | 6       |
| Fagron   | Water     | T05-0811507       | 2       |
| Fagron   | Water     | 16F14-T09-034330  | 11      |
| Fagron   | Water     | 18C19-T31-056017  | 1       |
| Fagron   | Water     | T02-0655000       | 2       |
| Fagron   | Water     | 15D14-T05         | 2       |
| Fagron   | Water     | 18C19-T6-053995   | 1       |
| Fagron   | Water     | 19C29-T02         | 1       |
| Fagron   | Water     | T02-0628601       | 2       |
| Fagron   | Water     | T09-072608        | 1       |
| Fagron   | Water     | 17H24-T13-047717  | 16      |
| Fagron   | Water     | 12243501          | 1       |
| Fagron   | Water     | 1929-T01-065497   | 1       |
| Fagron   | Water     | 15F-24-023883     | 1       |
| Fagron   | Water     | 14L03-T113-017804 | 1       |
| Fagron   | Water     | 15D14-T05-021481  | 3       |
| Fagron   | Water     | 15D14-T114-021502 | 1       |
| Fagron   | Water     | 16C23-T-16-031436 | 1       |
| Fagron   | Water     | 17B10-T20-041571  | 10      |
| Fagron   | Water     | 17B10T20041571    | 1       |
| Fagron   | Water     | 16f14-t09-034330  | 1       |
| Fagron   | Water     | 17H24-T15-047721  | 8       |
| Fagron   | Water     | 17K27-T16-050588  | 14      |
| Fagron   | Water     | 18C19-T28-054003  | 20      |
| Fagron   | Water     | 18G16-T02-028123  | 1       |
| Fagron   | Water     | 19A18-T01-063531  | 1       |
| Fagron   | Water     | 19C29-T07-065526  | 1       |
| Fagron   | Water     | T12-0689006       | 1       |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Fagron   | Water     | 20C17-T17-077607  | 7       |
| Fagron   | Water     | 20C17-T16-077604  | 5       |
| Fagron   | Water     | 19J14-T06-0726805 | 1       |
| Fagron   | Water     | 20E25-T08-080560  | 3       |
| Fagron   | Water     | 19F27-T10-068900  | 13      |
| Fagron   | Water     | 17K27-T11-050552  | 11      |
| Fagron   | Water     | 18G16-T05-058132  | 18      |
| Fagron   | Water     | 19J10-T06-072607  | 1       |
| Fagron   | Water     | 20d08-t06-078666  | 1       |
| Fagron   | Water     | 16F23-T06-045760  | 1       |
| Fagron   | Water     | 19j14-t07-072690  | 1       |
| Fagron   | Water     | 19c29-t02-065500  | 1       |
| Fagron   | Water     | 19A18-T06         | 1       |
| Fagron   | Water     | 20D08-T06-078666  | 1       |
| Fagron   | Water     | 19j14t07072690    | 1       |
| Fagron   | Water     | 19A18-T07         | 1       |
| Fagron   | Water     | 19D01-T08-065551  | 19      |
| Fagron   | Water     | 15L15-T01-028672  | 7       |
| Fagron   | Water     | 16F13-T16-034297  | 5       |
| Fagron   | Water     | 16F14-T03-034317  | 7       |
| Fagron   | Water     | 17K27-T13-050577  | 12      |
| Fagron   | Water     | 18C19-T26-053995  | 22      |
| Fagron   | Water     | 18C19-T31-054017  | 10      |
| Fagron   | Water     | 20F16T05081157    | 1       |
| Fagron   | Water     | T1607094000       | 1       |
| Fagron   | Water     | 15D13-T09-021469  | 6       |
| Fagron   | Water     | 15D14-T14-021502  | 6       |
| Fagron   | Water     | 15H25-T21-025683  | 5       |
| Fagron   | Water     | 16C23-T06-031423  | 9       |
| Fagron   | Water     | 17E05-T11-044076  | 11      |
| Fagron   | Water     | 17K01-T01-048440  | 7       |
| Fagron   | Water     | 18G16T02058123    | 1       |
| Fagron   | Water     | 19A18-T06-063528  | 26      |
| Fagron   | Water     | 18C19T31054017I   | 1       |
| Fagron   | Water     | 19D01-T11-065565  | 11      |
| Fagron   | Water     | 19H16-T16-070940  | 5       |
| Fagron   | Water     | T11-0689003       | 1       |
| Fagron   | Water     | 15070784          | 1       |
| Fagron   | Water     | 17K27-T15-050585  | 25      |
| Fagron   | Water     | 19C29-T02_065500  | 1       |
| Fagron   | Water     | 19J14-T08-072693  | 18      |
| Fagron   | Water     | 19F-27-T11-068903 | 1       |
| Fagron   | Water     | 14J16-T24-016261  | 1       |
| Fagron   | Water     | 15F24-T01-023879  | 10      |
| Fagron   | Water     | 15F04-T03-023259  | 2       |
| Fagron   | Water     | 15F04-T03-023529  | 1       |
| Fagron   | Water     | 15k10-t04-027614  | 1       |
| Fagron   | Water     | 16F13-T11-034264  | 11      |
| Fagron   | Water     | 16F13-TN-034264   | 1       |
| Fagron   | Water     | 16L12T16039628    | 1       |
| Fagron   | Water     | 16L12-T16-039628  | 7       |
| Fagron   | Water     | 16B10-T05-03026   | 1       |
| Fagron   | Water     | 16L12/T16/039628  | 1       |
| Fagron   | Water     | 16K25C20-17409    | 1       |
| Fagron   | Water     | 17114801          | 1       |
| Fagron   | Water     | 17E05-T05-044063  | 11      |
| Fagron   | Water     | 17C31-T05-043064  | 10      |
| Fagron   | Water     | 17K27-T09-050544  | 19      |
| Fagron   | Water     | 17K27-T11-05052   | 1       |
| Fagron   | Water     | 18E28-T01-056486  | 4       |

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| Supplier | Substance | Batch             | Spectra |
|----------|-----------|-------------------|---------|
| Fagron   | Water     | 19A18T02063518    | 1       |
| Fagron   | Water     | 19C29-T05-065509  | 18      |
| Fagron   | Water     | 18L19-T06-062854  | 2       |
| Fagron   | Water     | 18L19-T07-062857  | 10      |
| Fagron   | Water     | 19E20-T09-067576  | 3       |
| Fagron   | Water     | 19H12T14070779    | 1       |
| Fagron   | Water     | 19E20-T09-067577  | 2       |
| Fagron   | Water     | 19B06-T02-0621861 | 1       |
| Fagron   | Water     | 19J14-T12-072715  | 4       |
| Fagron   | Water     | 12-06556008       | 3       |
| Fagron   | Water     | 20C27-T04-078154  | 4       |
| Fagron   | Water     | 19J10-T09072607   | 1       |
| Fagron   | Water     | 20C17-T03-077521  | 5       |
| Fagron   | Water     | 20C19-T13-077809  | 7       |
| Fagron   | Water     | 19J14-T04-072678  | 8       |
| Fagron   | Water     | 20E13-T03-080173  | 2       |
| Fagron   | Water     | 20C19-T15077819   | 1       |
| Fagron   | Water     | 20D08-T06-078666  | 2       |
| Fagron   | Water     | 15068702          | 1       |
| Fagron   | Water     | 15D13T07021465    | 1       |
| Fagron   | Water     | 15L14T12028660    | 1       |
| Fagron   | Water     | 15L-15T07028685   | 1       |
| Fagron   | Water     | T14-031432        | 1       |
| Fagron   | Water     | 16C22-T07-031410  | 2       |
| Fagron   | Water     | 41608             | 1       |
| Fagron   | Water     | 44080             | 1       |
| Fagron   | Water     | 17H24T13047717    | 1       |
| Fagron   | Water     | 18109301          | 1       |
| Fagron   | Water     | 18C13-T15-053741  | 1       |
| Fagron   | Water     | 18L19-T062853     | 1       |
| Fagron   | Water     | 19H12-T16-070787  | 11      |
| Fagron   | Water     | 19H12-T15-070784  | 5       |
| Fagron   | Water     | 19H16-T14-0709304 | 1       |
| Fagron   | Water     | 20C7-T03-078151   | 1       |
| Fagron   | Water     | T06-0811600       | 1       |
| Fagron   | Water     | 20C27-T03-0078151 | 1       |
| Fagron   | Water     | 16F14-t03-034317  | 1       |
| Fagron   | Water     | 14F02-T03-012891  | 1       |
| Fagron   | Water     | 16C23-T16-031436  | 3       |
| Fagron   | Water     | 15L15-T07         | 1       |
| Fagron   | Water     | 17F23-T07-045766  | 1       |
| Fagron   | Water     | 17E05-T13         | 1       |
| Fagron   | Water     | 18C13-T14-053736  | 4       |
| Fagron   | Water     | 18C13T15-053741   | 1       |
| Fagron   | Water     | 17L20-T03-051260  | 1       |
| Fagron   | Water     | 18E28-T02-056491  | 1       |
| Fagron   | Water     | 18E28-T-02-056491 | 1       |
| Fagron   | Water     | 18I24-T15-060244  | 1       |
| Fagron   | Water     | 19B06-T01-062865  | 1       |
| Fagron   | Water     | 18I24-T14-060239  | 5       |
| Fagron   | Water     | 19A18-T11         | 2       |
| Fagron   | Water     | 18L19T06062854    | 2       |
| Fagron   | Water     | 18A16-T18-063538  | 1       |
| Fagron   | Water     | 19A18T08063538    | 1       |
| Fagron   | Water     | 19D08-T09-065554  | 1       |
| Fagron   | Water     | 18L19-T0-062854   | 1       |
| Fagron   | Water     | 19G04-T02-069130  | 3       |
| Fagron   | Water     | 19H16-T14-070934  | 6       |
| Fagron   | Water     | T16-0707807       | 1       |
| Fagron   | Water     | 19J10-T07-072613  | 2       |

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| Supplier            | Substance | Batch              | Spectra |
|---------------------|-----------|--------------------|---------|
| Fagron              | Water     | 19H16-T15-o7o937   | 1       |
| Fagron              | Water     | 20B28-T03-0767109  | 1       |
| Fagron              | Water     | 19h4-T10-072699    | 1       |
| Fagron              | Water     | T03-0767109        | 1       |
| Fagron              | Water     | T03-0799401        | 2       |
| Fagron              | Water     | 2x19H16-T15-070937 | 1       |
| Fagron              | Water     | 15L14-T12-028660   | 4       |
| Fagron              | Water     | 19F-27-T14-068914  | 1       |
| Fagron              | Water     | 15K10-T04-027614   | 10      |
| Fagron              | Water     | 16F14-T05-034321   | 7       |
| Fagron              | Water     | 17E05-T07-044067   | 13      |
| Fagron              | Water     | 17h24-709-047709   | 1       |
| Fagron              | Water     | 17K27-T09-o5o44    | 1       |
| Fagron              | Water     | 19a18-T01-063489   | 1       |
| Fagron              | Water     | 19C29-T02-065500   | 10      |
| Fagron              | Water     | 19H-12-T14-070779  | 1       |
| Fagron              | Water     | 19J10-T09-072607   | 11      |
| Fagron              | Water     | T03-0726705        | 1       |
| Fagron              | Water     | T17-0776007        | 5       |
| Fagron              | Water     | 20C27T04078154     | 2       |
| Fagron              | Water     | 19J14-T03-0726705  | 1       |
| Fagron              | Water     | 20F16T06081160     | 1       |
| Fagron              | Water     | 20J14-T05-083248   | 1       |
| Fagron              | Water     | 19j10-t09-072608   | 1       |
| Fagron              | Water     | T13-0778009        | 2       |
| Fagron              | Water     | T03-0801703        | 4       |
| Fagron              | Water     | T02-0815509        | 1       |
| Fagron              | Water     | 20C19-T15-077819   | 4       |
| Fagron              | Water     | 19J14-T12          | 1       |
| Fagron              | Water     | 70319-W            | 1       |
| Fagron              | Water     | 19D01-AT09-065554  | 1       |
| Fagron              | Water     | 18G6T05058132      | 1       |
| Fagron              | Water     | 19C29T06065512     | 1       |
| fargon              | Water     | 19c29t07065526     | 1       |
| Fargon              | Water     | 303429             | 1       |
| Fargon              | Water     | 16L12T11039624     | 1       |
| Fargon              | Water     | 17e05-t07-044067   | 1       |
| Fargon              | Water     | 16l12-t31-039661   | 1       |
| Fargon              | Water     | 17K27-T13-050577   | 1       |
| Fargon / Gehe       | Water     | 15D14-T13-021499   | 1       |
| Fargon / Gehe       | Water     | 17B10-T27-041575   | 1       |
| Fargon GmbH & Co.KG | Water     | 16F13-T16-034297   | 1       |
| Fargon GmbH & Co.KG | Water     | 15K10-To4-027614   | 1       |
| Fargon GmbH & Co.KG | Water     | 15K10-T07-027623   | 2       |
| Fargon GmbH & Co.KG | Water     | 16F14-T07-034326   | 1       |
| Fargon GmbH & Co.KG | Water     | 17B10-T20-041571   | 1       |
| Fargon GmbH & Co.KG | Water     | 16B10-T04-030213   | 3       |
| Fargon GmbH & Co.KG | Water     | 17E05-T03-044051   | 1       |
| Fargon/Kehr         | Water     | 15F04-T05-023263   | 1       |
| Fargon/Kehr         | Water     | 17B10-T20-041571   | 1       |
| Fargon/Kehr         | Water     | 17H24-T09-047709   | 1       |
| Fargon/Kehr         | Water     | 17L20-T02-051255   | 4       |
| Fargon/Noweda       | Water     | 15L15-T028676      | 1       |
| Fargon/Phoenix      | Water     | 18E28-T01-056486   | 1       |
| Fargon/Phoenix      | Water     | 18/24-T14-060239   | 1       |
| Fargon/Sanacorp     | Water     | 17K27-T14-050581   | 1       |
| Fargon/Sanacorp     | Water     | 18G16-T03-058126   | 2       |
| Fargron / Phönix    | Water     | 19H16-T15-070937   | 1       |
| Fargron/ Sanacorp   | Water     | 19d01t10065562     | 1       |
| Fiebig              | Water     | 16C22-T09-031414   | 1       |

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| Supplier               | Substance | Batch             | Spectra |
|------------------------|-----------|-------------------|---------|
| Fiebig                 | Water     | 17e05_t01_044045  | 1       |
| Fiebig                 | Water     | 18228801          | 1       |
| Fiebig                 | Water     | 18G16-T03-058126  | 1       |
| Fiebig                 | Water     | 19077501          | 1       |
| Fiebig                 | Water     | 18265001          | 1       |
| Caelo                  | Water     | 16F14-T05o34321   | 1       |
| Caelo                  | Water     | 16L12-T27-039646  | 2       |
| Fiebig/Fagromn         | Water     | 17H24-T09-047709  | 2       |
| Fiebig/Farago          | Water     | 17B10-T27-041575  | 1       |
| Fiebig/Farago          | Water     | 19A18-T08-063538  | 1       |
| Fagron                 | Water     | 17e05_t05_044063  | 1       |
| Fragon/Gehe            | Water     | 19A19-T06-063528  | 1       |
| Fragon/Phoenix         | Water     | 15L14-T12-028660  | 1       |
| Fragon/Phoenix         | Water     | 15L4-T14-028664   | 1       |
| Fragon/Phoenix         | Water     | 17K27-T16-050588  | 1       |
| Fragron                | Water     | 15L15-T01-028672  | 1       |
| Fragron /Gehe          | Water     | 18C19-T27-053999  | 1       |
| Fragron /Gehe          | Water     | 18C19-T29-054007  | 1       |
| Fragron /Gehe          | Water     | 19A18-T07-063531  | 1       |
| Fragron /Gehe          | Water     | 19A18-T01-063489  | 1       |
| Fragron /Gehe          | Water     | 19A18-T02-063515  | 1       |
| Fragron/Noweda         | Water     | 17H24-T11-047713  | 1       |
| Fresenius              | Water     | 14KB1003          | 1       |
| Fresenius              | Water     | 13NLP021          | 1       |
| Fresenius Kabi/Phoenix | Water     | 145I21            | 1       |
| Fresenius Kabi/Phoenix | Water     | 14LE20            | 3       |
| Fresenius Kabi/Phönix  | Water     | 14IL38            | 2       |
| Fresenius Kabi/Phönix  | Water     | 14KI21            | 4       |
| Gehe                   | Water     | 17H24-T15-047721  | 1       |
| Gehe                   | Water     | 17319901          | 2       |
| Gehe                   | Water     | 17H24-T11-047713  | 1       |
| Gehe                   | Water     | 17H24-T13-047717  | 1       |
| Gehe                   | Water     | 19A18-T06-063528  | 1       |
| Gehe                   | Water     | LOTAP0098         | 1       |
| Gehe                   | Water     | 18299501          | 1       |
| Gehe                   | Water     | 19A18-T07-063531  | 1       |
| Gehe                   | Water     | LOTAP0107         | 1       |
| Gehe                   | Water     | 19G04-T02-069129  | 1       |
| Gehe                   | Water     | AP-SP0009         | 1       |
| Gehe                   | Water     | 20C17-T16-077604  | 1       |
| Gehe                   | Water     | 20E25-T08-0805600 | 1       |
| Gehe                   | Water     | T06-0786606       | 2       |
| GEHE                   | Water     | 17B10-T27-041575  | 2       |
| GEHE                   | Water     | 17H24-T13-047717  | 1       |
| GEHE                   | Water     | 17H27-T10-050547  | 1       |
| GEHE                   | Water     | 17K27-T15         | 1       |
| GEHE                   | Water     | 18E08-T01         | 1       |
| GEHE                   | Water     | 18E09-T02-055711  | 1       |
| GEHE                   | Water     | 18G16-T02         | 2       |
| GEHE                   | Water     | 19A18-T07         | 1       |
| GEHE                   | Water     | 19A18-T06         | 1       |
| GEHE                   | Water     | 19D01-T12-065568  | 1       |
| GEHE                   | Water     | 19C29-T02-065500  | 2       |
| GEHE                   | Water     | 19C29-T08-065529  | 2       |
| Fagron                 | Water     | 18G16-T02-058123  | 14      |
| GEHE/ Braun            | Water     | 8292Z96           | 1       |
| Fagron                 | Water     | 17K27-T15050585   | 1       |
| Fagron                 | Water     | T19-0776103       | 5       |
| Gehe/10.09.19          | Water     | 19629-T02-065500  | 1       |
| Caelo                  | Water     | 15406801          | 2       |

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| Supplier            | Substance | Batch                | Spectra |
|---------------------|-----------|----------------------|---------|
| Caelo               | Water     | 16L12T16039628       | 1       |
| Caelo               | Water     | 2x17114701           | 1       |
| Caelo               | Water     | LOTAP0075            | 1       |
| Caelo               | Water     | 19263601             | 6       |
| Caelo               | Water     | 200038/79001         | 1       |
| Fagron              | Water     | 17E05-T13-044080     | 16      |
| Fagron              | Water     | 17K27-T09-050544/107 | 1       |
| Fagron              | Water     | 17K7-T15-050585      | 1       |
| Fagron              | Water     | 19c29to8o65529       | 1       |
| Fagron              | Water     | 19J14-T06            | 1       |
| Fagron              | Water     | 19H20-B06-194493     | 1       |
| Fagron              | Water     | 20do6-t15-078567     | 1       |
| Gehe/Wepa           | Water     | LOTAP0076            | 1       |
| Gehe/Wepa           | Water     | LOTAP0093            | 1       |
| Gehe/Wepa           | Water     | LOTAP0100            | 1       |
| Gehe/Wepa           | Water     | LOTAP0102            | 1       |
| Gehe/Wepa           | Water     | LOTAP0111            | 1       |
| Geibo/ Fargron      | Water     | 19A18-T02-063515     | 1       |
| Geibo/ Fargron      | Water     | 19d01-t11-065565     | 1       |
| Geilenkirchen       | Water     | 17K27-T15-050851     | 1       |
| hedinger            | Water     | 219135               | 1       |
| Hedinger            | Water     | 219116               | 1       |
| Hedinger            | Water     | 219133               | 1       |
| Hedinger            | Water     | 219132               | 1       |
| Hedinger            | Water     | 219140               | 1       |
| Hedinger            | Water     | 219143               | 2       |
| Hedinger            | Water     | 219147               | 1       |
| Hedinger            | Water     | 219147 (2x)          | 1       |
| Hedinger            | Water     | 219164               | 1       |
| Hedinger            | Water     | 219156               | 8       |
| Hedinger            | Water     | 219167               | 2       |
| Hedinger            | Water     | 219169               | 1       |
| Hedinger            | Water     | 219162               | 4       |
| Hedinger            | Water     | 219173               | 1       |
| Hedinger            | Water     | 219184               | 1       |
| Hedinger            | Water     | 219181               | 1       |
| Hedinger            | Water     | 219208               | 7       |
| Hedinger            | Water     | 219209               | 1       |
| Hedinger            | Water     | 219229               | 6       |
| Hedinger            | Water     | 219231               | 2       |
| HEDINGER            | Water     | 219172               | 4       |
| HEDINGER            | Water     | 219179               | 6       |
| HEDINGER            | Water     | 219183               | 2       |
| HEDINGER            | Water     | 219192               | 3       |
| HEDINGER            | Water     | 219185               | 5       |
| HEDINGER            | Water     | 219198               | 8       |
| HEDINGER            | Water     | 219202               | 3       |
| HEDINGER            | Water     | 219201               | 2       |
| HEDINGER            | Water     | 219206               | 4       |
| HEDINGER            | Water     | 219218               | 11      |
| Hedinger / AHD      | Water     | 219196               | 2       |
| Hedinger / GEHE     | Water     | 219129               | 1       |
| Hedinger / Sanacorp | Water     | 219183               | 1       |
| Hedinger / Sanacorp | Water     | 219198               | 3       |
| Hedinger / Sanacorp | Water     | 219206               | 1       |
| Hedinger / Sanacorp | Water     | 219208               | 2       |
| Hedinger / Sanacorp | Water     | 219218               | 2       |
| Hedinger Phoenix    | Water     | 219212               | 1       |
| Hedinger/ Noweda    | Water     | 219229               | 1       |
| Hedinger/ Noweda    | Water     | 219232               | 1       |

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| Supplier                   | Substance | Batch             | Spectra |
|----------------------------|-----------|-------------------|---------|
| Hedinger/ Noweda           | Water     | 219231            | 2       |
| Hedinger/ Noweda           | Water     | 219218            | 1       |
| Hedinger/ Sanacorp         | Water     | AP0022            | 1       |
| Hedinger/Alliance Healt... | Water     | 219231            | 1       |
| Hedinger/Fiebig            | Water     | 219140            | 1       |
| Hedinger/Fiebig            | Water     | 219208            | 1       |
| Hedinger/Fiebig            | Water     | 219229            | 1       |
| Hedinger/Gehe              | Water     | 219181            | 1       |
| Hedinger/Gehe              | Water     | 219220            | 1       |
| Hedinger/Kehr              | Water     | 219226            | 1       |
| Hedinger/Noweda            | Water     | 219177            | 1       |
| Klenk                      | Water     | 17F23-T06-045760  | 2       |
| Henry Lamotte              | Water     | 15L14-T12-028660  | 1       |
| Henry Lamotte Oils GmbH... | Water     | 17K27-T09-050544  | 1       |
| Jenne                      | Water     | 17E05-T11-044076  | 1       |
| Jenne                      | Water     | 17H24-T09-047709  | 2       |
| Jenne                      | Water     | 18G16-T03-058126  | 1       |
| Jenne                      | Water     | 19C29-T02-065500  | 2       |
| Jenne                      | Water     | T17-0776007       | 2       |
| Jenne                      | Water     | 20C17-T17-0776007 | 1       |
| Jenne                      | Water     | 19J14-T08-0726903 | 2       |
| Jenne                      | Water     | T08-0805600       | 1       |
| Jenne                      | Water     | T15-0785607       | 1       |
| Jenne                      | Water     | T03-0775201       | 1       |
| Jenne                      | Water     | 20C17-T03-0775201 | 1       |
| Jenne                      | Water     | 19J4-T08-0726903  | 1       |
| Jenne                      | Water     | T17-0785703       | 1       |
| JENNE                      | Water     | 17K27-T15-050585  | 1       |
| Fagron                     | Water     | T16-0709400       | 5       |
| Fagron                     | Water     | T08-0655209       | 1       |
| Fagron                     | Water     | T06-0786606       | 1       |
| Kehr                       | Water     | 17114801          | 1       |
| Kehr                       | Water     | 17114501          | 1       |
| Kehr                       | Water     | 20000853001       | 1       |
| Kehr                       | Water     | 20001293001       | 1       |
| Kehr.10.02.2020            | Water     | 19D01-T12-065568  | 2       |
| Caelo                      | Water     | 17002101          | 5       |
| Caelo                      | Water     | 17145002          | 2       |
| Caelo                      | Water     | 18156201          | 18      |
| Fagron                     | Water     | 18E07T08055699    | 2       |
| Fagron                     | Water     | 18G16-To1-058118  | 1       |
| Kerndl                     | Water     | 8412              | 1       |
| Kerndl                     | Water     | 32517             | 1       |
| Klenk                      | Water     | 15D14-T-021499    | 1       |
| Klenk                      | Water     | 17173001          | 2       |
| Caelo                      | Water     | 16F14-T09-034330  | 1       |
| Caelo                      | Water     | 17810-T27-041575  | 1       |
| L12                        | Water     | 16L12-T16-039628  | 1       |
| L12                        | Water     | 17E05-T11-044076  | 1       |
| L12                        | Water     | 17K27-T13-050577  | 1       |
| L12                        | Water     | 18C13-T14-053737  | 1       |
| Fagron                     | Water     | 16F13T11034264    | 2       |
| Fagron                     | Water     | 16F13-T11-0342564 | 1       |
| Lamotte                    | Water     | 219219            | 1       |
| Lamotte/Alliance           | Water     | 17211201          | 1       |
| Midas                      | Water     | 16C22_T07-031410  | 1       |
| Midas                      | Water     | 17E05-T07-044067  | 1       |
| Midas                      | Water     | 17K27-T11-050552  | 2       |
| Midas                      | Water     | 18062101          | 2       |
| Midas                      | Water     | 17L20-T02-051255  | 1       |

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| Supplier          | Substance | Batch             | Spectra |
|-------------------|-----------|-------------------|---------|
| Midas             | Water     | 17K01-T01-048440  | 1       |
| Midas             | Water     | 18C19-T31-054017  | 2       |
| Midas             | Water     | 18226801          | 1       |
| Midas             | Water     | 18E28-T01-056487  | 1       |
| Midas             | Water     | 18265001          | 2       |
| Midas             | Water     | 18263401          | 2       |
| Midas             | Water     | 18E09-T01-055708  | 1       |
| Midas             | Water     | 18G16-T04-058129  | 1       |
| Fagron            | Water     | 15L15-T07-028685  | 1       |
| Fagron            | Water     | 16C23-T4-031432   | 1       |
| Fagron            | Water     | 16C23_t14-031432  | 1       |
| Noweda            | Water     | 15F04-T03-023259  | 1       |
| Noweda            | Water     | 15K10-T05-027617  | 1       |
| Noweda            | Water     | 17K27-T15-050585  | 2       |
| Noweda            | Water     | 18C19-T27-053999  | 1       |
| Noweda            | Water     | 18G16-T04-058129  | 2       |
| Noweda            | Water     | 18238601          | 1       |
| Noweda            | Water     | 19005501          | 2       |
| Noweda            | Water     | 19A18-T07-063531  | 1       |
| Noweda            | Water     | 19162701          | 1       |
| Noweda            | Water     | 19C29-T02-065500  | 1       |
| Noweda            | Water     | 18265001          | 1       |
| Noweda            | Water     | 19C29-T06-065512  | 1       |
| Noweda            | Water     | 17145001          | 1       |
| Noweda            | Water     | 19077701          | 1       |
| Noweda            | Water     | 19199101          | 2       |
| Noweda            | Water     | 19C29-T08-065529  | 2       |
| Noweda            | Water     | 19263601          | 1       |
| Noweda            | Water     | 19C29-T05-065509  | 1       |
| Noweda            | Water     | 219222            | 5       |
| Noweda            | Water     | 19f27t12-068G06   | 1       |
| Noweda            | Water     | 19H16-T17-070943  | 2       |
| Noweda            | Water     | 20000526002       | 1       |
| Noweda            | Water     | 19J14-T07-072690  | 1       |
| Noweda            | Water     | 19J10-T09-0726008 | 1       |
| Noweda            | Water     | LOTAP0126         | 1       |
| Noweda            | Water     | LOTAP0131         | 1       |
| Noweda            | Water     | 19J14-T03-072675  | 1       |
| Noweda            | Water     | 20E13-T02-080170  | 1       |
| Noweda            | Water     | 20E03-T05-0799304 | 1       |
| Noweda            | Water     | LOTAP0136         | 1       |
| Noweda            | Water     | T18-0776100       | 1       |
| Noweda            | Water     | 20002910001       | 1       |
| Caelo             | Water     | 15068701          | 2       |
| Caelo             | Water     | 16307501          | 3       |
| Fagron            | Water     | 20D08T06078666    | 1       |
| Fagron            | Water     | 17Eo5-To1-o44o45  | 1       |
| Noweda 02.08.2019 | Water     | 18228701          | 1       |
| Noweda 17.07.2019 | Water     | 19A18-T07-063531  | 2       |
| Caelo             | Water     | 16B10T04030213    | 1       |
| Fagron            | Water     | 18c13T15053743    | 1       |
| Caelo             | Water     | 16002601          | 1       |
| Caelo             | Water     | 17035201          | 2       |
| Caelo             | Water     | 16B10-T05-030216  | 2       |
| Caelo             | Water     | 19077501          | 4       |
| Caelo             | Water     | 19207401          | 7       |
| Caelo             | Water     | 19C29-T06-065512  | 1       |
| Caelo             | Water     | 20004029001       | 1       |
| Caelo             | Water     | 21000522001       | 1       |
| Fagron            | Water     | 18C13-T14-053757  | 1       |

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| Supplier                   | Substance | Batch             | Spectra |
|----------------------------|-----------|-------------------|---------|
| Fagron                     | Water     | 18C13-T16-053745  | 1       |
| Fagron                     | Water     | 19A18-T01063489   | 1       |
| Fagron                     | Water     | 19A18-T07-06351   | 1       |
| Fagron                     | Water     | 19-j14-T12-072715 | 1       |
| Noweda/Fragron             | Water     | 19C29-T07-065526  | 1       |
| Noweda/Fragron             | Water     | 19H16-T14-070934  | 1       |
| Noweda/Hedinger            | Water     | 219224            | 1       |
| Noweda/Hedinger            | Water     | T06-0726805       | 1       |
| Noweda/HEDINGER            | Water     | 219200            | 1       |
| Noweda/Wepa                | Water     | L0TAP0053         | 1       |
| Pala                       | Water     | 19077501          | 1       |
| Pala                       | Water     | 19005602          | 1       |
| Phoenix                    | Water     | 15L14-T14         | 1       |
| Phoenix                    | Water     | 15L15-T07         | 1       |
| Phoenix                    | Water     | 18042901          | 1       |
| Phoenix                    | Water     | L0TAP0095         | 1       |
| Phoenix                    | Water     | 19G04-T02-069129  | 2       |
| Phoenix WE28.04.17 -7,9... | Water     | 16H02-T01-035743  | 1       |
| Fagron                     | Water     | 19H16-F15         | 1       |
| Caelo                      | Water     | 19097901          | 16      |
| phönix                     | Water     | 18G16T03058126    | 1       |
| phönix                     | Water     | 18E09T01055708    | 1       |
| Phönix                     | Water     | 16127901          | 1       |
| Phönix                     | Water     | 17233001          | 2       |
| Phönix                     | Water     | 18019501          | 4       |
| Phönix                     | Water     | 17E05-T13-044080  | 2       |
| Phönix                     | Water     | 18C19-T25-053991  | 1       |
| Phönix                     | Water     | 18109501          | 1       |
| Phönix                     | Water     | 17K27-T16-050588  | 1       |
| Phönix                     | Water     | 18J10-T01-060845  | 2       |
| Phönix                     | Water     | 18E09-T01-055708  | 1       |
| Phönix                     | Water     | 19A18-T11-06354   | 1       |
| Phönix                     | Water     | 19C29-T06-065512  | 1       |
| Phönix                     | Water     | 19D01-T10-065562  | 1       |
| Phönix                     | Water     | L0TAP-SP0005      | 1       |
| Phönix                     | Water     | 219222            | 3       |
| Phönix                     | Water     | 20B28-T03-076719  | 1       |
| Phönix                     | Water     | T03-0767109       | 1       |
| Phönix                     | Water     | 20C17-T17-077607  | 1       |
| PHÖNIX                     | Water     | 17E05-T07-044067  | 2       |
| PHÖNIX                     | Water     | 17E05-T07         | 2       |
| PHÖNIX                     | Water     | 17H24-T13         | 1       |
| Phönix WE:08.12.17 E...    | Water     | 17C31-T05-043064  | 2       |
| Caelo                      | Water     | 17145001          | 14      |
| Fagron                     | Water     | 191029-T06-065512 | 1       |
| Fagron                     | Water     | 19H12-T15         | 2       |
| Caelo                      | Water     | 15F24-T03-023883  | 2       |
| Caelo                      | Water     | 17H24T11047713    | 1       |
| Fagron                     | Water     | 18G16T05058132    | 1       |
| Phönix Gotha               | Water     | 15019101          | 3       |
| Phönix Gotha               | Water     | 15142501          | 1       |
| Phönix Gotha               | Water     | 14K05-T02-016775  | 2       |
| Phönix Gotha               | Water     | 15253901          | 1       |
| Phönix Gotha               | Water     | 15235201          | 2       |
| Phönix Gotha               | Water     | 19133401          | 2       |
| Phönix Gotha               | Water     | 18L19-T06-062854  | 1       |
| Phönix Gotha               | Water     | 19198401          | 1       |
| Phönix Gotha               | Water     | 19H16-T14-070934  | 3       |
| Phönix, Caesar&Loretz G... | Water     | 19152701          | 1       |

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| <b>Supplier</b>            | <b>Substance</b> | <b>Batch</b>         | <b>Spectra</b> |
|----------------------------|------------------|----------------------|----------------|
| Phönix, Fagro, 04.04.20... | Water            | 19H-12T15-070784     | 1              |
| Phönix/                    | Water            | T04-0832405          | 1              |
| Fagron                     | Water            | 15/10-T08-025964     | 1              |
| phönix/ WEPA               | Water            | LOTAP-SP0006         | 1              |
| Caelo                      | Water            | 18C13-T15-053741     | 2              |
| Caelo                      | Water            | 18G16T05058132       | 1              |
| Euro OTC                   | Water            | 16L12-T16-39628      | 1              |
| Fagron                     | Water            | 2050917/17B10-T18-04 | 1              |
| Fagron                     | Water            | 17k27-T09-050544     | 1              |
| Fagron                     | Water            | 18G16-To3-058126     | 1              |
| Fagron                     | Water            | 19D01T09065554       | 1              |
| Phönix/Wepa                | Water            | LOTAP0073            | 1              |
| Phönix 13.12.2018          | Water            | 18C19-T31-054017     | 1              |
| Rabenapotheke              | Water            | 14L03-T11-017800     | 1              |
| Rondell Apotheke           | Water            | LOTAP0016            | 1              |
| Fagron                     | Water            | 19F29-T10-068900     | 1              |
| Sanacorp/Pharma            | Water            | 17B13T02041604       | 1              |
| Sanacorp                   | Water            | 18062001             | 2              |
| Sanacorp                   | Water            | 17K27-T15-050585     | 1              |
| Sanacorp                   | Water            | 17339801             | 1              |
| Sanacorp                   | Water            | 17K27-T14-050581     | 2              |
| Sanacorp                   | Water            | 17114701             | 1              |
| Sanacorp                   | Water            | 18C19-T27-o53999     | 1              |
| Sanacorp                   | Water            | 18109301             | 1              |
| Sanacorp                   | Water            | 18138601             | 1              |
| Sanacorp                   | Water            | 18178302             | 3              |
| Sanacorp                   | Water            | 18210601             | 1              |
| Sanacorp                   | Water            | 18C19-T28-054003     | 1              |
| Sanacorp                   | Water            | LOTAP0090            | 1              |
| Sanacorp                   | Water            | 18227001             | 1              |
| Sanacorp                   | Water            | 18C19-T30-054012     | 1              |
| Sanacorp                   | Water            | 18E09-T02055711      | 1              |
| Sanacorp                   | Water            | 18E09-T02-055711     | 1              |
| Sanacorp                   | Water            | 19077801             | 1              |
| Sanacorp                   | Water            | LOTAP0180            | 1              |
| Sanacorp                   | Water            | 19C29-T01-065497     | 1              |
| Sanacorp                   | Water            | 19A18-T11-063541     | 2              |
| Sanacorp                   | Water            | 19F27-T11-068903     | 1              |
| Sanacorp                   | Water            | T17-0709403          | 2              |
| Sanacorp                   | Water            | 19J14-T06-0726805    | 2              |
| Sanacorp                   | Water            | T06-0726805          | 3              |
| Sanacorp                   | Water            | 19J14-T06-07268005   | 1              |
| Caelo                      | Water            | LOTAP0029            | 1              |
| Caelo                      | Water            | LOTAP0039            | 1              |
| Caelo                      | Water            | LOTAP0050            | 1              |
| Caelo                      | Water            | LOTAP0042            | 1              |
| Fagron                     | Water            | 17H14-T09-047709     | 1              |
| Sanacorp /Fargron          | Water            | 17E05-T01-044045     | 1              |
| Sanacorp /Fargron          | Water            | 19J14-T09-072696     | 1              |
| Sanacorp /Wepa             | Water            | LOTAp0042            | 1              |
| Fagron                     | Water            | 18G16-To4-058129     | 2              |
| Fagron                     | Water            | 20B28-T023-076719    | 2              |
| Fagron                     | Water            | 20B28T03-076719      | 1              |
| Fagron                     | Water            | T02-0799308          | 1              |
| Caelo                      | Water            | 17B10-T20-041571     | 1              |
| Fagron                     | Water            | 17B13-T04-041608     | 10             |
| Sanacorp/Wepa              | Water            | LOTAP0083            | 1              |
| Sanacorp/WEPA              | Water            | LOTAP-SP0005         | 1              |
| Sophien AM/Wepa            | Water            | LOTAP0077            | 1              |
| Sophien AM/Wepa            | Water            | LOTAP0082            | 1              |

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| Supplier                   | Substance | Batch            | Spectra |
|----------------------------|-----------|------------------|---------|
| Sophien AM/Wepa            | Water     | LOTAP0093        | 1       |
| Test                       | Water     | Test             | 1       |
| TTP / Gehe                 | Water     | 17332406         | 1       |
| VWR                        | Water     | 19L24108         | 1       |
| VWR                        | Water     | 19L124108        | 1       |
| Walter Schmidt Chemie G... | Water     | 1338             | 1       |
| Wasser, gereinigt          | Water     | 15D14T09021490   | 1       |
| Fagron                     | Water     | 16H02T01035743   | 1       |
| WE:Sanacorp 12.09.2016 ... | Water     | 16C23-T08-031427 | 1       |
| wepa                       | Water     | LOTAP0024        | 1       |
| wepa                       | Water     | LOTAP0031        | 1       |
| wepa                       | Water     | LOTAP0033        | 3       |
| wepa                       | Water     | LOTAP0038        | 1       |
| wepa                       | Water     | LOTAP0040        | 1       |
| wepa                       | Water     | LOTAP0045        | 1       |
| wepa                       | Water     | LOTAP0048        | 1       |
| wepa                       | Water     | LOTAP0081        | 1       |
| wepa                       | Water     | ap0081           | 1       |
| wepa                       | Water     | 3245             | 1       |
| wepa                       | Water     | LOT0094AP        | 1       |
| wepa                       | Water     | AP0089           | 1       |
| wepa                       | Water     | LOTAP0094        | 7       |
| wepa                       | Water     | LOTAP0095        | 1       |
| wepa                       | Water     | 18C19-T30-054012 | 1       |
| wepa                       | Water     | LOTAP0099        | 1       |
| wepa                       | Water     | LOTAP0101        | 8       |
| wepa                       | Water     | LOTAP-SP0004     | 1       |
| wepa                       | Water     | LOTAP0065        | 1       |
| wepa                       | Water     | LOTAP0116        | 2       |
| wepa                       | Water     | LOTAP0118        | 2       |
| wepa                       | Water     | LOTAP0111        | 1       |
| Wepa                       | Water     | LOTAP0013        | 1       |
| Wepa                       | Water     | LOTAP0017        | 1       |
| Wepa                       | Water     | LOTAP0020        | 1       |
| Wepa                       | Water     | LOTAP0015        | 1       |
| Wepa                       | Water     | AP0024           | 1       |
| Wepa                       | Water     | LOTAP0025        | 1       |
| Wepa                       | Water     | LOTAP0021        | 1       |
| Wepa                       | Water     | LOTAP0023        | 1       |
| Wepa                       | Water     | AP0029           | 1       |
| Wepa                       | Water     | LOTAP0030        | 1       |
| Wepa                       | Water     | LOTAP0040        | 2       |
| Wepa                       | Water     | LOTAP0035        | 1       |
| Wepa                       | Water     | LOTAP0046        | 2       |
| Wepa                       | Water     | LOTAp0036        | 1       |
| Wepa                       | Water     | LOTAP0052        | 2       |
| Wepa                       | Water     | LOTAP0048        | 1       |
| Wepa                       | Water     | LOTAP0054        | 2       |
| Wepa                       | Water     | AP0054           | 1       |
| Wepa                       | Water     | LOTAP0060        | 1       |
| Wepa                       | Water     | LOTAP0059        | 1       |
| Wepa                       | Water     | LOTAP0053        | 1       |
| Wepa                       | Water     | LOTAP0065        | 3       |
| Wepa                       | Water     | LOTAP0061        | 1       |
| Wepa                       | Water     | LOTAP0064        | 2       |
| Wepa                       | Water     | LOTAP0067        | 3       |
| Wepa                       | Water     | AP0071           | 1       |
| Wepa                       | Water     | LOTAP0072        | 4       |
| Wepa                       | Water     | LOTAP0066        | 2       |
| Wepa                       | Water     | AP0075           | 1       |

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| Supplier | Substance | Batch          | Spectra |
|----------|-----------|----------------|---------|
| Wepa     | Water     | LOTAP0073      | 1       |
| Wepa     | Water     | LOTAP0076      | 2       |
| Wepa     | Water     | AP0074         | 1       |
| Wepa     | Water     | LOTAP0074      | 4       |
| Wepa     | Water     | ap0069         | 1       |
| Wepa     | Water     | LOTAP0070      | 1       |
| Wepa     | Water     | LOTAP0068      | 1       |
| Wepa     | Water     | LOTAP0078      | 6       |
| Wepa     | Water     | LOTAP0079      | 3       |
| Wepa     | Water     | LOTAP0077      | 2       |
| Wepa     | Water     | AP0080         | 1       |
| Wepa     | Water     | LOTAP0083      | 5       |
| Wepa     | Water     | LOTAP-SP0001   | 8       |
| Wepa     | Water     | LOTAP0080      | 2       |
| Wepa     | Water     | LOTAP0082      | 5       |
| Wepa     | Water     | LOTAPSP0001    | 1       |
| Wepa     | Water     | LOTAP0084      | 2       |
| Wepa     | Water     | AP0087         | 1       |
| Wepa     | Water     | LOTAP0087      | 3       |
| Wepa     | Water     | LOTAP0085      | 2       |
| Wepa     | Water     | LOTAP0088      | 2       |
| Wepa     | Water     | AP0089         | 2       |
| Wepa     | Water     | LOTAP0091      | 3       |
| Wepa     | Water     | AP008          | 1       |
| Wepa     | Water     | LOTAP0090      | 1       |
| Wepa     | Water     | LOTAP0092      | 1       |
| Wepa     | Water     | AP0082         | 1       |
| Wepa     | Water     | LOTAP-SP0002   | 2       |
| Wepa     | Water     | LOTAP0094      | 4       |
| Wepa     | Water     | LOTAP0093      | 2       |
| Wepa     | Water     | AP0095         | 1       |
| Wepa     | Water     | AP-SP0002      | 1       |
| Wepa     | Water     | LOTAP0096      | 4       |
| Wepa     | Water     | LOTAP0098      | 2       |
| Wepa     | Water     | AP-SP0003      | 1       |
| Wepa     | Water     | AP0096         | 1       |
| Wepa     | Water     | LOTAP0097      | 1       |
| Wepa     | Water     | LOTAP0095      | 4       |
| Wepa     | Water     | AP0098         | 1       |
| Wepa     | Water     | AP0100         | 1       |
| Wepa     | Water     | LOTAP-SP0003   | 6       |
| Wepa     | Water     | LOTAP-SP-0003  | 1       |
| Wepa     | Water     | LOT-AP-SP-0003 | 1       |
| Wepa     | Water     | LOTAP-SP0004   | 6       |
| Wepa     | Water     | LOTAP0101      | 4       |
| Wepa     | Water     | LOT-AP-SP0003  | 1       |
| Wepa     | Water     | LOTAPSP0003    | 1       |
| Wepa     | Water     | LOTAP0106      | 4       |
| Wepa     | Water     | LOTAP0003      | 1       |
| Wepa     | Water     | LOTAP0081      | 1       |
| Wepa     | Water     | LotAP0102      | 3       |
| Wepa     | Water     | LOTAP0104      | 1       |
| Wepa     | Water     | AP0104         | 1       |
| Wepa     | Water     | AP0099         | 1       |
| Wepa     | Water     | LOTAP-SP0005   | 8       |
| Wepa     | Water     | LOTAP0102      | 2       |
| Wepa     | Water     | AP-SP0005      | 3       |
| Wepa     | Water     | AP0094         | 1       |
| Wepa     | Water     | AP0102         | 1       |
| Wepa     | Water     | LOTAP0103      | 1       |

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| Supplier | Substance | Batch            | Spectra |
|----------|-----------|------------------|---------|
| Wepa     | Water     | 219210           | 2       |
| Wepa     | Water     | LOTAP0109        | 6       |
| Wepa     | Water     | AP0111           | 2       |
| Wepa     | Water     | LOTap-sp0005     | 2       |
| Wepa     | Water     | LOTAP0012        | 1       |
| Wepa     | Water     | LOTAP0107        | 3       |
| Wepa     | Water     | LOTAP0108        | 4       |
| Wepa     | Water     | apsp0006         | 1       |
| Wepa     | Water     | LOTAP0086        | 1       |
| Wepa     | Water     | LOTAP0111        | 9       |
| Wepa     | Water     | LOTAP0112        | 3       |
| Wepa     | Water     | LOTAP-SP0006     | 8       |
| Wepa     | Water     | LOTAP0113        | 2       |
| Wepa     | Water     | LOTAP0115(3)     | 1       |
| Wepa     | Water     | LOTAP0112        | 1       |
| Wepa     | Water     | LOTAP0114        | 2       |
| Wepa     | Water     | LOTAP0116        | 4       |
| Wepa     | Water     | loap0107         | 1       |
| Wepa     | Water     | LOTAP0115        | 5       |
| Wepa     | Water     | LOTAP0117        | 5       |
| Wepa     | Water     | AP0109           | 1       |
| Wepa     | Water     | AP0118           | 4       |
| Wepa     | Water     | LOTAP-SP0007     | 2       |
| Wepa     | Water     | AP-SP0007        | 1       |
| Wepa     | Water     | LOTAP-SP0008     | 4       |
| Wepa     | Water     | LOTAP0110        | 1       |
| Wepa     | Water     | LOTAP0118        | 3       |
| Wepa     | Water     | LOT-AP-SP005     | 1       |
| Wepa     | Water     | LOTAP0122        | 3       |
| Wepa     | Water     | AP0123           | 3       |
| Wepa     | Water     | LOTAP0120        | 2       |
| Wepa     | Water     | LOTAP0123        | 14      |
| Wepa     | Water     | LOTAP0121(3)     | 1       |
| Wepa     | Water     | LOTAP0126        | 4       |
| Wepa     | Water     | AP0110           | 1       |
| Wepa     | Water     | -SP0007          | 1       |
| Wepa     | Water     | AP0122           | 3       |
| Wepa     | Water     | LOTAP0127        | 2       |
| Wepa     | Water     | LOTAP0128        | 1       |
| Wepa     | Water     | LOTAP129         | 1       |
| Wepa     | Water     | AP0127           | 1       |
| Wepa     | Water     | LOTAP-SP0009     | 1       |
| Wepa     | Water     | LOTAP0129        | 2       |
| Wepa     | Water     | LOTAP0124        | 3       |
| Wepa     | Water     | AP-SP0011        | 1       |
| Wepa     | Water     | LOTAP0131        | 3       |
| Wepa     | Water     | LOTAP0132        | 2       |
| Wepa     | Water     | LOTAP0130        | 1       |
| Wepa     | Water     | 19F27-T11-068903 | 1       |
| Wepa     | Water     | LOTAP0137        | 4       |
| Wepa     | Water     | LOTAP0138        | 1       |
| Wepa     | Water     | LOTAP0140        | 2       |
| Wepa     | Water     | AP0141           | 1       |
| Wepa     | Water     | LOTAP-SP0014     | 1       |
| Wepa     | Water     | AP0147           | 1       |
| WEPA     | Water     | LOTAP0012        | 2       |
| WEPA     | Water     | LOTAP0025        | 2       |
| WEPA     | Water     | LOTAP0036        | 1       |
| WEPA     | Water     | LOTAP0038        | 2       |
| WEPA     | Water     | LOTAP0039        | 1       |

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| Supplier                   | Substance | Batch           | Spectra |
|----------------------------|-----------|-----------------|---------|
| WEPA                       | Water     | LOTAP0053       | 1       |
| WEPA                       | Water     | LOTAP00500      | 1       |
| WEPA                       | Water     | LOTAP0051       | 1       |
| WEPA                       | Water     | LOTAP0047       | 1       |
| WEPA                       | Water     | LOTAP0054       | 1       |
| WEPA                       | Water     | LOTAP0062       | 1       |
| WEPA                       | Water     | LOTAP0071       | 3       |
| WEPA                       | Water     | LOTAP0069       | 1       |
| WEPA                       | Water     | LOTAP0072       | 1       |
| WEPA                       | Water     | LOTAP0075       | 2       |
| WEPA                       | Water     | LOTAP0080       | 3       |
| WEPA                       | Water     | LOTAP00812ma151 | 1       |
| WEPA                       | Water     | AP0076          | 1       |
| WEPA                       | Water     | LOTAP0078       | 2       |
| WEPA                       | Water     | LOTAP0084       | 2       |
| WEPA                       | Water     | LOTAP0081       | 1       |
| WEPA                       | Water     | LOTAP0087       | 2       |
| WEPA                       | Water     | LOTAP0079       | 1       |
| WEPA                       | Water     | LOTAP0089       | 1       |
| WEPA                       | Water     | LOT-AP-SP0001   | 1       |
| WEPA                       | Water     | LOTAP-sp0002    | 1       |
| WEPA                       | Water     | LOTAP0095       | 2       |
| WEPA                       | Water     | LOTAP-SP0002    | 1       |
| WEPA                       | Water     | LOTAP0092       | 1       |
| WEPA                       | Water     | LOTAP0097       | 2       |
| WEPA                       | Water     | AP-SP0003       | 1       |
| WEPA                       | Water     | lotap-sp0003    | 1       |
| WEPA                       | Water     | LOTAP0099       | 1       |
| WEPA                       | Water     | 18305501        | 1       |
| WEPA                       | Water     | LOTAP0103       | 1       |
| WEPA                       | Water     | LOTAP0102       | 2       |
| WEPA                       | Water     | LOTAP0107       | 2       |
| WEPA                       | Water     | AP0108          | 1       |
| WEPA                       | Water     | LOTAP0112       | 1       |
| WEPA                       | Water     | LOTAP0108       | 1       |
| WEPA                       | Water     | lotap-sp0005    | 1       |
| WEPA                       | Water     | LOTAP0104       | 1       |
| WEPA                       | Water     | LotAP0117       | 1       |
| WEPA                       | Water     | AP0105          | 1       |
| WEPA                       | Water     | LOTAP-SP0006    | 1       |
| WEPA                       | Water     | LOTAP0115       | 1       |
| WEPA                       | Water     | LOTAP0105       | 1       |
| WEPA                       | Water     | APLOT0120       | 1       |
| WEPA                       | Water     | LOTAP-SP0010    | 2       |
| WEPA                       | Water     | LOTAP0123       | 1       |
| WEPA                       | Water     | -SP001000       | 1       |
| WEPA                       | Water     | LOTAP0127       | 1       |
| WEPA                       | Water     | LOTAP-SP00212   | 1       |
| WEPA                       | Water     | LOTAP0135       | 1       |
| WEPA                       | Water     | AP0140          | 1       |
| WEPA                       | Water     | LOTAP0140       | 2       |
| WEPA                       | Water     | LOTAP-SP0014    | 1       |
| WEPA                       | Water     | LOTAP-SP0015    | 1       |
| WEPA / Alliance Healthc... | Water     | LOTAP0092       | 1       |
| Wepa / Gehe                | Water     | LOTAP0095       | 1       |
| Wepa / Gehe                | Water     | LotAP0100       | 1       |
| Wepa / Gehe                | Water     | LOTAP0113       | 1       |
| Wepa / Phoenix             | Water     | LOTAP0100       | 1       |
| Wepa / Sanacorp            | Water     | LOTAP-SP0005    | 1       |
| Wepa / Sanacorp            | Water     | LOTAP-SP0006    | 1       |

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| Supplier                   | Substance | Batch         | Spectra |
|----------------------------|-----------|---------------|---------|
| Wepa / Wepa                | Water     | LOTAP0045     | 1       |
| Wepa / Wepa                | Water     | LOTAP0048     | 2       |
| Wepa / Wepa                | Water     | LOTAP0072     | 1       |
| Wepa / Wepa                | Water     | LOTAP0107     | 1       |
| Wepa / Wepa / 18.02.201... | Water     | AP0097        | 1       |
| Wepa Apothekenbedarf       | Water     | LOTAP0037     | 3       |
| Wepa Apothekenbedarf       | Water     | LOTAP0042     | 2       |
| Wepa Apothekenbedarf       | Water     | AP0064        | 1       |
| Wepa Apothekenbedarf       | Water     | LOTAP0078     | 1       |
| Wepa Apothekenbedarf       | Water     | LOTAP0092     | 1       |
| Wepa Apothekenbedarf       | Water     | LOTAP0103     | 1       |
| Wepa Apothekenbedarf       | Water     | AP0129        | 1       |
| Wepa Apothekenbedarf       | Water     | LOTAP-SP0015  | 2       |
| WEPA Apothekenbedarf       | Water     | LOTAP0042     | 1       |
| WEPA Apothekenbedarf       | Water     | LOTAP0086     | 1       |
| WEPA Apothekenbedarf       | Water     | LOTAP-SP0006  | 2       |
| WEPA Apothekenbedarf GmbH  | Water     | LOTAP0112     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0061     | 2       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0074     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0082     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0089     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0095     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0100     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0135     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0087     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP0090     | 1       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP-SP0003  | 2       |
| WEPA Apothekenbedarf Gm... | Water     | LOTAP-SP0005  | 2       |
| WEPA Apothekenbedarf Hi... | Water     | LOTAP-SP0008  | 1       |
| WEPA Apothekenbedarf Hi... | Water     | LOTAP0128     | 1       |
| WEPA Apothekenbedarf Hi... | Water     | LOTAP0135     | 1       |
| WEPA Apothekenbedarf Hi... | Water     | LOTAP0118     | 1       |
| Wepa direkt                | Water     | AP0086        | 1       |
| Wepa direkt                | Water     | AP0091        | 1       |
| Wepa direkt                | Water     | LOTAP0094     | 1       |
| Wepa direkt                | Water     | LOTAP0108     | 1       |
| Wepa direkt                | Water     | LOTAP0116     | 1       |
| Wepa direkt                | Water     | LOTAP0118     | 1       |
| Wepa direkt                | Water     | LOTAP0125     | 2       |
| Wepa,                      | Water     | LOTAP0089     | 1       |
| Wepa/ Noweda               | Water     | LOTAP0115     | 1       |
| Wepa/ Noweda               | Water     | LOTAP0126     | 1       |
| Wepa/ Noweda               | Water     | LOTAP0129     | 1       |
| Wepa/ Noweda               | Water     | LOTAP0136     | 1       |
| Wepa/ AHD                  | Water     | LOTAP0092     | 1       |
| Wepa/ AHD                  | Water     | LOTAP0104     | 2       |
| Wepa/ Anzag                | Water     | 15(AP0081)    | 1       |
| Wepa/ Anzag                | Water     | 16(LOTAP0092) | 1       |
| Wepa/ Anzag                | Water     | 17(LOTAP0095) | 1       |
| Wepa/ Anzag                | Water     | 18(LOTAP0097) | 1       |
| Wepa/ Anzag                | Water     | 19(LOTAP0102) | 1       |
| Wepa/ Anzag                | Water     | 20(LOTAP0104) | 1       |
| Wepa/ Fiebig               | Water     | LOTAP0139     | 1       |
| WEPA/ Gehe                 | Water     | LOTAP-SP0005  | 1       |
| WEPA/ Gehe                 | Water     | LOTAP-SP0008  | 2       |
| Wepa/ Löwen                | Water     | LOTAP0073     | 1       |
| WEPA/ Phö                  | Water     | AP0118        | 1       |
| Wepa/ Phoenix              | Water     | LOTAP0059     | 2       |
| Wepa/ Phoenix              | Water     | LOTAP-SP0010  | 1       |
| Wepa/ Phönix               | Water     | LOTAT0086     | 1       |

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| Supplier                 | Substance | Batch         | Spectra |
|--------------------------|-----------|---------------|---------|
| Wepa/ Sanacorp           | Water     | LOTAP-SP0003  | 1       |
| Wepa/ Sanacorp           | Water     | LOTAP-SP0006  | 1       |
| Wepa/ Sanacorp           | Water     | -SP001000     | 1       |
| Wepa/ Sanacorp           | Water     | AP-SP0009     | 1       |
| Wepa/ Sanacorp           | Water     | LOTAP-SP0016  | 1       |
| Wepa/ wepa               | Water     | LOTAP0048     | 1       |
| Wepa/ Wepa               | Water     | LOTAP0051     | 1       |
| Wepa/ Wepa               | Water     | LOTAP0044     | 1       |
| Wepa/ Wepa               | Water     | LOTAP0071     | 2       |
| Wepa/ Wepa               | Water     | LOTAP0094     | 1       |
| WEPA/ WEPA               | Water     | LOTAS-SP0005  | 1       |
| Wepa/AHCA                | Water     | LOTAP0077     | 1       |
| Wepa/AHCA                | Water     | LOTAP0082     | 1       |
| Wepa/AHCA                | Water     | LOTAP0087     | 1       |
| Wepa/AHCA                | Water     | LOTAP0091     | 2       |
| Wepa/AHCA                | Water     | LOTAP0102     | 1       |
| Wepa/AHCA                | Water     | LOTAP0107     | 1       |
| Wepa/AHCA                | Water     | LOTAP0111     | 1       |
| Wepa/AHD                 | Water     | 10(LOTAP0062) | 1       |
| Wepa/AHD                 | Water     | LOTAP0069     | 2       |
| Wepa/AHD                 | Water     | 11(LOTAP0062) | 1       |
| Wepa/AHD                 | Water     | 13(LOTAP0078) | 1       |
| Wepa/AHD                 | Water     | LOTAP0074     | 1       |
| Wepa/AHD                 | Water     | 14(AP0076)    | 1       |
| Wepa/Alliance            | Water     | LOTAP0139     | 1       |
| WEPA/Alliance Healthcare | Water     | LOTAP-SP0005  | 1       |
| WEPA/Allianz             | Water     | LOTAP0131     | 1       |
| Wepa/Anzag               | Water     | LOTAP-SP0007  | 1       |
| Wepa/Anzag               | Water     | LOTAP-SP0010  | 2       |
| Wepa/Anzag               | Water     | LOTAP0121     | 1       |
| Wepa/Anzag               | Water     | LOTAP0128     | 1       |
| Wepa/Anzag 11.07.2017    | Water     | LOTAP0055     | 3       |
| WEPA/Fiebig              | Water     | LOTAP0135     | 1       |
| wepa/gehe                | Water     | LOTAP-SP0002  | 1       |
| wepa/gehe                | Water     | LOTAP-SP0003  | 1       |
| wepa/gehe                | Water     | 12298         | 1       |
| wepa/gehe                | Water     | -SP000008     | 1       |
| Wepa/Gehe                | Water     | LOTAP0101     | 1       |
| Wepa/Gehe                | Water     | LOTAP-SP0004  | 2       |
| Wepa/Gehe                | Water     | LOTAP0110     | 1       |
| Wepa/Gehe                | Water     | LOTAP-SP004   | 1       |
| Wepa/Gehe                | Water     | LOTAP-SP0006  | 1       |
| Wepa/Gehe                | Water     | LOTAP-SP0005  | 1       |
| Wepa/Gehe                | Water     | LOTAP0118     | 1       |
| Wepa/Gehe                | Water     | LOTAp-SP0010  | 1       |
| Wepa/Gehe                | Water     | LOTAP-SP0012  | 2       |
| Wepa/Gehe                | Water     | AP0135        | 2       |
| Wepa/Gehe                | Water     | LOTAP-SP0013  | 3       |
| Wepa/Gehe                | Water     | LOTAP0141     | 2       |
| WEPA/Gehe                | Water     | 20180515-03P  | 1       |
| WEPA/Gehe                | Water     | LOTAP0082     | 1       |
| Wepa/Jenne               | Water     | LOTAP-SP0010  | 2       |
| Wepa/Kehr                | Water     | AP-SP0011     | 1       |
| Wepa/Krieger             | Water     | LOTAP-SP0011  | 1       |
| WEPA/Krieger             | Water     | LOTAP-SP0009  | 1       |
| WEPA/Krieger             | Water     | AP-SP0009     | 1       |
| Wepa/Noweda              | Water     | LOTAP0101     | 1       |
| Wepa/Noweda              | Water     | LOTAP0107     | 1       |
| Wepa/Noweda              | Water     | 20000418001   | 2       |
| Wepa/Noweda              | Water     | LOTAP0118     | 1       |

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| Supplier          | Substance | Batch            | Spectra |
|-------------------|-----------|------------------|---------|
| WEPA/Noweda       | Water     | lotap0117        | 1       |
| WEPA/Noweda       | Water     | LOTAP0127        | 1       |
| WEPA/Noweda       | Water     | LOTAP0131        | 1       |
| WEPA/Pheonix      | Water     | LOTAP0068        | 1       |
| WEPA/Phoenix      | Water     | LOTAP-SP0007     | 1       |
| Wepa/Phönix       | Water     | LOTAP0120        | 1       |
| Wepa/Phönix       | Water     | LOTAP-SP0007     | 1       |
| Wepa/Phönix       | Water     | AP-SP0008        | 1       |
| WEPA/Phönix       | Water     | LOTAP0093        | 2       |
| WEPA/Phönix       | Water     | LOTAP0098        | 2       |
| WEPA/Phönix       | Water     | LOTAP0097        | 1       |
| WEPA/Phönix       | Water     | LOTAP-SP0005     | 1       |
| WEPA/Phönix       | Water     | LOTAP-SP0007     | 1       |
| wepa/Sanaco       | Water     | LOTAP0028        | 1       |
| wepa/Sanacorp     | Water     | AP0027           | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0047        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0076        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0081        | 2       |
| Wepa/Sanacorp     | Water     | LOTAP0084        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0089        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0091        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0096        | 1       |
| Wepa/Sanacorp     | Water     | LOTAT0092        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP0098        | 1       |
| Wepa/Sanacorp     | Water     | AP-SP0003        | 1       |
| Wepa/Sanacorp     | Water     | LOTAP-SP0004     | 1       |
| Wepa/Sanacorp     | Water     | AP-SP0005        | 2       |
| Wepa/Sanacorp     | Water     | AP0110           | 1       |
| Wepa/Sanacorp     | Water     | AP0117           | 1       |
| WEPA/Sanacorp     | Water     | LOTAP0105        | 2       |
| WEPA/Sanacorp     | Water     | LOTAP0114        | 1       |
| WEPA/Trans-o-flex | Water     | LOTAP0089        | 2       |
| WEPA/Trans-o-flex | Water     | LOTAP0103        | 1       |
| WEPA/Trans-o-flex | Water     | LOTAP0112        | 2       |
| WEPA/Trans-o-flex | Water     | LOTAP0118        | 1       |
| WEPA/Trans-o-flex | Water     | LOTAP0124        | 1       |
| Wepa/wepa         | Water     | LOTAP0054        | 1       |
| Wepa/Wepa         | Water     | LOTAP0058        | 1       |
| Wepa/Wepa         | Water     | LOTAP0046        | 1       |
| Wepa/Wepa         | Water     | 9(LOTAP0061)     | 1       |
| Wepa/Wepa         | Water     | LOTAP0068        | 1       |
| Wepa/Wepa         | Water     | LOTAP0072        | 1       |
| Wepa/Wepa         | Water     | 12(AP0074)       | 1       |
| Wepa/Wepa         | Water     | LOTAP0077        | 1       |
| Wepa/Wepa         | Water     | 2xLOTAP0081      | 1       |
| Wepa/Wepa         | Water     | LOTAP0083        | 2       |
| Wepa/Wepa         | Water     | LOTAP0078        | 1       |
| Wepa/Wepa         | Water     | LOTAP0088        | 2       |
| Wepa/Wepa         | Water     | LotAP0092        | 2       |
| Wepa/Wepa         | Water     | 18C19-T31-054017 | 4       |
| Wepa/Wepa         | Water     | LOTAP0090        | 2       |
| Wepa/Wepa         | Water     | LOTAP0089        | 1       |
| Wepa/Wepa         | Water     | LOTAP0091        | 1       |
| Wepa/Wepa         | Water     | LOTAP0086        | 2       |
| Wepa/Wepa         | Water     | AP0900           | 1       |
| Wepa/Wepa         | Water     | LOTAP0096        | 1       |
| Wepa/Wepa         | Water     | LOTAP0094        | 2       |
| Wepa/Wepa         | Water     | AP-SP0001        | 1       |
| Wepa/Wepa         | Water     | LOTAP0082        | 1       |
| Wepa/Wepa         | Water     | LOTAP-SP0003     | 1       |

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| Supplier                   | Substance | Batch         | Spectra |
|----------------------------|-----------|---------------|---------|
| Wepa/Wepa                  | Water     | LOTAP0098     | 5       |
| Wepa/Wepa                  | Water     | AP-SP002      | 1       |
| Wepa/Wepa                  | Water     | LOTAP0100     | 5       |
| Wepa/Wepa                  | Water     | lotap0095     | 1       |
| Wepa/Wepa                  | Water     | LOTAP0099     | 1       |
| Wepa/Wepa                  | Water     | AP-SP0004     | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP0004  | 3       |
| Wepa/Wepa                  | Water     | LOTAP-SP0005  | 4       |
| Wepa/Wepa                  | Water     | LOTAP0097     | 1       |
| Wepa/Wepa                  | Water     | LOTAP0106     | 1       |
| Wepa/Wepa                  | Water     | LOTAP0108     | 3       |
| Wepa/Wepa                  | Water     | LOTAP0111     | 2       |
| Wepa/Wepa                  | Water     | LOTAP_SP0007  | 1       |
| Wepa/Wepa                  | Water     | AP0121        | 1       |
| Wepa/Wepa                  | Water     | AP0123        | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP008   | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP0009  | 5       |
| Wepa/Wepa                  | Water     | AP-SP0009     | 1       |
| Wepa/Wepa                  | Water     | AP-SP0008     | 2       |
| Wepa/Wepa                  | Water     | LOTAP0125     | 1       |
| Wepa/Wepa                  | Water     | LOTAP0130     | 2       |
| Wepa/Wepa                  | Water     | LOTAP-SP0011  | 1       |
| Wepa/Wepa                  | Water     | -SP001001     | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP00010 | 1       |
| Wepa/Wepa                  | Water     | -SP001011     | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP0012  | 2       |
| Wepa/Wepa                  | Water     | LOTAP-SP0010  | 1       |
| Wepa/Wepa                  | Water     | AP0138        | 2       |
| Wepa/Wepa                  | Water     | -SP0013       | 1       |
| Wepa/Wepa                  | Water     | SP0013        | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP0014  | 1       |
| Wepa/Wepa                  | Water     | LOTAP-SP0015  | 2       |
| Wepa/Wepa                  | Water     | AP-SP0015     | 1       |
| Wepa/Wepa                  | Water     | LOTAP0143     | 2       |
| Wepa/Wepa                  | Water     | LOTAP-SP0016  | 1       |
| WEPA/Wepa                  | Water     | LOTAP0121     | 1       |
| WEPA/Wepa                  | Water     | LOTAP0127     | 2       |
| WEPA/Wepa                  | Water     | LOTAP0133     | 1       |
| WEPA/WEPA                  | Water     | LOTAP0061     | 1       |
| WEPA/WEPA                  | Water     | LOTAP0056     | 1       |
| WEPA/WEPA                  | Water     | LOTAP0077     | 1       |
| WEPA/WEPA                  | Water     | LOTAP0078     | 1       |
| WEPA/WEPA                  | Water     | LOTAP-SP0002  | 1       |
| WEPA/WEPA                  | Water     | LOTAP-SP0001  | 1       |
| WEPA/WEPA                  | Water     | LOTAP-SP0003  | 1       |
| WEPA/WEPA                  | Water     | lotap-sp0004  | 1       |
| WEPA/WEPA                  | Water     | LOTAP-SP0004  | 3       |
| WEPA/WEPA                  | Water     | LOTAP0096     | 1       |
| WEPA/WEPA                  | Water     | AP0095        | 1       |
| WEPA/WEPA                  | Water     | LOTAP0100     | 1       |
| WEPA/WEPA                  | Water     | LOT-AP-SP0006 | 1       |
| WEPA/WEPA                  | Water     | AP0013        | 1       |
| WEPA/WEPA                  | Water     | LOTAP-SP0006  | 1       |
| WEPA/WEPA                  | Water     | LOTAP0117     | 1       |
| WEPA/WEPA                  | Water     | AP0106        | 1       |
| WEPA/WEPA                  | Water     | AP0127        | 1       |
| WEPA/WEPA                  | Water     | AP0132        | 1       |
| WEPA/WEPA                  | Water     | AP0139        | 1       |
| Wepa/Wepa Apothekenbeda... | Water     | AP0116        | 1       |
| Wepa/Wepa/ 13.05.2019/ ... | Water     | LOTAP0101     | 1       |

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| Supplier                   | Substance                       | Batch            | Spectra |
|----------------------------|---------------------------------|------------------|---------|
| WEPA/WEPA/ 21.01.2020/ ... | Water                           | LOTAP0116        | 2       |
| Wepa/Wepa/ 28.10.2019/ ... | Water                           | AP00113          | 1       |
| Wepa/Wepa/ 28.10.2019/ ... | Water                           | AP0113           | 1       |
| Wepa/Zentrum               | Water                           | LOTAP-SP0001     | 1       |
| Wepa/Zentrum               | Water                           | LOTAP0097        | 1       |
| Wepa-Apothekenbedarf       | Water                           | LOTAP0069        | 1       |
| WEPA-WEPA                  | Water                           | LOTAP0028        | 1       |
| Aug. Hedinger GmbH&Co. ... | Aluminium acetotartrate solu... |                  | 1       |
| Caelo                      | Aluminium acetotartrate solu... | 12233502         | 4       |
| Caelo                      | Aluminium acetotartrate solu... | 15299901         | 23      |
| Caelo                      | Aluminium acetotartrate solu... | 13378704         | 1       |
| Dr.Seeger GmbH             | Aluminium acetotartrate solu... |                  | 1       |
| Euro OTC                   | Aluminium acetotartrate solu... |                  | 3       |
| Hedinger                   | Aluminium acetotartrate solu... |                  | 1       |
| Hedinger GmbH/Sanacorp     | Aluminium acetotartrate solu... |                  | 1       |
| Hedinger/Phönix            | Aluminium acetotartrate solu... |                  | 1       |
|                            | Chlorhexidine digluconate so... | 13K26B06289365   | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1511033-01       | 76      |
| Caelo                      | Chlorhexidine digluconate so... | 15131504         | 13      |
| Caelo                      | Chlorhexidine digluconate so... | 15292508         | 21      |
| Caelo                      | Chlorhexidine digluconate so... | 14011009         | 1       |
| Caelo                      | Chlorhexidine digluconate so... |                  | 8       |
|                            | Chlorhexidine digluconate so... | 1308002-02       | 1       |
| Euro OTC                   | Chlorhexidine digluconate so... | 1610021          | 1       |
| Fagron                     | Chlorhexidine digluconate so... | 13H19-B01        | 5       |
| Fagron                     | Chlorhexidine digluconate so... | 15I03-B02-315213 | 1       |
| Infectopharm/No            | Chlorhexidine digluconate so... |                  | 1       |
| Fagron                     | Water                           |                  | 5       |
| Chemica                    | Water                           |                  | 1       |
| Fagron                     | Water                           | 14K05-T02-016775 | 3       |
| Jenne                      | Water                           |                  | 1       |
| serumwerk bernburg         | Water                           |                  | 6       |
| Serumwerk Bernburg AG      | Water                           |                  | 2       |
| Serumwerk Bernburg/Sana... | Water                           |                  | 1       |
| Wepa                       | Water                           |                  | 14      |
| WEPA                       | Water                           |                  | 5       |
| Wepa /AllianceH.           | Water                           |                  | 1       |
| Wepa Apothekenbedarf       | Water                           |                  | 1       |
| Wepa/ wepa                 | Water                           |                  | 6       |
| Wepa/Wepa                  | Water                           |                  | 2       |

- 231 511 spectra from 1121 *Apo-Ident* customers from a total of 45 086 batches from a further 339 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Water and aqueous solutions* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Water and aqueous solutions* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 1365          | 0              | 62 574        |
| Type B | 0              | 2049          | 1              | 89 182        |
| Type C | 0              | 9740          | 112            | 231 093       |

The substance/substance group *Water and aqueous solutions* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate* (*specificity*) and the weighted *true positive rate* (*recognition rate*) are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.5604 %) |
| Type B | 100.0000 % (> 99.9660 %) | 99.9512 % (> 99.8049 %)  |
| Type C | 100.0000 % (> 99.6947 %) | 98.8632 % (> 98.8327 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Water and aqueous solutions* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Dextrorotary lactic acid 20%              | 16.74                  | —                              |
| Hydrophilic base emulsion (NRF p.25)      | 24.41                  | —                              |
| Chest elixir                              | 28.99                  | —                              |
| Gel basis Audor®                          | 33.69                  | —                              |
| Liquorice juice purified, diluted         | 35.55                  | —                              |
| Fortified wine                            | 39.20                  | —                              |
| Non-ionic hydrous liniment SR/DAC (NRF... | 39.79                  | —                              |
| Polyhexanide solution 20%                 | 45.63                  | —                              |
| Lotio Cordes®                             | 47.11                  | —                              |
| Condurango wine                           | 47.25                  | —                              |
| Hydrophilic cream, non-ionic SR (NRF p... | 48.42                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)       | 48.64                  | —                              |
| Viscous base solution (NRF p. 20)         | 51.12                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Water and aqueous solutions* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30869     | 31342               | 5.74                         | 18.85                           |
| 31057     | 31718               | 2.77                         | 32.25                           |
| 31240     | 31735               | 2.47                         | 24.88                           |
| 31342     | 31342               | 0.00                         | 16.42                           |
| 31463     | 31463               | 0.00                         | 26.62                           |
| 31624     | 31718               | 1.86                         | 30.88                           |
| 31676     | 32354               | 4.53                         | 33.57                           |
| 31705     | 31735               | 9.74                         | 24.31                           |
| 31718     | 31718               | 0.00                         | 31.62                           |
| 31735     | 31735               | 0.00                         | 24.80                           |
| 31809     | 31718               | 4.02                         | 28.93                           |
| 31829     | 31463               | 3.60                         | 24.61                           |
| 31846     | 31846               | 0.00                         | 25.47                           |
| 31959     | 31342               | 4.90                         | 16.67                           |
| 32308     | 31846               | 9.05                         | 23.76                           |
| 32354     | 32354               | 0.00                         | 31.41                           |
| 32732     | 31846               | 2.18                         | 24.15                           |
| 32831     | 32831               | 0.00                         | 32.86                           |
| 32832     | 32832               | 0.00                         | 33.93                           |
| 32921     | 31342               | 9.12                         | 18.77                           |
| 34690     | 31342               | 5.02                         | 18.71                           |
| 35112     | 35112               | 0.00                         | 28.83                           |
| 35113     | 35113               | 0.00                         | 27.33                           |
| 35163     | 35163               | 0.00                         | 27.80                           |
| 35315     | 35315               | 0.00                         | 28.14                           |
| 35539     | 35539               | 0.00                         | 33.22                           |
| 35555     | 35555               | 0.00                         | 28.34                           |
| 35556     | 35556               | 0.00                         | 28.51                           |
| 35599     | 35599               | 0.00                         | 28.58                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Wines**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30641-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Wines; Chest elixir; Condurango wine; Fortified wine; Gel basis Audor®; Liquiritiae succi elixir; Liquorice juice purified, diluted; Lotio Cordes®; Succus liquiritiae depur. solut.; Vinum condurangum

### Special notes

When selecting the *Wines* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Wines                     | 26     | 16     | 97     |

## Second-stage model

For differentiation of the substance/substance group *Wines* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Wines*:

| Supplier     | Substance           | Batch     | Sample ID | Spectra | Certificate |
|--------------|---------------------|-----------|-----------|---------|-------------|
| Caelo        | Chest elixir        | 13003109  | 31213     | 40      | 1405332     |
| Caelo        | Chest elixir        | 14182707  | 31615     | 60      | 20140709    |
| Caelo        | Chest elixir        | 17013603  | 33619     | 40      | 20170125    |
| Caelo        | Chest elixir        | 191235    | 34642     | 40      | 20190506*   |
| Caelo        | Condurango wine     | 11239009  | 30901     | 60      | 20110909    |
| Caelo        | Condurango wine     | 14345603  | 31581     | 60      | 1505325     |
| Caelo        | Condurango wine     | 192836    | 35725     | 50      | 20191113*   |
| Caelo        | Fortified wine      | 13208302  | 31127     | 40      | 1403400     |
| Caelo        | Fortified wine      | 13208306  | 31222     | 70      | 20130822    |
| Caelo        | Fortified wine      | 13397204  | 31466     | 60      | 20131216    |
| Caelo        | Fortified wine      | 192855    | 34803     | 40      | 20191128*   |
| Caelo        | Fortified wine      | 21002750  | 35723     | 50      | 20210820*   |
| Audor Pharma | Gel basis Audor®    | AP111500  | 30641     | 40      | 20101104    |
| Audor Pharma | Gel basis Audor®    | AP103113G | 31108     | 40      | 1404231     |
| Audor Pharma | Gel basis Audor®    | AP63101G  | 32751     | 40      | 20160906    |
| Audor Pharma | Gel basis Audor®    | AP63101G  | 32752     | 40      | 20160906    |
| Audor Pharma | Gel basis Audor®    | AP84001G  | 34599     | 40      | 20181019    |
| Euro OTC     | Gel basis Audor®    | 2012007   | 35249     | 40      | 20201223*   |
| Euro OTC     | Gel basis Audor®    | 2104016   | 35494     | 40      | 20210429*   |
| Caelo        | Liquorice juice ... | 14203111  | 31652     | 60      | 20140711    |
| Caelo        | Liquorice juice ... | 171695    | 33330     | 40      | 20170621*   |
| Caelo        | Liquorice juice ... | 192332    | 34710     | 40      | 20191016*   |
| Caelo        | Liquorice juice ... | 21000310  | 35280     | 40      | 20210202*   |
| Ichthyol     | Lotio Cordes®       | 12D014    | 31075     | 40      | 1403759     |
| Ichthyol     | Lotio Cordes®       | 14D010    | 31595     | 60      | 20140826    |
| Ichthyol     | Lotio Cordes®       | 15D002    | 32487     | 40      | 20150318    |
| Ichthyol     | Lotio Cordes®       | 19D002    | 34843     | 40      | 20190424    |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 1250 spectra of 27 reference samples from the substance/substance group *Wines*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 26 different batches.
- 62 689 spectra from a total of 1281 batches from further 218 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A*

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 640 spectra of 16 reference samples from the substance/substance group *Wines*.
- Among them are spectra of independent samples from 16 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier     | Substance                       | Batch    | Sample ID | Spectra |
|--------------|---------------------------------|----------|-----------|---------|
| Caelo        | Chest elixir                    | 15379113 | 32956     | 40      |
| Caelo        | Chest elixir                    | 181495   | 34228     | 40      |
| Caelo        | Condurango wine                 | 15341903 | 32957     | 40      |
| Caelo        | Condurango wine                 | 15341901 | 33836     | 40      |
| Caelo        | Condurango wine                 | 180781   | 34074     | 40      |
| Caelo        | Fortified wine                  | 161795   | 32336     | 40      |
| Caelo        | Fortified wine                  | 171984   | 33712     | 40      |
| Audor Pharma | Gel basis Audor <sup>®</sup>    | AP53801G | 32724     | 40      |
| Audor Pharma | Gel basis Audor <sup>®</sup>    | AP72301G | 33626     | 40      |
| Euro OTC     | Gel basis Audor <sup>®</sup>    | 2008005  | 35078     | 40      |
| Caelo        | Liquorice juice purified, di... | 161241   | 32200     | 40      |
| Caelo        | Liquorice juice purified, di... | 16316201 | 33463     | 40      |
| Caelo        | Liquorice juice purified, di... | 182598   | 34336     | 40      |
| Ichthyol     | Lotio Cordes <sup>®</sup>       | 15D021   | 32965     | 40      |
| Ichthyol     | Lotio Cordes <sup>®</sup>       | 16D011   | 33839     | 40      |
| Ichthyol     | Lotio Cordes <sup>®</sup>       | 20D0001  | 35107     | 40      |

- 90 851 spectra from a total of 2000 batches from further 340 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 396 spectra from 123 *Apo-Ident* customers from 108 batches from the substance/substance group *Wines*.
- Among them are spectra of independent samples from 97 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier     | Substance                       | Batch        | Spectra |
|--------------|---------------------------------|--------------|---------|
| Caelo        | Chest elixir                    | 18101306     | 1       |
| Caelo        | Chest elixir                    | 19071402     | 1       |
| Caelo        | Chest elixir                    | 12091406     | 1       |
| Caelo        | Chest elixir                    | 3031506      | 1       |
| Caelo        | Chest elixir                    | 13121719     | 1       |
| Fiebig       | Chest elixir                    | 11019106     | 1       |
| Caelo        | Condurango wine                 | 14345604     | 1       |
| Breko        | Fortified wine                  | 201701v12    | 1       |
| Breko        | Fortified wine                  | 201701v13    | 1       |
| Caelo        | Fortified wine                  | 16179505     | 1       |
| Caelo        | Fortified wine                  | 15175501     | 2       |
| Caelo        | Fortified wine                  | 12059809     | 2       |
| Caelo        | Fortified wine                  | 15175508     | 1       |
| Noweda       | Fortified wine                  | 16179509     | 1       |
| phönix       | Fortified wine                  | 16179508     | 1       |
| Anzag        | Gel basis Audor®                | 103081G      | 1       |
| Audor Pharma | Gel basis Audor®                | AP100852G    | 2       |
| Audor Pharma | Gel basis Audor®                | 102464       | 3       |
| Audor Pharma | Gel basis Audor®                | AP102464G    | 4       |
| Audor Pharma | Gel basis Audor®                | AP102464     | 1       |
| Audor Pharma | Gel basis Audor®                | AP80601G     | 28      |
| Audor Pharma | Gel basis Audor®                | 84001        | 3       |
| Audor Pharma | Gel basis Audor®                | AP103993G    | 3       |
| Audor Pharma | Gel basis Audor®                | AP53801G     | 10      |
| Audor Pharma | Gel basis Audor®                | AP72301G     | 30      |
| Audor Pharma | Gel basis Audor®                | ap84001g     | 5       |
| Audor Pharma | Gel basis Audor®                | AP90601      | 3       |
| Audor Pharma | Gel basis Audor®                | AP90601G     | 2       |
| Audor Pharma | Gel basis Audor®                | 92701        | 3       |
| Audor Pharma | Gel basis Audor®                | Ap103081G    | 1       |
| Audor Pharma | Gel basis Audor®                | AP100852     | 1       |
| Audor Pharma | Gel basis Audor®                | AP103081G    | 2       |
| Audor Pharma | Gel basis Audor®                | ap103113g    | 1       |
| Caelo        | Gel basis Audor®                | 18041301     | 1       |
| Caelo        | Gel basis Audor®                | AP80601G     | 3       |
| Euro OTC     | Gel basis Audor®                | 200500201    | 1       |
| Euro OTC     | Gel basis Audor®                | 2005003-01   | 1       |
| Euro OTC     | Gel basis Audor®                | 2008008-01   | 1       |
| Euro OTC     | Gel basis Audor®                | 92701        | 1       |
| Euro OTC     | Gel basis Audor®                | 2005002-01   | 3       |
| Fagron       | Gel basis Audor®                | AP103993G    | 1       |
| Gehe         | Gel basis Audor®                | AP84001G     | 1       |
| Caelo        | Liquorice juice purified, di... | 12061203     | 1       |
| Caelo        | Liquorice juice purified, di... | 12116703     | 2       |
| Caelo        | Liquorice juice purified, di... | 12116709     | 1       |
| Caelo        | Liquorice juice purified, di... | 13067606     | 3       |
| Caelo        | Liquorice juice purified, di... | 16316202     | 1       |
| Caelo        | Liquorice juice purified, di... | CH-B18259803 | 1       |
| Caelo        | Liquorice juice purified, di... | 16124103     | 6       |
| Caelo        | Liquorice juice purified, di... | 11293208     | 1       |
| Caelo        | Liquorice juice purified, di... | 3321         | 1       |
| Caelo        | Liquorice juice purified, di... | 15144207     | 2       |
| Caelo        | Liquorice juice purified, di... | 12116704     | 3       |
| Caelo        | Liquorice juice purified, di... | 17169504     | 1       |
| Caelo        | Liquorice juice purified, di... | 117169505    | 1       |
| Caelo        | Liquorice juice purified, di... | 1803401      | 1       |
| Caelo        | Liquorice juice purified, di... | 18259805     | 1       |
| Caelo        | Liquorice juice purified, di... | 16316208     | 4       |
| Caelo        | Liquorice juice purified, di... | 13067602     | 2       |
| Caelo        | Liquorice juice purified, di... | 16124108     | 4       |

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| Supplier                      | Substance                         | Batch     | Spectra |
|-------------------------------|-----------------------------------|-----------|---------|
| Caelo                         | Liquorice juice purified, di. . . | 16316201  | 5       |
| Caelo                         | Liquorice juice purified, di. . . | 17169505  | 2       |
| Caelo                         | Liquorice juice purified, di. . . | 18034101  | 1       |
| Caelo                         | Liquorice juice purified, di. . . | 16124109  | 1       |
| Caelo                         | Liquorice juice purified, di. . . | 13067604  | 1       |
| Caelo                         | Liquorice juice purified, di. . . | 13133801  | 5       |
| Caelo                         | Liquorice juice purified, di. . . | 14002602  | 4       |
| Caelo                         | Liquorice juice purified, di. . . | 14203104  | 2       |
| Caelo                         | Liquorice juice purified, di. . . | 14203105  | 3       |
| Caelo                         | Liquorice juice purified, di. . . | 14203107  | 1       |
| Caelo                         | Liquorice juice purified, di. . . | 15155302  | 1       |
| Caelo                         | Liquorice juice purified, di. . . | 17169508  | 3       |
| Caelo                         | Liquorice juice purified, di. . . | 18155006  | 2       |
| Caelo                         | Liquorice juice purified, di. . . | 18259808  | 1       |
| Caesar & Loretz GmbH          | Liquorice juice purified, di. . . | 19233205  | 1       |
| Fagron                        | Liquorice juice purified, di. . . | 15155302  | 2       |
| Caelo                         | Liquorice juice purified, di. . . | 15144203  | 1       |
| Jenne                         | Liquorice juice purified, di. . . | 16124103  | 1       |
| Noweda                        | Liquorice juice purified, di. . . | 181555009 | 1       |
| Phönix                        | Liquorice juice purified, di. . . | 18155009  | 1       |
| VDL                           | Liquorice juice purified, di. . . | 12116703  | 2       |
| VDL                           | Liquorice juice purified, di. . . | 11293210  | 1       |
| Alliance Health 05.06.2. . .  | Lotio Cordes®                     | 11D029    | 1       |
| Anzag/Ichtyol-Gesellsch. . .  | Lotio Cordes®                     | 13D009    | 1       |
| Caelo                         | Lotio Cordes®                     | 12081403  | 1       |
| Caelo                         | Lotio Cordes®                     | 10D011    | 20      |
| Caelo                         | Lotio Cordes®                     | 14D010    | 1       |
| Caelo                         | Lotio Cordes®                     | 15D002    | 1       |
| Caelo                         | Lotio Cordes®                     | 15D022    | 1       |
| Caelo                         | Lotio Cordes®                     | 14D011    | 3       |
| Euro OTC                      | Lotio Cordes®                     | 15D022    | 2       |
| Gehe/ Ichthyol Gesellsch. . . | Lotio Cordes®                     | 19D002    | 1       |
| Geibo/Ichtyol                 | Lotio Cordes®                     | 18D002    | 1       |
| Ichthiol/Sanacorp             | Lotio Cordes®                     | 18D002    | 1       |
| Ichthol/ gehe 06.11.17        | Lotio Cordes®                     | 16d010    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 11D030    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 14041402  | 1       |
| Ichthyol                      | Lotio Cordes®                     | 13D009    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 13D010    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 16021509  | 1       |
| Ichthyol                      | Lotio Cordes®                     | 27041507  | 1       |
| Ichthyol                      | Lotio Cordes®                     | 27041508  | 1       |
| Ichthyol                      | Lotio Cordes®                     | 14D011    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 15D001    | 2       |
| Ichthyol                      | Lotio Cordes®                     | 16D010    | 2       |
| Ichthyol                      | Lotio Cordes®                     | 16D011    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 18D001    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 18D002    | 1       |
| Ichthyol                      | Lotio Cordes®                     | 20D0001   | 1       |
| ICHTHYOL                      | Lotio Cordes®                     | 15D002    | 1       |
| Ichthyol / Gehe               | Lotio Cordes®                     | 15D022    | 1       |
| Ichthyol / Gehe               | Lotio Cordes®                     | 16D011    | 1       |
| Ichthyol / Geibo              | Lotio Cordes®                     | 14D011    | 1       |
| Ichthyol / Noweda             | Lotio Cordes®                     | 19D002    | 1       |
| ichthyol /107                 | Lotio Cordes®                     | 19D001    | 1       |
| Ichthyol /Noweda              | Lotio Cordes®                     | 14D010    | 2       |
| Ichthyol /Noweda              | Lotio Cordes®                     | 15D001    | 1       |
| Ichthyol Gesellschaft         | Lotio Cordes®                     | 15D021    | 1       |
| Ichthyol Gesellschaft C. . .  | Lotio Cordes®                     | 18D001    | 1       |
| Ichthyol Gesellschaft- . . .  | Lotio Cordes®                     | 13D010    | 1       |

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| Supplier                   | Substance                    | Batch     | Spectra |
|----------------------------|------------------------------|-----------|---------|
| Ichthyol Gesellschaft/C... | Lotio Cordes <sup>®</sup>    | 190002    | 1       |
| Ichthyol Gesellschaft/G... | Lotio Cordes <sup>®</sup>    | 19D002    | 1       |
| Ichthyol Gesellschaft/N... | Lotio Cordes <sup>®</sup>    | 15d001    | 1       |
| Ichthyol/Alliance          | Lotio Cordes <sup>®</sup>    | 15D002    | 1       |
| Ichthyol/Anzag             | Lotio Cordes <sup>®</sup>    | 15D002    | 1       |
| Ichthyol/Ebert             | Lotio Cordes <sup>®</sup>    | 15D022    | 1       |
| Ichthyol/gehe              | Lotio Cordes <sup>®</sup>    | 13D010    | 1       |
| Ichthyol/gehe              | Lotio Cordes <sup>®</sup>    | 14D010    | 2       |
| Ichthyol/gehe              | Lotio Cordes <sup>®</sup>    | 18D001    | 1       |
| Ichthyol/gehe              | Lotio Cordes <sup>®</sup>    | 18D002    | 5       |
| Ichthyol/gehe              | Lotio Cordes <sup>®</sup>    | 19D002    | 1       |
| Ichthyol/Gehe              | Lotio Cordes <sup>®</sup>    | 18D001    | 2       |
| Ichthyol/Gehe              | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| Ichthyol/GEHE              | Lotio Cordes <sup>®</sup>    | 14D011    | 1       |
| Ichthyol/Noweda            | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| Ichthyol/Noweda            | Lotio Cordes <sup>®</sup>    | 20D0001   | 1       |
| Ichthyol/Phoenix           | Lotio Cordes <sup>®</sup>    | 15D001    | 1       |
| Ichthyol/Phoenix           | Lotio Cordes <sup>®</sup>    | 15D002    | 1       |
| Ichthyol/Phoenix           | Lotio Cordes <sup>®</sup>    | 18D001    | 1       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 13D009    | 1       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 14D010    | 2       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 15D001    | 2       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 15D002    | 4       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 16D011    | 2       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 18D001    | 1       |
| Ichthyol/Phönix            | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| Ichthyol/Sanacorp          | Lotio Cordes <sup>®</sup>    | 14D010    | 1       |
| Ichthyol-G. / Sanacorp     | Lotio Cordes <sup>®</sup>    | 15D001    | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 15D001    | 2       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 15D002    | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 15D021    | 2       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 15D022    | 3       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 4111709   | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 30041806  | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 18D001    | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 16D010    | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| ICHTHYOL-GESELLSCHAFT      | Lotio Cordes <sup>®</sup>    | 19D001    | 5       |
| ICHTHYOL-GESELLSCHAFT      | Lotio Cordes <sup>®</sup>    | 20D0001   | 1       |
| Ichthyol-Gesellschaft /... | Lotio Cordes <sup>®</sup>    | 18D001    | 1       |
| Ichthyol-Gesellschaft C... | Lotio Cordes <sup>®</sup>    | 19D001    | 1       |
| Ichthyol-Gesellschaft, ... | Lotio Cordes <sup>®</sup>    | 13D010    | 1       |
| Ichthyol-Gesellschaft      | Lotio Cordes <sup>®</sup>    | 19D002    | 1       |
| ichtyol                    | Lotio Cordes <sup>®</sup>    | 12D014    | 1       |
| Ichtyol                    | Lotio Cordes <sup>®</sup>    | 16D010    | 20      |
| Ichtyol/Phoenix            | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| Ichtyol-Gesellschaft       | Lotio Cordes <sup>®</sup>    | 15D002    | 1       |
| Ichtyol-Gesellschaft       | Lotio Cordes <sup>®</sup>    | 18D002    | 1       |
| Kehr                       | Lotio Cordes <sup>®</sup>    | 16D011    | 1       |
| Phoenix/Stiefel            | Lotio Cordes <sup>®</sup>    | 12D014    | 1       |
| Audor Pharma               | Gel basis Audor <sup>®</sup> |           | 12      |
| Audor Pharma               | Gel basis Audor <sup>®</sup> | AP84001G  | 15      |
| Audor Pharma               | Gel basis Audor <sup>®</sup> | AP103113G | 1       |
| Ichthyol                   | Lotio Cordes <sup>®</sup>    | 14D010    | 3       |
| Ichthyol                   | Lotio Cordes <sup>®</sup>    | 15D002    | 2       |

- 240 967 spectra from 1121 *Apo-Ident* customers from a total of 46 899 batches from a further 337 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are docu-

mented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Wines* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Wines* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 1250          | 0              | 62 689        |
| <b>Type B</b> | 0              | 640           | 0              | 90 646        |
| <b>Type C</b> | 0              | 394           | 2              | 240 894       |

The substance/substance group *Wines* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.5200 %) |
| <b>Type B</b> | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.0625 %) |
| <b>Type C</b> | 100.0000 % (> 99.6826 %) | 99.4949 % (> 98.7374 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra ([Rule of Three](#) [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Wines* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                                 | Distance in main model | Distance in second-stage model |
|-------------------------------------------|------------------------|--------------------------------|
| Hydrophilic base emulsion (NRF p.25)      | 13.42                  | —                              |
| Viscous base solution (NRF p. 20)         | 20.49                  | —                              |
| Dextrorotary lactic acid 20%              | 29.42                  | —                              |
| Polyhexanide solution 20%                 | 30.14                  | —                              |
| Aluminium acetotartrate solution          | 32.54                  | —                              |
| Water                                     | 32.63                  | —                              |
| Non-ionic hydrous liniment SR/DAC (NRF... | 32.79                  | —                              |
| Sodium lactate solution 50%               | 33.17                  | —                              |
| Hydrated liniment SR/DAC (NRF p.40)       | 33.39                  | —                              |
| Chlorhexidine digluconate solution        | 34.47                  | —                              |
| Raspberry syrup (conserved)               | 35.37                  | —                              |
| Base cream, diluted                       | 40.70                  | —                              |
| Marshmallow syrup (conserved)             | 41.41                  | —                              |
| Gel Cordes®                               | 45.61                  | —                              |
| Anionic hydrophilic cream with propyle... | 51.52                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Wines* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30641     | 31108               | 6.62                         | 22.39                           |
| 30901     | 35725               | 7.36                         | 33.63                           |
| 31075     | 31075               | 0.00                         | 30.45                           |
| 31108     | 31108               | 0.00                         | 20.30                           |
| 31127     | 31127               | 0.00                         | 21.58                           |
| 31213     | 31213               | 0.00                         | 35.16                           |
| 31222     | 31127               | 2.23                         | 21.28                           |
| 31466     | 31127               | 3.11                         | 21.21                           |
| 31581     | 31581               | 0.00                         | 29.08                           |
| 31595     | 31075               | 5.22                         | 21.80                           |
| 31615     | 34642               | 4.79                         | 29.04                           |
| 31652     | 34710               | 6.41                         | 35.05                           |
| 32487     | 31075               | 6.93                         | 40.30                           |
| 32751     | 35249               | 4.00                         | 21.97                           |
| 32752     | 35249               | 6.34                         | 22.18                           |
| 33330     | 33330               | 0.00                         | 37.22                           |
| 33619     | 31213               | 6.19                         | 30.75                           |
| 34599     | 35494               | 4.64                         | 21.24                           |
| 34642     | 34642               | 0.00                         | 27.41                           |
| 34710     | 34710               | 0.00                         | 30.67                           |
| 34803     | 34803               | 0.00                         | 19.67                           |
| 34843     | 31075               | 6.78                         | 21.90                           |
| 35249     | 35249               | 0.00                         | 22.92                           |
| 35280     | 35280               | 0.00                         | 27.20                           |
| 35494     | 35494               | 0.00                         | 23.28                           |
| 35723     | 35723               | 0.00                         | 19.00                           |
| 35725     | 35725               | 0.00                         | 30.69                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Wood oils                                                        |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 30710-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Wood oils; Cypress oil; Juniper wood oil; Oleum cupressi; Oleum Juniperi e Ligno pro uso externo; Terebinthinae aetheroleum; Turpentine oil

### Special notes

When selecting the *Wood oils* substance/substance group, the following information is displayed to the user:

- Advice: Currently no longer available from major pharmaceutical manufacturers. Therefore, batch maintenance is currently not possible.

### Applicable documents

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| 978-3-7692-7517-9 | <i>European Pharmacopoeia 10th Edition, Basic Version 2020</i> [3] |
| Komm2.2.40        | <i>Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident</i> [4]           |
| AA004             | <i>Erstellung und Validierung eines IdentModul-Updates</i>         |

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Wood oils                 | 12     | 6      | 57     |



## Second-stage model

For differentiation of the substance/substance group *Wood oils* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Wood oils*:

| Supplier | Substance        | Batch      | Sample ID | Spectra | Certificate |
|----------|------------------|------------|-----------|---------|-------------|
| Caelo    | Cypress oil      | 13349109   | 31837     | 60      | 1606484     |
| Caelo    | Cypress oil      | 16130501   | 32183     | 40      | 9464        |
| Caelo    | Juniper wood oil | 11363504   | 30710     | 40      | 20111221    |
| Caelo    | Juniper wood oil | 11363507   | 30860     | 40      | 20111221    |
| Caelo    | Juniper wood oil | 13196208   | 31201     | 40      | 1405102     |
| Caelo    | Juniper wood oil | 190399     | 34644     | 40      | 20190312*   |
| Caelo    | Turpentine oil   | 12383210   | 31214     | 40      | 1407275     |
| Caelo    | Turpentine oil   | 161997     | 32317     | 40      | 20160707*   |
| Caelo    | Turpentine oil   | 171509     | 33310     | 40      | 20170518*   |
| Euro OTC | Turpentine oil   | 1312026-01 | 31531     | 60      | 20140113    |
| Euro OTC | Turpentine oil   | 1511012    | 31815     | 60      | 20151214*   |
| Euro OTC | Turpentine oil   | 1703005    | 33232     | 40      | 20170327*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

**Type A** All calibration spectra.

- 540 spectra of 12 reference samples from the substance/substance group *Wood oils*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 12 different batches.
- 63 399 spectra from a total of 1295 batches from further 221 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples:

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 280 spectra of 7 reference samples from the substance/substance group *Wood oils*.
- Among them are spectra of independent samples from 6 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance        | Batch    | Sample ID | Spectra |
|----------|------------------|----------|-----------|---------|
| Caelo    | Cypress oil      | 17017101 | 33602     | 40      |
| Caelo    | Cypress oil      | 173150   | 33905     | 40      |
| Caelo    | Juniper wood oil | 16055410 | 33506     | 40      |
| Caelo    | Juniper wood oil | 171964   | 33914     | 40      |
| Caelo    | Turpentine oil   | 181108   | 34060     | 40      |
| Euro OTC | Turpentine oil   | 1806017  | 34188     | 40      |
| Caelo    | Cypress oil      | 17017101 | 33603     | 40      |

- 91211 spectra from a total of 2010 batches from further 343 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 168 spectra from 101 *Apo-Ident* customers from 60 batches from the substance/substance group *Wood oils*.
- Among them are spectra of independent samples from 56 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier           | Substance        | Batch         | Spectra |
|--------------------|------------------|---------------|---------|
| Caelo              | Cypress oil      | 16130505      | 12      |
| Caelo              | Cypress oil      | 17017101      | 1       |
| JENNE              | Cypress oil      | 17017101      | 1       |
| Caelo              | Juniper wood oil | 14008307      | 3       |
| Caelo              | Juniper wood oil | 14008306      | 1       |
| Caelo              | Juniper wood oil | 15149502      | 1       |
| Caelo              | Juniper wood oil | 14008301      | 1       |
| Caelo              | Juniper wood oil | 14008303      | 2       |
| Caelo              | Juniper wood oil | 15149511      | 1       |
| Caelo              | Juniper wood oil | 17196402      | 1       |
| Caelo              | Juniper wood oil | 12342604      | 1       |
| Taoasis GmbH       | Juniper wood oil | 736525-110967 | 1       |
| Taoasis GmbH       | Juniper wood oil | 604898-109389 | 1       |
| AHC 20.07 13 250ml | Turpentine oil   | 13106701      | 1       |
| AHD                | Turpentine oil   | 16199705      | 1       |
| apo Ident / Noweda | Turpentine oil   | 1511012-01    | 1       |
| Caelo              | Turpentine oil   | 14242701      | 1       |
| Caelo              | Turpentine oil   | 11127905      | 1       |
| Caelo              | Turpentine oil   | 14071201      | 1       |
| Caelo              | Turpentine oil   | 412M-02022    | 1       |
| Caelo              | Turpentine oil   | 10296303      | 1       |
| Caelo              | Turpentine oil   | 19061310      | 1       |

*continued on the next page*

continued from previous page

| Supplier                   | Substance      | Batch        | Spectra |
|----------------------------|----------------|--------------|---------|
| Caelo                      | Turpentine oil | 1424703      | 1       |
| Caelo                      | Turpentine oil | 14242703     | 2       |
| Caelo                      | Turpentine oil | 24544454     | 1       |
| Caelo                      | Turpentine oil | 15185106     | 4       |
| Caelo                      | Turpentine oil | 15185110     | 3       |
| Caelo                      | Turpentine oil | 16199705     | 7       |
| Caelo                      | Turpentine oil | 16199712     | 6       |
| Caelo                      | Turpentine oil | 17150902     | 2       |
| Caelo                      | Turpentine oil | 16199709     | 1       |
| Caelo                      | Turpentine oil | 19129905     | 4       |
| Caelo                      | Turpentine oil | 15185101     | 6       |
| Caelo                      | Turpentine oil | 13378804     | 3       |
| Caelo                      | Turpentine oil | 13106701     | 9       |
| Caelo                      | Turpentine oil | 24(18110801) | 1       |
| Caelo                      | Turpentine oil | 12383201     | 1       |
| Caelo                      | Turpentine oil | 11358910     | 7       |
| Caelo                      | Turpentine oil | 11358903     | 5       |
| Caelo                      | Turpentine oil | 14012601     | 2       |
| Caelo                      | Turpentine oil | 15084003     | 2       |
| Caelo                      | Turpentine oil | 23(16199709) | 1       |
| Caelo                      | Turpentine oil | 11127908     | 2       |
| Caelo                      | Turpentine oil | 16199172     | 1       |
| Caelo                      | Turpentine oil | 18110801     | 10      |
| Caelo                      | Turpentine oil | 16199701     | 7       |
| Caelo                      | Turpentine oil | 18047301     | 3       |
| Caelo                      | Turpentine oil | 192206007    | 2       |
| Caelo                      | Turpentine oil | 192206011    | 1       |
| Caelo                      | Turpentine oil | 161990709    | 1       |
| Caesar & Loretz GmbH       | Turpentine oil | 18110801     | 2       |
| Caesar & Loretz GmbH/No... | Turpentine oil | 18110801     | 1       |
| Euro OTC                   | Turpentine oil | 981772       | 3       |
| Euro OTC                   | Turpentine oil | 1511012-01   | 1       |
| Euro OTC                   | Turpentine oil | 711Q-03557   | 2       |
| Euro OTC                   | Turpentine oil | 1503007-01   | 2       |
| Euro OTC                   | Turpentine oil | 1703005-01   | 1       |
| Euro OTC                   | Turpentine oil | 1210016-01   | 4       |
| Fiebig                     | Turpentine oil | 15185101     | 1       |
| Fiebig                     | Turpentine oil | 18110801     | 1       |
| Gehe                       | Turpentine oil | 16199705     | 1       |
| Kögl                       | Turpentine oil | 1700151      | 1       |
| Euro OTC                   | Turpentine oil | 1407037-01   | 1       |
| Phoenix Göttingen 07.01... | Turpentine oil | 18047301     | 1       |
| Phönix                     | Turpentine oil | 13378804     | 1       |
| Sanacorp                   | Turpentine oil | 13106701     | 1       |
| Sanacorp                   | Turpentine oil | 12383210     | 1       |
| Sanacorp                   | Turpentine oil | 16199712     | 2       |
| Sanacorp WE:12.01.2017 ... | Turpentine oil | 16199701     | 1       |
| Euro OTC                   | Turpentine oil | 1806017-01   | 2       |
| Schiele                    | Turpentine oil | 55379        | 1       |
| Caelo                      | Cypress oil    | 16130501     | 1       |
| Caelo                      | Cypress oil    |              | 1       |
| Caelo                      | Turpentine oil | 12383210     | 3       |
| Schiele/Phönix             | Turpentine oil |              | 1       |

- 241 195 spectra from 1121 *Apo-Ident* customers from a total of 46 948 batches from a further 340 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#),

the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Wood oils* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Wood oils* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 540           | 0              | 63 399        |
| <b>Type B</b> | 0              | 280           | 0              | 91 211        |
| <b>Type C</b> | 0              | 164           | 4              | 241 195       |

The substance/substance group *Wood oils* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9797 %) | 100.0000 % (> 98.8889 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 97.8571 %) |
| <b>Type C</b> | 100.0000 % (> 99.6849 %) | 97.6190 % (> 95.8333 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Wood oils* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Myrtle oil                    | 19.55                  | —                              |
| Eucalyptus oil                | 22.02                  | —                              |
| Pine silvestris oil           | 22.36                  | —                              |
| Cajeput (essentiel oil)       | 24.85                  | —                              |
| Rosemary oil                  | 26.75                  | —                              |
| Cineole                       | 32.28                  | —                              |
| Dwarf pine oil                | 36.40                  | —                              |
| Caraway oil                   | 41.54                  | —                              |
| Spearmint oil                 | 42.77                  | —                              |
| Spruce needle oil             | 44.29                  | —                              |
| Verbena oil, nature-identical | 46.51                  | —                              |
| Sage oil                      | 47.56                  | —                              |
| Citric oil                    | 48.25                  | —                              |
| Juniper oil                   | 48.45                  | —                              |
| Peppermint oil                | 49.78                  | —                              |
| Cedar wood oil                | 53.83                  | —                              |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Wood oils* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

#### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 30710     | 31201               | 3.38                         | 37.02                           |
| 30860     | 31201               | 5.02                         | 37.25                           |
| 31201     | 31201               | 0.00                         | 36.50                           |
| 31214     | 31214               | 0.00                         | 32.65                           |
| 31531     | 31214               | 2.67                         | 34.03                           |
| 31815     | 31815               | 0.00                         | 29.11                           |
| 31837     | 31837               | 0.00                         | 26.74                           |
| 32183     | 32183               | 0.00                         | 28.08                           |
| 32317     | 32317               | 0.00                         | 30.68                           |
| 33232     | 33232               | 0.00                         | 33.09                           |
| 33310     | 33310               | 0.00                         | 33.37                           |
| 34644     | 34644               | 0.00                         | 34.61                           |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50% greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

|                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| Validated substance/substance group | Wool alcohols creams                                             |
| Substance class                     | APIs & excipients, liquid/semi-solid (with analysis certificate) |
| Report date                         | 08/11/2021                                                       |
| Report number                       | 34567-2021-11-08                                                 |
| Executing company                   | HiperScan GmbH<br>Weißeritzstraße 3<br>01067 Dresden<br>Germany  |

### Relevant substance names

Wool alcohols creams; Eucerin® cum Aqua; Lanae alcoholum unguentum aquosum DAB; Unguentum Alcoholum Lanae aquosum SR; Wool alcohol cream DAB; Wool alcohol cream SR

### Special notes

When selecting the *Wool alcohols creams* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Wool alcohols creams      | 39     | 95     | 93     |

## Second-stage model

For differentiation of the substance/substance group *Wool alcohols creams* the following second-stage model is used:

- [Submodel 06](#)

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Wool alcohols creams*:

| Supplier  | Substance                     | Batch     | Sample ID | Spectra | Certificate |
|-----------|-------------------------------|-----------|-----------|---------|-------------|
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 191776    | 34778     | 40      | 20190711*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 13369401  | 34877     | 40      | 20131111    |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 13369401  | 34878     | 40      | 1406055     |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 14126801  | 34879     | 40      | 20140415    |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153608    | 34880     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153608    | 34881     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153608    | 34882     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153609    | 34883     | 60      | 20151103*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153611    | 34885     | 60      | 20151106*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153613    | 34887     | 60      | 20151106*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153615    | 34889     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153615    | 34890     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153616    | 34891     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153616    | 34892     | 60      | 20151029*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153617    | 34893     | 60      | 20151103*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 153617    | 34894     | 60      | 20151103*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 160901    | 34898     | 40      | 20160414*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 161994    | 34922     | 40      | 20160928*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 161994    | 34923     | 40      | 20160928*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 161994    | 34924     | 40      | 20160928*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 163129    | 34926     | 40      | 20161111*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170394    | 34935     | 40      | 20170214*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170395    | 34936     | 40      | 20170209*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170398    | 34937     | 40      | 20170221*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170396    | 34940     | 40      | 20170214*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170401    | 34947     | 40      | 20170217*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 170397    | 34948     | 40      | 20170214*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 172848    | 34961     | 40      | 20171023*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 20003755  | 35421     | 40      | 20210113*   |
| Caelo     | Eucerin <sup>®</sup> cum Aqua | 21002261  | 35632     | 50      | 20210802*   |
| Bombastus | Wool alcohol cre. ...         | 284945    | 34567     | 40      | 1406054     |
| Bombastus | Wool alcohol cre. ...         | 18006845  | 34578     | 40      | 130371      |
| Caelo     | Wool alcohol cre. ...         | 13394101  | 34568     | 30      | 1509376     |
| Caelo     | Wool alcohol cre. ...         | 161776    | 34569     | 40      | 20160615*   |
| Caelo     | Wool alcohol cre. ...         | 191472    | 34795     | 40      | 20190605*   |
| Caelo     | Wool alcohol cre. ...         | 192261    | 34796     | 40      | 20190905*   |
| Caelo     | Wool alcohol cre. ...         | 192673    | 34797     | 40      | 20191030*   |
| Caelo     | Wool alcohol cre. ...         | 21001567  | 35612     | 50      | 20210617*   |
| apomix    | Wool alcohol cre. ...         | 07A210519 | 34593     | 40      | 20190521    |
| Bombastus | Wool alcohol cre. ...         | 19000025  | 34591     | 40      | 130668      |
| Bombastus | Wool alcohol cre. ...         | 18004726  | 34592     | 40      | 127526      |
| Caelo     | Wool alcohol cre. ...         | 13272603  | 34585     | 70      | 20130829    |
| Caelo     | Wool alcohol cre. ...         | 14031601  | 34586     | 40      | 1512182     |
| Caelo     | Wool alcohol cre. ...         | 160143    | 34587     | 40      | 20160121*   |
| Caelo     | Wool alcohol cre. ...         | 161208    | 34588     | 40      | 20160503*   |
| Caelo     | Wool alcohol cre. ...         | 20002190  | 35094     | 40      | 20200728*   |
| Caelo     | Wool alcohol cre. ...         | 21001786  | 35611     | 50      | 20210617*   |



## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 2170 spectra of 47 reference samples from the substance/substance group *Wool alcohols creams*. These samples are listed above in the *calibration samples* section. The reference samples come from 39 different batches.
- 61 769 spectra from a total of 1268 batches from further 221 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this *chemometric model*, the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in *Appendix A*. The samples in *Appendix A* were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

**Type B** Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 4280 spectra of 104 reference samples from the substance/substance group *Wool alcohols creams*.
- Among them are spectra of independent samples from 95 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

| Supplier | Substance                     | Batch    | Sample ID | Spectra |
|----------|-------------------------------|----------|-----------|---------|
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 192122   | 34779     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 12205402 | 34876     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 153610   | 34884     | 60      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 153612   | 34886     | 60      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 153614   | 34888     | 60      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160078   | 34895     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160899   | 34896     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160900   | 34897     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160902   | 34899     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160903   | 34900     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160904   | 34901     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160905   | 34902     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160906   | 34903     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 160907   | 34904     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161122   | 34905     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161578   | 34906     | 40      |

*continued on the next page*

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

*continued from previous page*

| <b>Supplier</b> | <b>Substance</b>              | <b>Batch</b> | <b>Sample ID</b> | <b>Spectra</b> |
|-----------------|-------------------------------|--------------|------------------|----------------|
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161577       | 34908            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161579       | 34909            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161580       | 34910            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161581       | 34912            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161992       | 34916            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161993       | 34919            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 161989       | 34925            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 163131       | 34927            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 162779       | 34928            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 162782       | 34929            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 162783       | 34930            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 162781       | 34931            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 162823       | 34932            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 163130       | 34933            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 170392       | 34934            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 170399       | 34938            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 170400       | 34939            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 163407       | 34941            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 163409       | 34942            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 163410       | 34943            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171028       | 34944            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171027       | 34945            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171026       | 34946            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171487       | 34949            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171490       | 34950            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171492       | 34951            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171876       | 34952            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171877       | 34953            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171878       | 34954            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171879       | 34955            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 171880       | 34956            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 172844       | 34957            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 172845       | 34958            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 172846       | 34959            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 172847       | 34960            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001463     | 34968            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001065     | 34969            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003021     | 35166            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000611     | 35408            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000612     | 35409            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000613     | 35410            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000614     | 35411            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000615     | 35412            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000616     | 35413            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000617     | 35414            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000618     | 35415            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000619     | 35416            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000620     | 35417            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003751     | 35418            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003752     | 35419            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003754     | 35420            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003756     | 35422            | 40             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21001566     | 35509            | 50             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21001565     | 35510            | 50             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21002262     | 35633            | 50             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21002263     | 35634            | 50             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21002264     | 35635            | 50             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21002265     | 35636            | 50             |
| Caelo           | Wool alcohol cream DAB        | 12036401     | 34566            | 40             |
| Caelo           | Wool alcohol cream DAB        | 161774       | 34570            | 40             |

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| Supplier | Substance                     | Batch     | Sample ID | Spectra |
|----------|-------------------------------|-----------|-----------|---------|
| Caelo    | Wool alcohol cream DAB        | 161778    | 34571     | 40      |
| Caelo    | Wool alcohol cream DAB        | 163441    | 34572     | 40      |
| Caelo    | Wool alcohol cream DAB        | 170941    | 34573     | 40      |
| Caelo    | Wool alcohol cream DAB        | 171783    | 34574     | 40      |
| Caelo    | Wool alcohol cream DAB        | 171782    | 34575     | 40      |
| Caelo    | Wool alcohol cream DAB        | 180234    | 34576     | 40      |
| Caelo    | Wool alcohol cream DAB        | 180863    | 34577     | 40      |
| Caelo    | Wool alcohol cream DAB        | 190110    | 34579     | 40      |
| Caelo    | Wool alcohol cream DAB        | 20001083  | 34849     | 40      |
| Caelo    | Wool alcohol cream DAB        | 21000023  | 35325     | 40      |
| Caelo    | Wool alcohol cream DAB        | 21001024  | 35326     | 40      |
| apomix   | Wool alcohol cream SR         | 06A210519 | 34594     | 40      |
| Caelo    | Wool alcohol cream SR         | 162490    | 34589     | 40      |
| Caelo    | Wool alcohol cream SR         | 172287    | 34590     | 40      |
| Caelo    | Wool alcohol cream SR         | 191774    | 34794     | 40      |
| Caelo    | Wool alcohol cream SR         | 19000612  | 34983     | 40      |
| Caelo    | Wool alcohol cream SR         | 20003437  | 35156     | 40      |
| Caelo    | Wool alcohol cream SR         | 21000336  | 35327     | 40      |
| Caelo    | Wool alcohol cream SR         | 21001225  | 35328     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161578    | 34907     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161580    | 34911     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161577    | 34913     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161578    | 34914     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161579    | 34915     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161992    | 34917     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161992    | 34918     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161993    | 34920     | 40      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 161993    | 34921     | 40      |

- 87 211 spectra from a total of 1921 batches from further 343 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 469 spectra from 165 *Apo-Ident* customers from 93 batches from the substance/substance group *Wool alcohols creams*.
- Among them are spectra of independent samples from 93 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance                     | Batch       | Spectra |
|----------|-------------------------------|-------------|---------|
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 20001068001 | 4       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 19177701    | 20      |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 18262403    | 1       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 19040701    | 4       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 19040601    | 3       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 19115601    | 8       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 18115401    | 1       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 18331901    | 1       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 19178001    | 6       |
| Caelo    | Eucerin <sup>®</sup> cum Aqua | 3426        | 1       |

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| <b>Supplier</b> | <b>Substance</b>              | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|-------------------------------|---------------|----------------|
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19177801      | 5              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19177604      | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19212201      | 12             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19279802      | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19226301      | 3              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19267401      | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000768002   | 8              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000772001   | 7              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003022002   | 4              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2000146001    | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000611001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001070003   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003752001   | 3              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001067001   | 11             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 200002056002  | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003754001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19279801      | 11             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2100061001    | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115701      | 5              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000769001   | 7              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001066001   | 15             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000773002   | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 18104101      | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 1177901       | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2001070003    | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003756001   | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19040602      | 5              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000767001   | 13             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20002058001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 18262501      | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000401      | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 1917701       | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001461001   | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000768001   | 10             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001465001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2000100003    | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19259503      | 16             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2000166001    | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 21000612001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115301      | 7              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19259601      | 24             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001467001   | 9              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003755001   | 8              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19057902      | 4              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115201      | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19268601      | 9              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19212101      | 19             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115402      | 9              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 1921101       | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19000771001   | 7              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 2000375560001 | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003022001   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115401      | 17             |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19040801      | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 3450          | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 190000767001  | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20001462001   | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 20003756004   | 1              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19115501      | 2              |
| Caelo           | Eucerin <sup>®</sup> cum Aqua | 19212302      | 6              |

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| Supplier                   | Substance                     | Batch        | Spectra |
|----------------------------|-------------------------------|--------------|---------|
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 200001066001 | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 19177601     | 15      |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 19177802     | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 1900768001   | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001098001  | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001463001  | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001464001  | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001466001  | 9       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001460002  | 5       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20003020003  | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20003019001  | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20003756002  | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 1098277      | 2       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 19177901     | 8       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 21000616001  | 3       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001069001  | 5       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19057902     | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19115601     | 2       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19115501     | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19115301     | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19177701     | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19212101     | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19000768001  | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 19000768002  | 2       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 20001462001  | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 20003752001  | 1       |
| Caesar & Loretz GmbH       | Eucerin <sup>®</sup> cum Aqua | 20003755001  | 1       |
| Caesar & Loretz GmbH / ... | Eucerin <sup>®</sup> cum Aqua | 19177601     | 1       |
| Caesar & Loretz GmbH/AEP   | Eucerin <sup>®</sup> cum Aqua | 19115601     | 1       |
| Caesar & Loretz GmbH/AEP   | Eucerin <sup>®</sup> cum Aqua | 19178101     | 4       |
| Caesar & Loretz GmbH/AEP   | Eucerin <sup>®</sup> cum Aqua | 19000771001  | 1       |
| Caesar & Loretz GmbH/AEP   | Eucerin <sup>®</sup> cum Aqua | 19000772001  | 1       |
| Caesar & Loretz GmbH/Al... | Eucerin <sup>®</sup> cum Aqua | 19212301     | 1       |
| Caesar & Loretz GmbH/Kr... | Eucerin <sup>®</sup> cum Aqua | 19177802     | 2       |
| Caesar & Loretz GmbH/Ph... | Eucerin <sup>®</sup> cum Aqua | 20001460001  | 1       |
| Caesar & Loretz GmbH/Sa... | Eucerin <sup>®</sup> cum Aqua | 19259503     | 2       |
| Caesar & Loretz GmbH/Sa... | Eucerin <sup>®</sup> cum Aqua | 20001065001  | 1       |
| Caleo                      | Eucerin <sup>®</sup> cum Aqua | 19478101     | 1       |
| Cealo                      | Eucerin <sup>®</sup> cum Aqua | 19115501     | 1       |
| Cealo/11                   | Eucerin <sup>®</sup> cum Aqua | 19177802     | 1       |
| Cealo/Gehe                 | Eucerin <sup>®</sup> cum Aqua | 200001067001 | 1       |
| Gehe                       | Eucerin <sup>®</sup> cum Aqua | 19000767001  | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 20001065001  | 10      |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 19115301     | 1       |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 19177701     | 1       |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 19212101     | 2       |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 19259601     | 2       |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 20001067001  | 2       |
| Noweda                     | Eucerin <sup>®</sup> cum Aqua | 20001466001  | 1       |
| Phönix Gotha               | Eucerin <sup>®</sup> cum Aqua | 19177901     | 1       |
| Phönix Gotha               | Eucerin <sup>®</sup> cum Aqua | 19000771001  | 1       |
| Caelo                      | Eucerin <sup>®</sup> cum Aqua | 190007690012 | 1       |
| Sanacorp                   | Eucerin <sup>®</sup> cum Aqua | 19000401     | 1       |
| Sanacorp                   | Eucerin <sup>®</sup> cum Aqua | 19115301     | 1       |

- 240894 spectra from 1121 *Apo-Ident* customers from a total of 46949 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#),

the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Wool alcohols creams* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Wool alcohols creams* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|        | False positive | True positive | False negative | True negative |
|--------|----------------|---------------|----------------|---------------|
| Type A | 0              | 2170          | 0              | 61 769        |
| Type B | 0              | 4280          | 0              | 87 211        |
| Type C | 0              | 466           | 3              | 233 519       |

The substance/substance group *Wool alcohols creams* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|        | Specificity              | Recognition rate         |
|--------|--------------------------|--------------------------|
| Type A | 100.0000 % (> 99.9797 %) | 100.0000 % (> 99.7235 %) |
| Type B | 100.0000 % (> 99.9655 %) | 100.0000 % (> 99.8598 %) |
| Type C | 100.0000 % (> 99.6837 %) | 99.3603 % (> 98.7207 %)  |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

## Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Wool alcohols creams* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance                     | Distance in main model | Distance in second-stage model |
|-------------------------------|------------------------|--------------------------------|
| Base cream DAC                | 17.32                  | 26.66                          |
| Psorisol base cream Audor®    | 33.39                  | —                              |
| Lanette® ointment (conserved) | 36.78                  | 17.20                          |
| Non-ionic hydrophil ointment  | 37.55                  | 13.03                          |
| ⋮                             | ⋮                      | ⋮                              |
| 2-ethylhexyl laurate          | >50                    | 175.57                         |
| Squalane                      | >50                    | 191.93                         |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Wool alcohols creams* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.



### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference sample ID | Distance to reference sample | Distance to next foreign sample |
|-----------|---------------------|------------------------------|---------------------------------|
| 34567     | 34567               | 0.00                         | 22.88                           |
| 34568     | 34568               | 0.00                         | 31.13                           |
| 34569     | 34569               | 0.00                         | 28.40                           |
| 34578     | 34883               | 3.67                         | 28.34                           |
| 34585     | 34890               | 5.93                         | 24.49                           |
| 34586     | 34586               | 0.00                         | 27.12                           |
| 34587     | 34587               | 0.00                         | 22.40                           |
| 34588     | 34588               | 0.00                         | 22.23                           |
| 34591     | 34883               | 5.73                         | 22.21                           |
| 34592     | 34883               | 5.16                         | 25.64                           |
| 34593     | 34586               | 7.92                         | 24.14                           |
| 34778     | 34778               | 0.00                         | 21.15                           |
| 34795     | 34795               | 0.00                         | 25.02                           |
| 34796     | 34796               | 0.00                         | 24.59                           |
| 34797     | 34797               | 0.00                         | 25.33                           |
| 34877     | 34878               | 1.69                         | 27.10                           |
| 34878     | 34878               | 0.00                         | 25.98                           |
| 34879     | 34883               | 2.07                         | 32.44                           |
| 34880     | 34880               | 0.00                         | 27.91                           |
| 34881     | 34881               | 0.00                         | 28.04                           |
| 34882     | 34882               | 0.00                         | 29.03                           |
| 34883     | 34883               | 0.00                         | 29.79                           |
| 34885     | 34885               | 0.00                         | 28.40                           |
| 34887     | 34887               | 0.00                         | 21.73                           |
| 34889     | 34889               | 0.00                         | 24.22                           |
| 34890     | 34890               | 0.00                         | 26.08                           |
| 34891     | 34891               | 0.00                         | 25.40                           |
| 34892     | 34892               | 0.00                         | 23.84                           |
| 34893     | 34893               | 0.00                         | 24.38                           |
| 34894     | 34894               | 0.00                         | 21.85                           |
| 34898     | 34898               | 0.00                         | 31.19                           |
| 34922     | 34922               | 0.00                         | 25.65                           |
| 34923     | 34923               | 0.00                         | 26.31                           |
| 34924     | 34924               | 0.00                         | 24.70                           |
| 34926     | 34926               | 0.00                         | 22.91                           |
| 34935     | 34935               | 0.00                         | 27.31                           |
| 34936     | 34936               | 0.00                         | 27.67                           |
| 34937     | 34937               | 0.00                         | 27.27                           |
| 34940     | 34940               | 0.00                         | 26.55                           |
| 34947     | 34947               | 0.00                         | 30.98                           |
| 34948     | 34948               | 0.00                         | 27.27                           |
| 34961     | 34961               | 0.00                         | 28.70                           |
| 35094     | 35094               | 0.00                         | 19.14                           |
| 35421     | 35421               | 0.00                         | 25.65                           |
| 35611     | 35611               | 0.00                         | 24.86                           |
| 35612     | 35612               | 0.00                         | 26.71                           |

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| <b>Sample ID</b> | <b>Reference<br/>sample ID</b> | <b>Distance to<br/>reference sample</b> | <b>Distance to<br/>next foreign sample</b> |
|------------------|--------------------------------|-----------------------------------------|--------------------------------------------|
| 35632            | 35632                          | 0.00                                    | 29.81                                      |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

# VALIDATION REPORT

## IdentModule 2.4-2021-04

Validated substance/substance group **Wormwood oil**  
Substance class APIs & excipients, liquid/semi-solid (with analysis certificate)  
Report date 08/11/2021  
Report number 30846-2021-11-08  
Executing company HiperScan GmbH  
Weißeritzstraße 3  
01067 Dresden  
Germany

### Relevant substance names

Wormwood oil; Oleum absinthii

### Special notes

When selecting the *Wormwood oil* substance/substance group, the following information is displayed to the user:

*no information*

### Applicable documents

978-3-7692-7517-9 *European Pharmacopoeia 10th Edition, Basic Version 2020* [3]  
Komm2.2.40 *Erfüllung von Ph. Eur. 2.2.40 durch Apo-Ident* [4]  
AA004 *Erstellung und Validierung eines IdentModul-Updates*

### Validation method

Validation is performed after every change to the chemometric model (also “database”) in three steps:

1. The chemometric model is calculated from the calibration spectra using a *PCA algorithm*. The calibration spectra originate from the calibration samples of all substances in this class.
2. In the *chemometric model* generated, the distances between all separable substances are checked for compliance with the specified safety distances.
3. All spectra are presented to the generated chemometric model for evaluation. In three runs, the reference spectra (*Type A*), spectra from independent samples (*Type B*), and spectra from the field (*Type C*) are presented successively. Here, no single *false positive* result is permitted.

Finally, a report is generated from the validation run results and is archived together with the parameters of the model generation in audit-compliant manner.

### Number of independent samples (batches) in calibration and validation

A sample is considered independent if no sample from the same batch has been included in the calibration of the chemometric model.

| Substance/substance group | Type A | Type B | Type C |
|---------------------------|--------|--------|--------|
| Wormwood oil              | 4      | 2      | 4      |

## Second-stage model

For differentiation of the substance/substance group *Wormwood oil* the following second-stage model is used:

*no second-stage model*

## Calibration samples

Only spectra which have been recorded by *HiperScan GmbH* from traceable samples are used for the generation of the [chemometric models](#). The following samples have been obtained from the substance/substance group *Wormwood oil*:

| Supplier | Substance    | Batch    | Sample ID | Spectra | Certificate |
|----------|--------------|----------|-----------|---------|-------------|
| Caelo    | Wormwood oil | 11346603 | 30846     | 40      | 20111208    |
| Caelo    | Wormwood oil | 13347703 | 31198     | 40      | 1403146     |
| Caelo    | Wormwood oil | 13347704 | 31423     | 60      | 20131028    |
| Caelo    | Wormwood oil | 13347704 | 31424     | 60      | 20131028    |
| Caelo    | Wormwood oil | 182940   | 34451     | 40      | 20181108*   |

## Validation samples

A total of 396 793 spectra were provided for validation. The results were evaluated separately according to the following sample categories:

### Type A All calibration spectra.

- 240 spectra of 5 reference samples from the substance/substance group *Wormwood oil*. These samples are listed above in the [calibration samples](#) section. The reference samples come from 4 different batches.
- 63 699 spectra from a total of 1303 batches from further 223 substances. These spectra were recorded by *HiperScan GmbH*. *Type A* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type A* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix A](#). The samples in [Appendix A](#) were added for model generation not with the intention to have the model identify these substances, but with the intention to make the model reject them despite their similarity to substances identifiable.

### Type B Spectra from independent samples not included in the database structure. Measurement is carried out by *HiperScan GmbH*.

Samples from batches of which no spectra have been included in the database structure are considered as independent samples. The number of batches from which independent samples supplied *Type B* spectra for validation is shown below, representing the number of independent *Type B* samples. Samples, of which some of the spectra have been included in the database structure and other spectra in the validation, are marked with a <sup>†</sup>. The following applies to the remaining unmarked samples: In the same batch, there was at least one additional sample (other sales container, other sample ID) from which reference spectra (*Type A*) were included in the database structure.

- 80 spectra of 2 reference samples from the substance/substance group *Wormwood oil*.
- Among them are spectra of independent samples from 2 batches from which no spectra have been included in the database structure. They are sorted upwards in the following table and separated from the additional samples by a line.

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.

| Supplier | Substance    | Batch    | Sample ID | Spectra |
|----------|--------------|----------|-----------|---------|
| Caelo    | Wormwood oil | 15316909 | 33508     | 40      |
| Caelo    | Wormwood oil | 170389   | 33904     | 40      |

- 91 411 spectra from a total of 2014 batches from further 345 substances. These spectra were recorded by *HiperScan GmbH*. *Type B* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type B* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix B](#).

**Type C** Spectra of independent samples not included in the database structure. *Apo-Ident* customers carry out the measurements. *HiperScan GmbH* generally does not verify the information provided by the customer regarding manufacturer and batch number.

- 7 spectra from 4 *Apo-Ident* customers from 4 batches from the substance/substance group *Wormwood oil*.
- Among them are spectra of independent samples from 4 batches from which no spectra have been included in the database structure. These are sorted upwards in the following table.

| Supplier | Substance    | Batch      | Spectra |
|----------|--------------|------------|---------|
| Caelo    | Wormwood oil | 12197809   | 1       |
| Caelo    | Wormwood oil | 17038903   | 1       |
| Voegele  | Wormwood oil | 2013109402 | 3       |
| Vögele   | Wormwood oil | 2017115182 | 2       |

- 241 356 spectra from 1121 *Apo-Ident* customers from a total of 47 002 batches from a further 342 substances. These spectra were recorded by *Apo-Ident* customers. *Type C* samples are documented within this entire report. If the substance can be identified with this [chemometric model](#), the samples are listed in the *Type C* section of each substance page. If the substance cannot be identified by this model, the samples are listed in [Appendix C](#).

## Validation results

The validation runs checked whether the substance/substance group *Wormwood oil* can clearly be distinguished from all other substances using NIR spectroscopy with *Apo-Ident*. For this purpose, all relevant spectra of the various substances were compared with *Wormwood oil* and it was evaluated how many matches (positive) and rejections (negative) were correct or incorrect. The following table breaks down the numbers of correct and incorrect results according to the expected result (*positive/negative*) and the validation spectrum type (*A/B/C*).

|               | False positive | True positive | False negative | True negative |
|---------------|----------------|---------------|----------------|---------------|
| <b>Type A</b> | 0              | 240           | 0              | 63 699        |
| <b>Type B</b> | 0              | 80            | 0              | 91 411        |
| <b>Type C</b> | 0              | 7             | 0              | 241 356       |

The substance/substance group *Wormwood oil* can be clearly distinguished from all other substances. In order to make these figures comparable, the weighted *true negative rate (specificity)* and the weighted *true positive rate (recognition rate)* are determined:

|               | Specificity              | Recognition rate         |
|---------------|--------------------------|--------------------------|
| <b>Type A</b> | 100.0000 % (> 99.9798 %) | 100.0000 % (> 97.5000 %) |
| <b>Type B</b> | 100.0000 % (> 99.9656 %) | 100.0000 % (> 92.5000 %) |
| <b>Type C</b> | 100.0000 % (> 99.6861 %) | n/a (n/a)                |

In order to ensure that each substance is entered with the same weight irrespective of the number of spectra available, each spectrum is weighted with the reciprocal value of its number. (If several new spectra of a substance with a very distinctive spectrum are added, the values for *specificity* and *recognition rate* are safer, but are by no means idealised.)

In order to illustrate the impact of the number of spectra, a comparison is made in parentheses as to how the *specificity* or *recognition rate* would worsen if three additional incorrect results were to exist amongst the spectra (*Rule of Three* [10, 11]). The larger the number of spectra, the lower the deterioration if the three hypothetical *incorrect results* were added.

Where the number of spectra does not exceed 20, no *recognition rate* is provided.

### Nearest chemometric neighbours

The following table lists the closest chemometric neighbours of the substance/substance group *Wormwood oil* in the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*. Furthermore, their *Mahalanobis distance* is specified within the main model and, where appropriate, within the second-stage model.

| Substance    | Distance in<br>main model | Distance in<br>second-stage model |
|--------------|---------------------------|-----------------------------------|
| Bergamot oil | 72.16                     | —                                 |

The list stops after the first substance with a *Mahalanobis distance* greater than 50. If the substance/substance group *Wormwood oil* is separated from critical neighbours in a second-stage model, all the remaining substances in the second-stage model follow.

### Identity according to identity test using NIR spectroscopy

For each substance, a certificate of the correct identity is obtained from an independent GMP-certified test laboratory. If the identity of the sample can be provided using NIR on an independently tested reference sample, in the following table the *Mahalanobis distance* to the reference sample is specified as well as the *Mahalanobis distance* to the next non-identical substance:

| Sample ID | Reference<br>sample ID | Distance to<br>reference sample | Distance to<br>next foreign sample |
|-----------|------------------------|---------------------------------|------------------------------------|
| 30846     | 31198                  | 5.08                            | 76.37                              |
| 31198     | 31198                  | 0.00                            | 75.75                              |
| 31423     | 31198                  | 2.15                            | 74.78                              |
| 31424     | 31198                  | 1.76                            | 75.23                              |
| 34451     | 34451                  | 0.00                            | 68.25                              |

The identity of a sample will be confirmed by NIR if the distance to the next foreign sample is at least 50 % greater than the distance to a reference sample whose identity has been established by laboratory testing. This criterion is always considered in the chemometric model, which contains all substances of the substance class, even if a second-stage dissolves a subgroup of similar substances, thereby increasing the distances between them. The samples confirmed by NIR support the statistical variance of the original reference substance, but cannot add new aspects or forms of the substance.

## ***Appendix A: Additional calibration samples (Type A)***

Substance spectra also enter the generation of the [chemometric model](#) which cannot be identified with this model. This serves the purpose that substances which the model is not supposed to recognise are safely rejected. The spectra of these samples are entered into the validation as *Type A*. They were recorded by *HiperScan GmbH*.

The samples originate from 2 batches. From these, 80 spectra were recorded. The calibration spectra of substances which can be identified with the model are listed respectively in the section *calibration samples* for the individual substances and do not appear again elsewhere in this list.

| Supplier    | Substance              | Batch        | Spectra | Certificate |
|-------------|------------------------|--------------|---------|-------------|
| Caelo       | Coal tar solution      | 182919       | 40      | 20190226*   |
| Hänseler AG | Cooling cream Ph.Helv. | 2019.02.0611 | 40      | 20190320    |

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.





## Appendix B: Additional validation samples (*Type B*)

It is necessary that spectra also enter the validation which cannot be identified with this model. In this manner, it is verified that the model also rejects unknown substances. The spectra for these samples were recorded by *HiperScan GmbH*. They are allocated to the *Type B*. They also include the calibration spectra for other models.

The samples originate from 170 batches. From these 7455 spectra were recorded. The spectra recorded on independent samples of substances which can be identified with the model are listed respectively in the section *Type B* for the individual substances and do not appear again elsewhere in this list.

| Supplier    | Substance                                           | Batch        | Spectra | Certificate |
|-------------|-----------------------------------------------------|--------------|---------|-------------|
| Caelo       | Acorus tincture (70%) 1:5                           | 11355109     | 40      | 20111212    |
| Caelo       | Aloe vera oil                                       | 190953       | 40      | 20190412*   |
| Hedinger    | Ammonia solution 10%<br>DAB                         | 027138       | 40      | 20130423    |
| Hänseler AG | Anionic hydrophilic cream<br>Ph.Helv.               | 2018.09.0249 | 40      | 20181012    |
| Fagron      | Apricot aroma                                       | 13D08-N08    | 30      | 1407103     |
| Caelo       | Arnica oil, fat                                     | 191060       | 40      | 20190718*   |
| Maros       | Arnica root mother tincture<br>D1                   | U3606        | 40      | 20120817    |
| Caelo       | Aromatic tincture (70%) 1:5                         | 11355009     | 40      | 20111212    |
| Maros       | Ash bark mother tincture                            | U3264        | 40      | 20111110    |
| Caelo       | Basil oil                                           | 11346902     | 40      | 20111208    |
| Caelo       | Basil oil                                           | 13153601     | 40      | 1404505     |
| Caelo       | Basil oil                                           | 13395803     | 40      | 20131211    |
| Caelo       | Belladonna tincture, stan-<br>dardised (70%) 1:10   | 190191       | 40      | 20190205*   |
| apomix      | Betamethasone valerate 1%                           | 01B200912    | 40      | 20120925    |
| Maros       | Bilberry leaf mother tinc-<br>ture                  | U3749        | 40      | 20130228    |
| Caelo       | Bitter tincture (70%) 1:5                           | 11380108     | 60      | 20120105    |
| Maros       | Bittersweet stalks mother<br>tincture               | U3320        | 40      | 20120229    |
| Maros       | Black cohosh mother tinc-<br>ture                   | U3668        | 40      | 20121220    |
| Maros       | Boldo leaf mother tincture                          | U3502        | 30      | 20120402    |
| Maros       | Bryony root mother tincture                         | U3269        | 40      | 20111207    |
| Maros       | Burnet root mother tincture                         | U3600        | 30      | 20120821    |
| Caelo       | Calendula oil, fat                                  | 13287203     | 40      | 1403102     |
| Caelo       | Calendula oil, fat                                  | 14063403     | 40      | 20140307    |
| Caelo       | Camphor oil 10%                                     | 13317402     | 40      | 1509155     |
| Caelo       | Camphor oil 10%                                     | 13317402     | 60      | 20131022    |
| Gatt-Koller | Camphor spirit (ÖAB)                                | 18.00514     | 40      | 1809577     |
| Euro OTC    | Capsaicin liquid extract 3%                         | 1205038-02   | 40      | 1406349     |
| Euro OTC    | Capsaicin liquid extract 3%                         | 1205038-01   | 40      | 20120601    |
| Caelo       | Carmelite water                                     | 14001202     | 40      | 20140109    |
| Caelo       | Carotene (ca. 4m IU)                                | 12139305     | 40      | 1402564     |
| Caelo       | Cayenne pepper tincture,<br>standardised (85%) 1:10 | 11102412     | 40      | 20110407    |
| Hänseler AG | Cetylic ointment Ph.Helv.                           | 2018.09.0016 | 40      | 20180924    |
| Caelo       | Chinchona bark tincture,<br>standardised (70%)      | 11275507     | 40      | 20110929    |
| Euro OTC    | Cholecalciferol concentrate<br>(oily form)          | 2107025      | 50      | 20210820*   |
| apomix      | Clobatesol propionate 0,5%                          | 01B200912    | 40      | 20120924    |
| Ichthyol    | Clobetasol 0.5% Cordes®<br>RK                       | 11D034       | 40      | 20111205    |

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| Supplier    | Substance                                           | Batch            | Spectra | Certificate   |
|-------------|-----------------------------------------------------|------------------|---------|---------------|
| Maros       | Common broom mother tincture                        | R4688            | 40      | 20100806      |
| Maros       | Common wormwood mother tincture                     | U2448            | 40      | 20110329      |
| Maros       | Coneflower herb, purple mother tincture             | U3041            | 40      | 20111005      |
| Ichthyol    | Cordes® base solution                               | 19B006           | 40      | 20190819      |
| Ichthyol    | Cordes® base solution                               | 20B0004          | 40      | 20200713      |
| Ratiopharm  | Corticoid-ratiopharm 0.1% cream                     | L30263           | 40      | from supplier |
| apomix      | Dexamethasone 1% (non-ionic, hydrophilic cream SR)  | 04A270513        | 40      | 20130527      |
| Caelo       | Dimethyl isosorbide                                 | 15230402         | 60      | 1603485       |
| Caelo       | Dimethyl isosorbide                                 | 15427602         | 60      | 20160210      |
| Caelo       | Dimethyl isosorbide                                 | 16170904         | 40      | 20160714      |
| Caelo       | Dimethyl isosorbide                                 | 17169803         | 40      | 20170620      |
| apomix      | Epinephrine solution 0,1% SR                        | 04A160712        | 40      | 20120727      |
| Maros       | Fennel fruit tincture 1:5                           | 6996             | 40      | 20120614      |
| Maros       | Figwort mother tincture                             | U3623            | 40      | 20120917      |
| Caelo       | Food colorant yellow (E102; E124)                   | 12022212         | 40      | 20120127      |
| Caelo       | Formic acid 85%                                     | 13373301         | 60      | 20131118      |
| Caelo       | Ginger oil                                          | 163186           | 40      | 20161213*     |
| Caelo       | Ginger oil                                          | 15042113         | 40      | 20150217      |
| Maros       | Ginkgo leaf mother tincture                         | U2834            | 40      | 20100806      |
| Maros       | Golden rod herb tincture 1:5                        | 6737             | 30      | 20120227      |
| Maros       | Horehound herb mother tincture                      | U2929            | 40      | 20091215      |
| Caelo       | Hyoscyamus oil                                      | 162692           | 40      | 20160930*     |
| Fagron      | Iron (III) subsulfate solution                      | 17J23-B12-342837 | 40      | 20171221      |
| Caelo       | Larch terpentine                                    | 161264           | 60      | 20160428*     |
| Caelo       | Lavender spirit                                     | 13300803         | 50      | 1403101       |
| Caelo       | Lavender spirit                                     | 13300803         | 60      | 20130917      |
| Ichthyol    | Lipo Lotio Cordes®                                  | 19D009           | 40      | 20190520      |
| Maros       | Lovage root mother tincture                         | U3389            | 40      | 20120417      |
| Caelo       | Macadamia oil, refined                              | 13012102         | 40      | 1407349       |
| Caelo       | Macadamia oil, refined                              | 14179304         | 60      | 20140611      |
| Caelo       | Macadamia oil, refined                              | 170556           | 40      | 20170302*     |
| BASF        | Macrogol 15 hydroxystearate                         | 58730647G0       | 40      | 20200831      |
| BASF        | Macrogol 15 hydroxystearate                         | 75389809T0       | 40      | 20201021      |
| BASF        | Macrogol 15 hydroxystearate                         | 01732356P0       | 40      | 20200617      |
| Hänseler AG | Macrogol ointment Ph.Helv.                          | 2018.11.0534     | 40      | 20181129      |
| Hänseler AG | Macrogol ointment Ph.Helv.                          | 2018.01.0313     | 40      | 20180116      |
| Maros       | Matricaria flower mother tincture                   | U3347            | 40      | 20121121      |
| Caelo       | Matricaria flower tincture (70%) 1:5                | 11269917         | 40      | 20110928      |
| Caelo       | Matricaria oil, fat                                 | 12189803         | 40      | 20120713      |
| Caelo       | Matricaria oil, fat                                 | 14001103         | 40      | 20120713      |
| apomix      | Metronidazole 10% (non-ionic, hydrophilic cream SR) | 07B110913        | 40      | 1403475       |
| Maros       | Mistletoe mother tincture                           | U2932            | 40      | 20100225      |
| Maros       | Monk's pepper fruit mother tincture D1              | U3476            | 40      | 20120524      |
| Maros       | Motherwort herb mother tincture                     | U2785            | 40      | 20120125      |

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| Supplier      | Substance                                                 | Batch            | Spectra | Certificate   |
|---------------|-----------------------------------------------------------|------------------|---------|---------------|
| Maros         | Motherwort herb tincture 1:5                              | 6997             | 40      | 20120905      |
| Caelo         | Nettle herb liquid extract                                | 14176902         | 40      | 1501199       |
| Maros         | Nettle mother tincture                                    | U3633            | 40      | 20121219      |
| Caelo         | Nettle root tincture (70%) 1:5                            | 11187409         | 40      | 20110705      |
| Caelo         | Nettle tincture (70%) 1:5                                 | 11108801         | 40      | 20110412      |
| Hänseler AG   | Nonionic hydrophilic ointment Ph.Helv.                    | 2018.05.0237     | 40      | 20180615      |
| Caelo         | Orange flower oil, artificial                             | 13067705         | 40      | 20130304      |
| Caelo         | Orange flower oil, artificial                             | 13067707         | 40      | 1404598       |
| Caelo         | Orange flower water                                       | 12238104         | 40      | 20120816      |
| Staufen-Pharm | Oxalic acid D30 vial                                      | 09.05.12         | 80      | from supplier |
| Caelo         | Peanut oil, hydrated                                      | 13339803         | 40      | 20131105      |
| Maros         | Pelargonium root mother tincture                          | 01028113         | 40      | 20121030      |
| Caelo         | Pepsin wine                                               | 12277403         | 60      | 20120921      |
| Caelo         | Pepsin wine                                               | 14339802         | 45      | 1503624       |
| Caelo         | Pepsin wine                                               | 15449301         | 60      | 20160118      |
| Caelo         | Pepsin wine                                               | 15449303         | 40      | 20160118      |
| Caelo         | Peru balsam, original                                     | 12302401         | 40      | 20121017      |
| Caelo         | Peru balsam, original                                     | 14223909         | 60      | 1703349       |
| Fagron        | Peru balsam, original                                     | 13F13-N04        | 40      | 1502255       |
| Fagron        | Phytomenadione, racemic                                   | 20A17-F04-369209 | 40      | 20200401      |
| Caelo         | Plantain herb liquid extract (35%) 1:1                    | 11332613         | 40      | 20111129      |
| Caelo         | Polyacrylic acid gel pH 6,5 (NRF p. 43)                   | 173012           | 40      | 20171027*     |
| apomix        | Prednisolone 1% (non-ionic - hydrophilic cream SR)        | 07A031212        | 40      | 20121207      |
| apomix        | Prednisolone 1% (non-ionic - hydrophilic cream SR)        | 01A100113        | 40      | 20130110      |
| Caelo         | Prednisolone acetate concentrate 10% basis white paraffin | 13077701         | 100     | 20130313      |
| Caelo         | Primrose root liquid extract 1:1                          | 12175307         | 100     | 1404596       |
| Caelo         | Primrose root liquid extract 1:1                          | 13330110         | 60      | 20130930      |
| Caelo         | Propolis liquid extract 10% (in propylene glycol)         | 11220406         | 40      | 20110829      |
| Caelo         | Propolis liquid extract 10% (in propylene glycol)         | 13347602         | 40      | 1404589       |
| Caelo         | Propolis liquid extract 10% (in propylene glycol)         | 13347606         | 60      | 20131030      |
| Bombastus     | Propolis tincture 20%                                     | 273005           | 40      | 20120712      |
| Bombastus     | Propolis tincture 20%                                     | 273005           | 40      | 20120712      |
| Caelo         | Pyroligneous acid, purified                               | 12023203         | 40      | 20120130      |
| Maros         | Ribwort plantain tincture 1:5                             | 6736             | 40      | 20120227      |
| Maros         | Robert herb mother tincture                               | U3720            | 40      | 20111127      |
| Maros         | Rosemary leaf mother tincture D1                          | U3238            | 40      | 20110531      |
| Caelo         | Sage leaf liquid extract (55%) 1:1                        | 11372203         | 40      | 20120102      |
| apomix        | Searing paste SR                                          | 04B130418        | 40      | 20180416      |
| Caelo         | Siam benzoin tincture (90%) 1:5                           | 13169905         | 50      | 1405623       |

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| Supplier    | Substance                                                   | Batch        | Spectra | Certificate        |
|-------------|-------------------------------------------------------------|--------------|---------|--------------------|
| Hedinger    | Sodium hypochlorite solution 1%                             | 045226       | 40      | 20170110           |
| Euro OTC    | Sodium lactate solution 60%                                 | 1201037-01   | 60      | 20120224           |
| Euro OTC    | Sodium lactate solution 60%                                 | 1310007-01   | 60      | 20140217           |
| Euro OTC    | Sodium lactate solution 60%                                 | 1310007-01   | 40      | AR-17-FG-012458-01 |
| Euro OTC    | Sodium lactate solution 60%                                 | 1310007-01   | 40      | 20140217           |
| EDQM        | Squalene                                                    | 1.0          | 40      | CRS                |
| Caelo       | St. John's wort oil                                         | 12076913     | 40      | 20120323           |
| Caelo       | St. John's wort oil                                         | 13389218     | 40      | 20131210           |
| Maros       | St. John's wort oil                                         | 9712         | 40      | 20121102           |
| Caelo       | Standardised cayenne pepper extract (80%) 4-7:1             | 13259103     | 20      | 20130926           |
| Maros       | Strophanthus seed mother tincture D1                        | 01028513     | 40      | 20121210           |
| Maros       | Sundew herb mother tincture                                 | U3354        | 40      | 20120917           |
| Bene        | Tacholiniquin® 1% solution                                  | 350K121      | 40      | from supplier      |
| Maros       | Teasel root mother tincture                                 | U3685        | 40      | 20121114           |
| Maros       | Tetterwort mother tincture                                  | U3063        | 40      | 20110905           |
| Caelo       | Texapon® CS paste                                           | 12292001     | 40      | 20121010           |
| Caelo       | Texapon® CS paste                                           | 12292006     | 40      | 20121010           |
| Caelo       | Texapon® CS paste                                           | 14087206     | 60      | 1501415            |
| Caelo       | Texapon® CS paste                                           | 16268901     | 40      | 20160915           |
| Caelo       | Texapon® CS paste                                           | 16268901     | 40      | 20160915           |
| Caelo       | Thyme liquid extract                                        | 13273613     | 60      | 20130819           |
| apomix      | Triamcinolone acetonide 1% (non-ionic, hydrophile cream SR) | 01A210513    | 40      | 20130521           |
| apomix      | Triamcinolone acetonide 1% (non-ionic, hydrophile cream SR) | 09C111212    | 40      | 20121212           |
| Caelo       | Triamcinolone acetonide concentrate 2% base white paraffin  | 12250701     | 70      | 20120830           |
| Caelo       | Valerian root liquid extract                                | 13343703     | 60      | 20131017           |
| Caelo       | Vitamin A-palmitate (ca. 1 m I.U./g)                        | 12132910     | 60      | 20120516           |
| Maros       | Waterhorehound herb mother tincture                         | U3388        | 40      | 20120203           |
| Maros       | Willow bark tincture 1:5                                    | 6865         | 40      | 20120604           |
| Caelo       | Witch hazel bark liquid extract (45%) 1:1                   | 13357902     | 40      | 1407627            |
| Caelo       | Witch hazel bark liquid extract (45%) 1:1                   | 13357902     | 40      | 20131107           |
| Caelo       | Witch hazel leaf liquid extract (45%) 1:1                   | 12165010     | 40      | 20120628           |
| Maros       | Wood violet mother tincture                                 | U2222        | 40      | 20120511           |
| Hänseler AG | Wool wax Ph.Helv.                                           | 2017.10.0158 | 40      | 20171114           |
| Caelo       | Wormwood tincture (70%) 1:5                                 | 12237901     | 40      | 20120829           |
| Maros       | Yam mother tincture                                         | 32210        | 40      | 20111020           |
| Caelo       | Ylang-ylang oil                                             | 12040606     | 40      | 20120301           |
| Caelo       | Ylang-ylang oil                                             | 14192905     | 60      | 20140730           |
| Caelo       | Ylang-ylang oil                                             | 15101104     | 60      | 9203               |
| Caelo       | Ylang-ylang oil                                             | 15101104     | 60      | 20150330           |
| Caelo       | Ylang-ylang oil                                             | 15101109     | 40      | 20150330           |
| Caelo       | Ylang-ylang oil                                             | 15101109     | 40      | 20150330           |
| Caelo       | Ylang-ylang oil                                             | 163148       | 40      | 20161213*          |
| Caelo       | Ylang-ylang oil                                             | 16314804     | 40      | 20161213           |

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| <b>Supplier</b> | <b>Substance</b>                      | <b>Batch</b> | <b>Spectra</b> | <b>Certificate</b> |
|-----------------|---------------------------------------|--------------|----------------|--------------------|
| apomix          | Zinc oxide cream 25% SR (NRF 11.109)  | 02B220119    | 40             | 20190123           |
| Henry Lamotte   | Zinc oxide lotion, aqueous DAC        | 5375600      | 40             | 20121026           |
| Caelo           | Zinc oxide oil DAC                    | 12289802     | 40             | 20121107           |
| apomix          | Zinc oxide paste SR90                 | 01A190218    | 40             | 20180220           |
| apomix          | Zinc oxide paste, soft SR90           | 31B141117    | 40             | 20171114           |
| Caelo           | Zinc oxide shaking mixture, ethanolic | 20001114002  | 50             | 20200504           |
| Henry Lamotte   | Zinc paste, soft DAB                  | 5374900      | 40             | 20120918           |
| Caelo           | Zinc paste, soft DRF (stabilised)     | 12378402     | 80             | 20121220           |

\*The spectra were taken from a part of the same sample which the supplier used for its analysis (identity, purity, content). In this case the manufacturer certificates proof the identity and quality of the sample from those the spectra descend.



## Appendix C: Additional validation samples (*Type C*)

Spectra for substances from the field which cannot be identified with this model also enter the validation. In this manner, it is verified that the model also rejects unknown substances. The spectra for these samples were recorded by *Apo-Ident* customers. They belong to *Type C*. The information provided by the customer regarding the manufacturer and batch number is taken over by *HiperScan GmbH* to a large extent unchecked.

The samples originate from 4310 batches. From these, 15 791 spectra were recorded. The spectra recorded on independent samples of substances from the field which can be identified with the model are listed respectively in the section *Type C* for the individual substances and do not appear again elsewhere in this list.

| Supplier                         | Substance                  | Batch              | Spectra |
|----------------------------------|----------------------------|--------------------|---------|
| Caelo                            | Acorus tincture (70%) 1:5  | 11355115           | 1       |
| Caelo                            | Acorus tincture (70%) 1:5  | 11355110           | 2       |
| Caelo                            | Acorus tincture (70%) 1:5  | 13051001           | 2       |
| Caelo                            | Acorus tincture (70%) 1:5  | 19121322           | 1       |
| Anzag<br>ek:10.21EUR<br>27.08... | Alcoholic liniment         | 12103301           | 1       |
| Caelo                            | Alcoholic liniment         | 2507212316         | 1       |
| Caelo                            | Alcoholic liniment         | 204312316          | 1       |
| Caelo                            | Alcoholic liniment         | 34365645645        | 1       |
| Caelo                            | Alcoholic liniment         | 445255             | 1       |
| Caelo                            | Alcoholic liniment         | 2612M-02925        | 1       |
| Caelo                            | Alcoholic liniment         | 12103312           | 1       |
| Caelo                            | Alcoholic liniment         | 12103319           | 1       |
| Caelo                            | Alcoholic liniment         | 5213E2316          | 1       |
| Caelo                            | Aloe vera oil              | 11014807           | 2       |
| Caelo                            | Aloe vera oil              | 12033104           | 1       |
| Caelo                            | Aloe vera oil              | 11014806           | 1       |
| Caelo                            | Aloe vera oil              | 12033106           | 1       |
| Caelo                            | Aloe vera oil              | 12033108           | 1       |
| Caelo                            | Aloe vera oil              | 12033111           | 1       |
| Caelo                            | Aloe vera oil              | 123033108          | 1       |
| Caelo                            | Aloe vera oil              | 12033114           | 2       |
| Caelo                            | Aloe vera oil              | 12383702           | 3       |
| Caelo                            | Aloe vera oil              | 12383703           | 3       |
| Caelo                            | Aloe vera oil              | 12383706           | 5       |
| Caelo                            | Aloe vera oil              | 12033107           | 1       |
| Caelo                            | Aloe vera oil              | 12033113           | 4       |
| Caelo                            | Aloe vera oil              | 12033101           | 1       |
| Caelo                            | Aloe vera oil              | 11014804           | 1       |
| Caesar § Lorenz GmbH             | Aloe vera oil              | 12383707           | 1       |
| Primavera                        | Aloe vera oil              | 8601131            | 1       |
| Taoasis                          | Aloe vera oil              | 110137-96542       | 1       |
| Taoasis                          | Aloe vera oil              | 120247-107323      | 1       |
| Taoasis                          | Aloe vera oil              | 111208-105327      | 1       |
| Taoasis                          | Aloe vera oil              | 120247-106498      | 1       |
| Taoasis                          | Aloe vera oil              | 130237-111659      | 1       |
| Taoasis                          | Aloe vera oil              | 130501-112371      | 1       |
| Taoasis                          | Aloe vera oil              | 130237-112020BAG94 | 1       |
| Taoasis GmbH                     | Aloe vera oil              | 130237             | 1       |
| Maros                            | Angelica root tincture 1:5 | 1028713            | 2       |
| Maros                            | Angelica root tincture 1:5 | 8030113            | 1       |
| Caelo                            | Apricot aroma              | 14C19-B30-292291   | 1       |
| Caelo                            | Arnica oil, fat            | 11096702           | 1       |
| Caelo                            | Arnica oil, fat            | 12088504           | 3       |
| Caelo                            | Arnica oil, fat            | Sanacorb           | 1       |
| Caelo                            | Arnica oil, fat            | 12359703           | 1       |
| Caelo                            | Arnica oil, fat            | 13186604           | 1       |

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| Supplier | Substance                  | Batch       | Spectra |
|----------|----------------------------|-------------|---------|
| Caelo    | Arnica oil, fat            | 13186601    | 2       |
| Caelo    | Arnica oil, fat            | 13042503    | 3       |
| Caelo    | Arnica oil, fat            | 13186602    | 1       |
| Taoasis  | Arnica oil, fat            | 7360-111366 | 1       |
| Taoasis  | Arnica oil, fat            | 7360-112511 | 1       |
| Taoasis  | Arnica oil, fat            | 7525-113064 | 1       |
| Taoasis  | Arnica oil, fat            | 7360-111459 | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 10341801    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 10362814    | 3       |
| Caelo    | Arnica tincture (70%) 1:10 | 10362820    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031001    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031004    | 2       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031008    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 12301009    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 20090312-4  | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 10362809    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031015    | 7       |
| Caelo    | Arnica tincture (70%) 1:10 | 26031301    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 10362805    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 13094609    | 5       |
| Caelo    | Arnica tincture (70%) 1:10 | 8111301     | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 13094607    | 3       |
| Caelo    | Arnica tincture (70%) 1:10 | 13094610    | 2       |
| Caelo    | Arnica tincture (70%) 1:10 | 10362815    | 2       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031017    | 7       |
| Caelo    | Arnica tincture (70%) 1:10 | 13094613    | 1       |
| Caelo    | Arnica tincture (70%) 1:10 | 12031009    | 4       |
| Caelo    | Arnica tincture (70%) 1:10 | 13094612    | 2       |
| Caelo    | Arnica tincture (70%) 1:10 | 1213A-02398 | 1       |
| Euro OTC | Arnica tincture (70%) 1:10 | 1211003-01  | 4       |
| Euro OTC | Arnica tincture (70%) 1:10 | 120404601   | 1       |
| Euro OTC | Arnica tincture (70%) 1:10 | 1204046-01  | 4       |
| Euro OTC | Arnica tincture (70%) 1:10 | 1306038-01  | 1       |
| Euro OTC | Arnica tincture (70%) 1:10 | 1112029-01  | 1       |
| Lamotte  | Arnica tincture (70%) 1:10 | 5139400     | 1       |
| Teofarma | Arnica tincture (70%) 1:10 | 144301      | 1       |

| Supplier                 | Substance                         | Batch    | Spectra |
|--------------------------|-----------------------------------|----------|---------|
| Caelo                    | Basil oil                         | 13153601 | 1       |
| Caelo                    | Belladonna tincture, standardi... | 11322611 | 2       |
| Caelo                    | Belladonna tincture, standardi... | 12315101 | 1       |
| Caelo                    | Belladonna tincture, standardi... | 12315104 | 2       |
| Caelo                    | Belladonna tincture, standardi... | 12315111 | 2       |
| Caelo                    | Belladonna tincture, standardi... | 13273004 | 1       |
| Caelo                    | Belladonna tincture, standardi... | 11322615 | 1       |
| Caelo                    | Benzalkonium chloride             | 12033403 | 2       |
| Caelo                    | Benzalkonium chloride             | 12033411 | 1       |
| Caelo                    | Benzalkonium chloride             | 13307902 | 1       |
| Caelo                    | Benzalkonium chloride             | 13070201 | 1       |
| Caelo                    | Benzalkonium chloride             | 13070206 | 6       |
| Caesar & Loretz GmbH,... | Benzalkonium chloride             | 12033407 | 2       |
| Sanacorp                 | Benzalkonium chloride             | 10190002 | 1       |
| apomix                   | Benzalkonium chloride solution... | 4a210515 | 1       |
| Apomix                   | Benzalkonium chloride solution... | 6B060912 | 1       |
| Apomix                   | Benzalkonium chloride solution... | 3A170413 | 2       |
| Apomix direkt            | Benzalkonium chloride solution... | 2B070313 | 1       |
| Apomix direkt            | Benzalkonium chloride solution... | 4A110713 | 2       |
| Caelo                    | Benzoic lard (stabilised)         | 12063902 | 1       |

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| Supplier                 | Substance                         | Batch     | Spectra |
|--------------------------|-----------------------------------|-----------|---------|
| Alliance HealthCare 1... | Betamethasone valerate 1%         | 10B060613 | 1       |
| Anzag/04.04.2013         | Betamethasone valerate 1%         | 3B280213  | 1       |
| Apomix                   | Betamethasone valerate 1%         | 9B160413  | 1       |
| apomix/phoenix           | Betamethasone valerate 1%         | 13C031213 | 1       |
| Ichthyol                 | Betamethason-V 1.22% Cordes® RK   | 11D001    | 56      |
| Ichthyol                 | Betamethason-V 1.22% Cordes® RK   | 11D01     | 1       |
| Ichthyol                 | Betamethason-V 1.22% Cordes® RK   | 11D035    | 99      |
| Ichthyol                 | Betamethason-V 1.22% Cordes® RK   | 11/2015   | 1       |
| Ichthyol/Jenne           | Betamethason-V 1.22% Cordes® RK   | 12D015    | 24      |
| Ichthyol/Jenne           | Betamethason-V 1.22% Cordes® RK   | 12D015    | 2       |
| Maros                    | Bitter candytuft fresh plant t... | 5408      | 1       |
| Maros                    | Bitter candytuft fresh plant t... | 5433      | 1       |
| Caelo                    | Bitter orange tincture (70%) 1:5  | 27072013  | 1       |
| Caelo                    | Bitter orange tincture (70%) 1:5  | 13003302  | 1       |
| Caelo                    | Bitter orange tincture (70%) 1:5  | 12231906  | 2       |
| Caelo                    | Bitter orange tincture (70%) 1:5  | 13003301  | 1       |
| Caelo                    | Bitter orange tincture (70%) 1:5  | 13003309  | 1       |
| Gehe                     | Bitter orange tincture (70%) 1:5  | 11187211  | 1       |
| Gehrlicher/Gehrlicher    | Burnet root mother tincture       | U3600     | 1       |

| Supplier        | Substance                    | Batch         | Spectra |
|-----------------|------------------------------|---------------|---------|
| Caelo           | Calendula mother tincture    | 12117313      | 1       |
| Caelo           | Calendula oil, fat           | 12189901      | 1       |
| Caelo           | Calendula oil, fat           | 11274801      | 2       |
| Caelo           | Calendula oil, fat           | 11183102      | 1       |
| Caelo           | Calendula oil, fat           | 12216901      | 2       |
| Caelo           | Calendula oil, fat           | 13185402      | 4       |
| Caelo           | Calendula oil, fat           | 14001004      | 2       |
| Caelo           | Calendula oil, fat           | 13251002      | 3       |
| Caelo           | Calendula oil, fat           | 12373103      | 1       |
| Caelo           | Calendula oil, fat           | 13069603      | 1       |
| Caelo           | Calendula oil, fat           | 12373101      | 2       |
| Caelo           | Calendula oil, fat           | 12006802      | 3       |
| Caelo           | Calendula oil, fat           | 122116904     | 1       |
| Caelo           | Calendula oil, fat           | 13251002/1    | 1       |
| Caelo           | Calendula oil, fat           | 13355701      | 1       |
| Caelo           | Calendula oil, fat           | 13185401      | 2       |
| Caelo           | Calendula oil, fat           | 12373102      | 3       |
| Caelo           | Calendula oil, fat           | 13355702      | 2       |
| Caesar u Loretz | Calendula oil, fat           | 13251004      | 1       |
| Caelo           | Calendula oil, fat           | 13251003      | 4       |
| Klenk           | Calendula oil, fat           | 12308503      | 1       |
| Caelo           | Calendula oil, fat           | 12189903      | 2       |
| Caelo           | Calendula oil, fat           | 12216904      | 1       |
| Caelo           | Calendula oil, fat           | 12308502      | 2       |
| Caelo           | Calendula oil, fat           | 13069601      | 1       |
| Taoasis         | Calendula oil, fat           | 119426-108734 | 1       |
| Taoasis         | Calendula oil, fat           | 119943-110316 | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 10260111      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 11143803      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 11332710      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 12117305      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 12117308      | 2       |
| Caelo           | Calendula tincture (70%) 1:5 | 11332702      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 19061311      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 13142803      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 12117320      | 1       |
| Caelo           | Calendula tincture (70%) 1:5 | 13142802      | 2       |
| Caelo           | Calendula tincture (70%) 1:5 | 12117311      | 1       |

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| Supplier                 | Substance                    | Batch       | Spectra |
|--------------------------|------------------------------|-------------|---------|
| Caelo                    | Calendula tincture (70%) 1:5 | 12117301    | 3       |
| Caelo                    | Calendula tincture (70%) 1:5 | 12117310    | 2       |
| Caelo                    | Calendula tincture (70%) 1:5 | 12117312    | 3       |
| Caelo                    | Calendula tincture (70%) 1:5 | 12117313    | 1       |
| Caelo                    | Calendula tincture (70%) 1:5 | 12117317    | 5       |
| Caelo                    | Calendula tincture (70%) 1:5 | 13142804    | 7       |
| Anzag 27.12.12 ek:5,19   | Camphor oil 10%              | 12269502    | 10      |
| Berkel AHK               | Camphor oil 10%              | 15028001    | 3       |
| Caelo                    | Camphor oil 10%              | 14139202    | 2       |
| Caelo                    | Camphor oil 10%              | 15028003    | 1       |
| Caelo                    | Camphor oil 10%              | 14139201    | 1       |
| Caelo                    | Camphor oil 10%              | 18082015A   | 1       |
| Caelo                    | Camphor oil 10%              | 15028002    | 1       |
| Caelo                    | Camphor oil 10%              | 15028003    | 1       |
| Caelo                    | Camphor oil 10%              | 15338202    | 2       |
| Caelo                    | Camphor oil 10%              | 15338201    | 1       |
| Caelo                    | Camphor oil 10%              | 15338202    | 1       |
| Caelo                    | Camphor oil 10%              | 16085205    | 1       |
| Caelo                    | Camphor oil 10%              | 12269501    | 1       |
| Caelo                    | Camphor oil 10%              | 13317401    | 4       |
| Caelo                    | Camphor oil 10%              | 13043901    | 2       |
| Caelo                    | Camphor oil 10%              | 15208001    | 1       |
| Caelo                    | Camphor oil 10%              | 13317402    | 10      |
| Caelo                    | Camphor oil 10%              | 15338201    | 1       |
| Caelo                    | Camphor oil 10%              | 16085201    | 2       |
| L12                      | Camphor oil 10%              | 16085202    | 2       |
| Midas                    | Camphor oil 10%              | 17003105    | 3       |
| Euro OTC                 | Camphor oil 10%              | 15338204    | 2       |
| phönix                   | Camphor oil 10%              | 7/AKD57     | 1       |
| Caelo                    | Camphor oil 10%              | 14139202    | 4       |
| Caelo                    | Camphor oil 10%              | 15028004    | 2       |
| Caelo                    | Camphor oil 10%              | 15338205    | 1       |
| Sanacorp                 | Camphor oil 10%              | 7/AKD4      | 1       |
| Caelo                    | Carbomer gel 1%              | 1102D002    | 1       |
| Fagron                   | Carbomer gel 1%              | 1211D010    | 3       |
| Fagron                   | Carbomer gel 1%              | 1309D002    | 1       |
| Fagron                   | Carbomer gel 1%              | 1302D002    | 7       |
| Fagron                   | Carbomer gel 1%              | 1309D001    | 1       |
| Caelo                    | Carotene (ca. 4m IU)         | 19186005    | 1       |
| Caelo                    | Carotene (ca. 4m IU)         | 19091603    | 1       |
| Caelo                    | Carotene (ca. 4m IU)         | 13008404    | 1       |
| Caelo                    | Carotene (ca. 4m IU)         | 17192406    | 2       |
| Caelo                    | Carotene (ca. 4m IU)         | 19044803    | 5       |
| Caelo                    | Carotene (ca. 4m IU)         | 18086105    | 3       |
| Resena/Anzag             | Carotene (ca. 4m IU)         | 1204-3534   | 1       |
| AHD                      | Castor oil, hydrated         | 278661      | 1       |
| Anzag 19.12.2012         | Castor oil, hydrated         | 273882      | 3       |
| Anzag 29.04.13 ek: 3,... | Castor oil, hydrated         | 13096304    | 1       |
| Bombastus                | Castor oil, hydrated         | 266593      | 1       |
| Bombastus                | Castor oil, hydrated         | 269565      | 3       |
| Bombastus                | Castor oil, hydrated         | 270580      | 5       |
| Bombastus                | Castor oil, hydrated         | 264468      | 1       |
| Bombastus                | Castor oil, hydrated         | 26956512-13 | 1       |
| Bombastus                | Castor oil, hydrated         | 275938      | 1       |
| Bombastus                | Castor oil, hydrated         | 271754      | 2       |
| Bombastus                | Castor oil, hydrated         | 266591      | 1       |
| Bombastus                | Castor oil, hydrated         | 272591      | 1       |
| Bombastus                | Castor oil, hydrated         | 255179      | 1       |
| Caelo                    | Castor oil, hydrated         | 8061201     | 1       |
| Caelo                    | Castor oil, hydrated         | 16071201    | 1       |

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| Supplier         | Substance                         | Batch       | Spectra |
|------------------|-----------------------------------|-------------|---------|
| Caelo            | Castor oil, hydrated              | 11260604    | 1       |
| Caelo            | Castor oil, hydrated              | 4101201     | 1       |
| Caelo            | Castor oil, hydrated              | 12114603    | 3       |
| Caelo            | Castor oil, hydrated              | 25011301    | 1       |
| Caelo            | Castor oil, hydrated              | 14199604    | 1       |
| Caelo            | Castor oil, hydrated              | 14101703    | 1       |
| Caelo            | Castor oil, hydrated              | 11359502    | 2       |
| Caelo            | Castor oil, hydrated              | 12114606    | 1       |
| Caelo            | Castor oil, hydrated              | 11359508    | 6       |
| Caelo            | Castor oil, hydrated              | 12071101    | 1       |
| Caelo            | Castor oil, hydrated              | 11359507    | 1       |
| Caelo            | Castor oil, hydrated              | 12114605    | 2       |
| Caelo            | Castor oil, hydrated              | 11260603    | 2       |
| Caelo            | Castor oil, hydrated              | 11260609    | 1       |
| EuRho            | Castor oil, hydrated              | 1212008-01  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1112002-02  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1109001-01  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1910212009  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1202041-02  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1512212009  | 1       |
| Euro OTC         | Castor oil, hydrated              | 1206039-01  | 2       |
| Euro OTC         | Castor oil, hydrated              | 120204-01   | 1       |
| Euro OTC         | Castor oil, hydrated              | 1206039-02  | 2       |
| Fagron           | Castor oil, hydrated              | 10L02-N03   | 1       |
| Gehe             | Castor oil, hydrated              | 1311012     | 1       |
| Bombastus        | Castor oil, hydrated              | 273390      | 13      |
| H.Lamotte/Noweda | Castor oil, hydrated              | 5280301     | 2       |
| H.Lamotte/Noweda | Castor oil, hydrated              | 123384      | 1       |
| Caelo            | Castor oil, hydrated              | 11359501    | 2       |
| Caelo            | Castor oil, hydrated              | 12114602    | 3       |
| lamotte          | Castor oil, hydrated              | 5188401     | 2       |
| Lamotte / Gehe   | Castor oil, hydrated              | 5138701     | 2       |
| Noweda           | Castor oil, hydrated              | 268877      | 1       |
| Euro OTC         | Castor oil, hydrated              | 2507213553  | 1       |
| Phoenix          | Castor oil, hydrated              | 11325205    | 2       |
| Phoenix          | Castor oil, hydrated              | 12071107    | 1       |
| Phönix Gotha     | Castor oil, hydrated              | 12H29-N04   | 2       |
| Phönix Gotha     | Castor oil, hydrated              | 12H29-N04   | 1       |
| Caelo            | Castor oil, hydrated              | 12042103    | 2       |
| Caelo            | Cayenne pepper tincture, stand... | 13072013    | 1       |
| Caelo            | Cayenne pepper tincture, stand... | 11102425    | 1       |
| Caelo            | Cayenne pepper tincture, stand... | 11102419    | 1       |
| Caelo            | Cayenne pepper tincture, stand... | 12207111    | 2       |
| Phönix           | Cayenne pepper tincture, stand... |             | 1       |
| Bombastus        | Chinese cinnamon oil              | 263892      | 1       |
| Bombastus        | Chinese cinnamon oil              | 262660      | 1       |
| Bombastus        | Chinese cinnamon oil              | 269558      | 1       |
| Nachprüfung      | Chinese cinnamon oil              |             | 1       |
| Caelo            | Cinchona bark tincture, compos... | 13069808    | 1       |
| Maros/Maros      | Cistus tincture 1:5               | 11027812    | 1       |
| apomix           | Clobetasol propionate 0,5%        | 1A20213     | 1       |
| Noweda/apomix    | Clobetasol propionate 0,5%        | 13A131113   | 1       |
| Phoenix/Apomix   | Clobetasol propionate 0,5%        | 6A070513    | 1       |
| ichthyol         | Clobetasol 0.5% Cordes® RK        | 5112M-03390 | 1       |
| ichthyol         | Clobetasol 0.5% Cordes® RK        | 1713M-03390 | 1       |
| Ichthyol         | Clobetasol 0.5% Cordes® RK        | 11D003      | 12      |
| Ichthyol         | Clobetasol 0.5% Cordes® RK        | 9D035       | 1       |
| Ichthyol         | Clobetasol 0.5% Cordes® RK        | 11D034      | 24      |
| Ichthyol         | Clobetasol 0.5% Cordes® RK        | 10D024      | 1       |
| Ichthyol         | Clobetasol 0.5% Cordes® RK        | 12d012      | 1       |

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| Supplier             | Substance                              | Batch        | Spectra |
|----------------------|----------------------------------------|--------------|---------|
| Ichtyvol             | Clobetasol 0.5% Cordes <sup>®</sup> RK | 12D012       | 14      |
| Caelo                | Coal tar solution                      | 11319204     | 5       |
| Caelo                | Coal tar solution                      | 9345509      | 2       |
| Caelo                | Coal tar solution                      | 9345510      | 1       |
| Caelo                | Coal tar solution                      | 9345406      | 1       |
| Caelo                | Coal tar solution                      | 27071207     | 1       |
| Caelo                | Coal tar solution                      | 113192017    | 1       |
| Caelo                | Coal tar solution                      | 12286103     | 23      |
| Caelo                | Coal tar solution                      | 13193703     | 4       |
| Caelo                | Coal tar solution                      | 13193713     | 2       |
| Caelo                | Coal tar solution                      | 14331403     | 1       |
| Caelo                | Coal tar solution                      | 14331401     | 1       |
| Caelo                | Coal tar solution                      | 14331402     | 1       |
| Caelo                | Coal tar solution                      | 14331509     | 1       |
| Caelo                | Coal tar solution                      | 14331506     | 1       |
| Caelo                | Coal tar solution                      | 15203703     | 1       |
| Caelo                | Coal tar solution                      | 11319207     | 10      |
| Caelo                | Coal tar solution                      | 90391069     | 2       |
| Caelo                | Coal tar solution                      | 15203704     | 1       |
| Caelo                | Coal tar solution                      | 11319209     | 1       |
| Caelo                | Coal tar solution                      | 9039201      | 1       |
| Caelo                | Coal tar solution                      | 11319203     | 1       |
| Caelo                | Coal tar solution                      | 24131-01799  | 1       |
| Caesar & Loretz GmbH | Coal tar solution                      | 72816068     | 1       |
| Euro OTC             | Coal tar solution                      | 1110031-01   | 6       |
| Euro OTC             | Coal tar solution                      | 1110031-03   | 1       |
| Euro OTC             | Coal tar solution                      | 1110031      | 2       |
| Euro OTC             | Coal tar solution                      | 1307027-01   | 2       |
| Fagron               | Coal tar solution                      | 11F21-N01    | 3       |
| Fagron               | Coal tar solution                      | 20230712-6   | 1       |
| Fagron               | Coal tar solution                      | 12L05-N02    | 4       |
| Fagron               | Coal tar solution                      | 13H06-N02    | 9       |
| Fagron               | Coal tar solution                      | 16102013B    | 1       |
| Fagron               | Coal tar solution                      | 13H06N02     | 1       |
| Fagron               | Coal tar solution                      | 18061301     | 1       |
| Fagron               | Coal tar solution                      | 13I26-N02    | 1       |
| Fagron               | Coal tar solution                      | 2011.07.0288 | 2       |
| Fagron               | Coal tar solution                      | 12E08-N01    | 3       |
| Fagron               | Coal tar solution                      | 4513E1799    | 1       |
| Fagron               | Coal tar solution                      | 11/05-N12    | 1       |
| Fagron               | Coal tar solution                      | 12E08-N08    | 1       |
| Fagron               | Coal tar solution                      | 12H28-N05    | 1       |
| Fiebig               | Coal tar solution                      | 9345501      | 3       |
| Gehe                 | Coal tar solution                      | 701972-0001  | 1       |
| Gehe                 | Coal tar solution                      | 12A20-N04    | 1       |
| Krieger              | Coal tar solution                      | 11319212     | 4       |
| Euro OTC             | Coal tar solution                      | 1110031-02   | 6       |
| Phönix               | Coal tar solution                      | 12105-n02    | 1       |
| Phönix               | Coal tar solution                      | 12F19-N08    | 3       |
| Phönix               | Coal tar solution                      | 11B14-N04    | 1       |
| Retest               | Coal tar solution                      | 11D01-N04    | 1       |
| Caelo                | Coconut oil, hardened                  | 613E-07004   | 1       |
| Caelo                | Coconut oil, hardened                  | 11379511     | 1       |
| Caelo                | Coconut oil, hardened                  | 11379510     | 2       |
| Caelo                | Coconut oil, hardened                  | 11379517     | 1       |
| Cealo / Noweda       | Coconut oil, hardened                  | 13010808     | 1       |
| Caelo                | Comfrey root tincture, cleaned...      | 11121314     | 2       |
| Caelo                | Comfrey root tincture, cleaned...      | 12054008     | 1       |
| Caelo                | Comfrey root tincture, cleaned...      | 12054012     | 2       |
| Caelo                | Comfrey root tincture, cleaned...      | 12054016     | 1       |

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| Supplier | Substance                         | Batch       | Spectra |
|----------|-----------------------------------|-------------|---------|
| Caelo    | Comfrey tincture, cleaned of p... | 11121406    | 1       |
| Caelo    | Comfrey tincture, cleaned of p... | 14298513    | 1       |
| Caelo    | Comfrey tincture, cleaned of p... | 12177001    | 3       |
| Caelo    | Comfrey tincture, cleaned of p... | 12177005    | 1       |
| Caelo    | Comfrey tincture, cleaned of p... | 4512E-02482 | 1       |

| Supplier        | Substance                         | Batch    | Spectra |
|-----------------|-----------------------------------|----------|---------|
| Apomix / 11     | Dexamethasone 1% (non-ionic, h... | 4A270513 | 1       |
| apomix/ Phoenix | Dexamethasone 1% (non-ionic, h... | 2A220313 | 1       |
| Caelo           | Dimethyl isosorbide               | 16170901 | 1       |
| Caelo           | Dimethyl isosorbide               | 16170902 | 12      |

| Supplier       | Substance                        | Batch    | Spectra |
|----------------|----------------------------------|----------|---------|
| Caelo          | Food colorant blue (E131)        | 12322306 | 1       |
| Caelo          | Food colorant blue (E131)        | 12038601 | 1       |
| Caelo          | Food colorant blue (E131)        | 13212405 | 1       |
| Caelo          | Food colorant green (E102; E1... | 13020105 | 1       |
| Caelo          | Food colorant red (E124)         | 13020001 | 1       |
| Caelo          | Food colorant red (E124)         | 13020002 | 1       |
| Caelo          | Food colorant red (E124)         | 13020005 | 1       |
| Caelo          | Food colorant yellow (E102; E... | 12022212 | 1       |
| Caelo          | Food colorant yellow (E102; E... | 13075706 | 1       |
| Anzag/ Fischar | Formic acid 85%                  |          | 1       |
| Caelo          | Formic acid 85%                  | 10343801 | 1       |
| Caelo          | Formic acid 85%                  | 13373301 | 1       |
| Hedinger       | Formic acid 85%                  | 383338   | 1       |
| Hedinger       | Formic acid 85%                  | 170912   | 1       |
| Caelo          | Formic acid 85%                  | 16239301 | 1       |

| Supplier                 | Substance                            | Batch       | Spectra |
|--------------------------|--------------------------------------|-------------|---------|
| Ichthyol                 | Gentamicin 1% Cordes <sup>®</sup> RK | 10D026      | 33      |
| Ichthyol                 | Gentamicin 1% Cordes <sup>®</sup> RK | 10d026      | 1       |
| Ichthyol                 | Gentamicin 1% Cordes <sup>®</sup> RK | 12D010      | 28      |
| Ichthyol-Gesellschaft... | Gentamicin 1% Cordes <sup>®</sup> RK | 9D002       | 1       |
| Caelo                    | Gentian tincture (70%) 1:5           | 11220506    | 1       |
| Caelo                    | Gentian tincture (70%) 1:5           | 11220504    | 1       |
| Caelo                    | Gentian tincture (70%) 1:5           | 4109M-02442 | 1       |
| Caelo                    | Gentian tincture (70%) 1:5           | 12035507    | 5       |
| Caelo                    | Gentian tincture (70%) 1:5           | 13036405    | 1       |
| Caelo                    | Gentian tincture (70%) 1:5           | 300711      | 1       |
| Caesar&lorenz,Phoenix    | Gentian tincture (70%) 1:5           | 13036409    | 2       |
| Caesar/Noweda            | Gentian tincture (70%) 1:5           | 13036408    | 1       |
| Nachprüfung              | Gentian tincture (70%) 1:5           | 411E02442   | 1       |
| Phönix Gotha             | Gentian tincture (70%) 1:5           | 10334601    | 1       |
| Caelo                    | Ginger tincture (70%) 1:5            | 11053812    | 1       |
| Caelo                    | Ginger tincture (70%) 1:5            | 11323810    | 1       |

| Supplier | Substance                         | Batch      | Spectra |
|----------|-----------------------------------|------------|---------|
| Caelo    | Hawthorn tincture of leaf and ... | 12211008   | 1       |
| Caelo    | Horse chestnut seed liquid ext... | 12293604   | 1       |
| Caelo    | Horse chestnut seed liquid ext... | 11194611   | 2       |
| Caelo    | Horse chestnut seed tincture      | 12295308   | 1       |
| apomix   | Hydrogen peroxide solution 3%     | 231A160513 | 1       |
| apomix   | Hydrogen peroxide solution 3%     | 6A070114   | 1       |
| apomix   | Hydrogen peroxide solution 3%     | 6A080116   | 1       |

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| Supplier                 | Substance                      | Batch              | Spectra |
|--------------------------|--------------------------------|--------------------|---------|
| Apomix                   | Hydrogen peroxide solution 3%  | 227A160513         | 1       |
| apomix PKH               | Hydrogen peroxide solution 3%  | 472A160913         | 1       |
| Apomix/Anzag             | Hydrogen peroxide solution 3%  | 67A300113          | 1       |
| apomix/Geibo             | Hydrogen peroxide solution 3%  | 447A050913         | 1       |
| apomix/Geibo             | Hydrogen peroxide solution 3%  | 546A251013         | 1       |
| Caelo                    | Hydrogen peroxide solution 3%  | 341A160713         | 2       |
| Caelo                    | Hydrogen peroxide solution 3%  | 12D17-M05          | 2       |
| Defektur 05.11.2013      | Hydrogen peroxide solution 3%  | 2013-11-05Defektur | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13K07-M04          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 12I06-M05          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13A02-M10          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13D05-M04          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13G09-M07          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13G09-M03          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13G12-M06          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13G12-M09          | 1       |
| Fagron                   | Hydrogen peroxide solution 3%  | 13A02-M13          | 1       |
| Fischar                  | Hydrogen peroxide solution 3%  | 6303042A           | 1       |
| GEHE                     | Hydrogen peroxide solution 3%  |                    | 10      |
| GEHE                     | Hydrogen peroxide solution 3%  | H216091/1          | 1       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301205             | 1       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301208             | 1       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301210             | 2       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301207             | 1       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301212             | 1       |
| Hedinger                 | Hydrogen peroxide solution 3%  | 301211             | 1       |
| Hedinger/AHD             | Hydrogen peroxide solution 3%  | 61010B             | 1       |
| Herbeta Arzneimittel     | Hydrogen peroxide solution 3%  | 15061202           | 1       |
| Hergestellt am 03.07.... | Hydrogen peroxide solution 3%  | 2013-07-03C        | 1       |
| Hubertus Apo             | Hydrogen peroxide solution 3%  | 240513             | 1       |
| Hubertus Apo             | Hydrogen peroxide solution 3%  | 100913             | 1       |
| Hubertus Apotheke        | Hydrogen peroxide solution 3%  | 130114             | 1       |
| Hubertus Apotheke        | Hydrogen peroxide solution 3%  | 5082014            | 1       |
| PKH / Gehe               | Hydrogen peroxide solution 3%  | 12D27-M09          | 1       |
| PKH / Gehe               | Hydrogen peroxide solution 3%  | 12D26-M05          | 1       |
| PKH / Gehe               | Hydrogen peroxide solution 3%  | 12I06-M07          | 2       |
| PKH / Gehe               | Hydrogen peroxide solution 3%  | 12I04-M09          | 1       |
| PKH / Gehe               | Hydrogen peroxide solution 3%  | 13A02-M09          | 3       |
| PKH GmbH                 | Hydrogen peroxide solution 3%  | 487A161012         | 1       |
| PKH GmbH/Anzag           | Hydrogen peroxide solution 3%  | 485A121012         | 1       |
| stumpf                   | Hydrogen peroxide solution 3%  | 280A060712         | 1       |
| Anzag                    | Hydrogen peroxide solution 30% | 61007B             | 7       |
| Anzag/Fischar            | Hydrogen peroxide solution 30% | 6313035            | 2       |
| Caelo                    | Hydrogen peroxide solution 30% | 610093             | 1       |
| Caelo                    | Hydrogen peroxide solution 30% | 12091302           | 1       |
| Caelo                    | Hydrogen peroxide solution 30% | 61010b             | 1       |
| fischar                  | Hydrogen peroxide solution 30% | 6312072            | 3       |
| fischar                  | Hydrogen peroxide solution 30% | 6312082            | 2       |
| fischar                  | Hydrogen peroxide solution 30% | 6313072            | 2       |
| Fischar                  | Hydrogen peroxide solution 30% | 6311092            | 3       |
| Fischar                  | Hydrogen peroxide solution 30% | 6312061            | 1       |
| Fischar                  | Hydrogen peroxide solution 30% | 6312073            | 2       |
| Fischar                  | Hydrogen peroxide solution 30% | 6312081            | 2       |
| Fischar                  | Hydrogen peroxide solution 30% | 6312077            | 1       |
| Fischar                  | Hydrogen peroxide solution 30% | 631109             | 1       |
| Fischar                  | Hydrogen peroxide solution 30% | 6313025            | 2       |
| Fischar                  | Hydrogen peroxide solution 30% | 6313061            | 5       |
| Fischar                  | Hydrogen peroxide solution 30% | 6314018            | 1       |
| Fischar                  | Hydrogen peroxide solution 30% | 6314021            | 2       |
| Fischar                  | Hydrogen peroxide solution 30% | 6315084            | 1       |

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| Supplier                 | Substance                         | Batch       | Spectra |
|--------------------------|-----------------------------------|-------------|---------|
| Fischar 25.06.2013 Al... | Hydrogen peroxide solution 30%    | 6313034     | 1       |
| Fischar/AHD              | Hydrogen peroxide solution 30%    | 6313062     | 1       |
| Fischar/Anzag            | Hydrogen peroxide solution 30%    | 6313064     | 2       |
| Fischar/G                | Hydrogen peroxide solution 30%    | 6313033     | 2       |
| Fischar/G                | Hydrogen peroxide solution 30%    | 6313093     | 2       |
| Fischar/Gehe             | Hydrogen peroxide solution 30%    | 6313102     | 1       |
| Fischar/GEHE/16.04.2013  | Hydrogen peroxide solution 30%    | 6312114     | 3       |
| Fischar/GUMO             | Hydrogen peroxide solution 30%    | 6313027     | 7       |
| /02.08.2...              |                                   |             |         |
| Fischar/Sanacorp         | Hydrogen peroxide solution 30%    | 6312111     | 1       |
| Fischbar                 | Hydrogen peroxide solution 30%    | 4101202     | 1       |
| Gehe                     | Hydrogen peroxide solution 30%    | 6312074     | 3       |
| Gehe/Fischar/11.12.2012  | Hydrogen peroxide solution 30%    | 6312105     | 8       |
| GEHE/Fischar/12.06.2012  | Hydrogen peroxide solution 30%    | 6312012     | 3       |
| Gehe/Fischar11.07.2012   | Hydrogen peroxide solution 30%    | 6312051     | 7       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 61006B      | 1       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 61005B      | 2       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 61010B      | 21      |
| Hedinger                 | Hydrogen peroxide solution 30%    | 61011B      | 24      |
| Hedinger                 | Hydrogen peroxide solution 30%    | 16092013A   | 1       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 210913H202  | 1       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 8111302     | 1       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 61003B      | 2       |
| Hedinger                 | Hydrogen peroxide solution 30%    | 610128      | 1       |
| HEDINGER                 | Hydrogen peroxide solution 30%    | 601008B     | 1       |
| Hedinger / Gehe          | Hydrogen peroxide solution 30%    | (061b)061b  | 2       |
| Hedinger / Gehe          | Hydrogen peroxide solution 30%    | 64044B      | 1       |
| Hedinger Jenne           | Hydrogen peroxide solution 30%    | 61009B      | 21      |
| Hedinger/Anzag           | Hydrogen peroxide solution 30%    | 4413A-01720 | 1       |
| Hedinger/Anzag           | Hydrogen peroxide solution 30%    | 61008B      | 19      |
| 21.07...                 |                                   |             |         |
| Noweda/Hedinger          | Hydrogen peroxide solution 30%    | 61012B      | 8       |
| Otto Fischar             | Hydrogen peroxide solution 30%    | 6313101     | 1       |
| Otto Fischar / Noweda    | Hydrogen peroxide solution 30%    | 6314011     | 1       |
| Otto Fischar gmbh        | Hydrogen peroxide solution 30%    | 6314113     | 1       |
| Otto Fischar gmbh        | Hydrogen peroxide solution 30%    | 6315031     | 1       |
| Otto Fischar GmbH        | Hydrogen peroxide solution 30%    | 6312021     | 2       |
| Otto Fischar GmbH&       | Hydrogen peroxide solution 30%    | 6313055     | 5       |
| Co...                    |                                   |             |         |
| Phönix                   | Hydrogen peroxide solution 30%    | 6313073     | 2       |
| Caelo                    | Hydrogen peroxide solution 30%    |             | 1       |
| All..Healthc./Apomix     | Hydrophilic metronidazole crea... | 7B180713    | 5       |
| Alliance Health-         | Hydrophilic metronidazole crea... | 6B120613    | 5       |
| care/A...                |                                   |             |         |
| Alliance Health-         | Hydrophilic metronidazole crea... | 11201113    | 1       |
| care/A...                |                                   |             |         |
| AMH Niemann GmbH &       | Hydrophilic metronidazole crea... | 4190413     | 1       |
| Co...                    |                                   |             |         |
| AMH Niemann              | Hydrophilic metronidazole crea... | 5B170414    | 1       |
| Gmbh+Co Kg               |                                   |             |         |
| amv niemann gmbh&co      | Hydrophilic metronidazole crea... | 4B060515    | 1       |
| kg                       |                                   |             |         |
| Anzag                    | Hydrophilic metronidazole crea... | 11B201113   | 2       |
| apomix                   | Hydrophilic metronidazole crea... | 11B221112   | 2       |
| apomix                   | Hydrophilic metronidazole crea... | 5B020513    | 6       |
| apomix                   | Hydrophilic metronidazole crea... | 9B091013    | 2       |
| apomix                   | Hydrophilic metronidazole crea... | 10C141013   | 1       |
| Apomix                   | Hydrophilic metronidazole crea... | 1B190112    | 1       |
| Apomix                   | Hydrophilic metronidazole crea... | 2B220212    | 2       |
| Apomix                   | Hydrophilic metronidazole crea... | 4B270412    | 1       |

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| Supplier                    | Substance                         | Batch       | Spectra |
|-----------------------------|-----------------------------------|-------------|---------|
| Apomix                      | Hydrophilic metronidazole crea... | 9B041012    | 2       |
| Apomix                      | Hydrophilic metronidazole crea... | 8418213     | 2       |
| Apomix                      | Hydrophilic metronidazole crea... | 8B110912    | 4       |
| Apomix                      | Hydrophilic metronidazole crea... | 10B251012   | 3       |
| Apomix                      | Hydrophilic metronidazole crea... | 1B030113    | 4       |
| Apomix                      | Hydrophilic metronidazole crea... | 3B140313    | 4       |
| Apomix                      | Hydrophilic metronidazole crea... | 2B220213    | 5       |
| ApoMix                      | Hydrophilic metronidazole crea... | 6B310512    | 3       |
| Apomix Anzag                | Hydrophilic metronidazole crea... | 7B200712    | 5       |
| Apomix/Noweda               | Hydrophilic metronidazole crea... | 8B290813    | 3       |
| apomix/Phönix               | Hydrophilic metronidazole crea... | 11B20113    | 1       |
| Apomix/Phönix               | Hydrophilic metronidazole crea... | 12B111213   | 1       |
| Brückenapotheke             | Hydrophilic metronidazole crea... | 3113Q-07001 | 1       |
| Brückenapotheke             | Hydrophilic metronidazole crea... | 3313M-07001 | 1       |
| Brückenapotheke             | Hydrophilic metronidazole crea... | 3913E-07001 | 1       |
| Brückenapotheke             | Hydrophilic metronidazole crea... | 5013A-07001 | 1       |
| Brückenapotheke             | Hydrophilic metronidazole crea... | 414M-07001  | 1       |
| Brücken-Apotheke            | Hydrophilic metronidazole crea... | 4613M-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 3212M-03387 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 3412M-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 35121-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 3712Q-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 4012A-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 4112E-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 4612E-03387 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 4812E-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 4912Q-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 813A-07001  | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 1613a-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 1813E-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 1813Q-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 1913A-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 2513q-07001 | 1       |
| Defektur                    | Hydrophilic metronidazole crea... | 2713E-07001 | 1       |
| Eigenherstellung            | Hydrophilic metronidazole crea... | 912Q-07001  | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 2512Q-07001 | 2       |
| Gehe                        | Hydrophilic metronidazole crea... | 5112Q-07001 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 1013Q-07001 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 1213E-07001 | 2       |
| Gehe                        | Hydrophilic metronidazole crea... | 2813M-07001 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 3613E-07001 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 4813E-07001 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 5513E-03387 | 1       |
| Gehe                        | Hydrophilic metronidazole crea... | 114M-07001  | 1       |
| Phönix Gotha                | Hydrophilic metronidazole crea... | 4B190413    | 6       |
| Caelo                       | Hydrophobic triclosan cream 1%... | S0211201.1  | 1       |
| Caelo                       | Hydrophobic triclosan cream 1%... | S011503.1   | 1       |
| Infectopharm/Gehe           | Hydrophobic triclosan cream 1%... | S021201.    | 1       |
| Infectopharm                | Hydrophobic triclosan cream 1%... | S031101.1   | 1       |
| Infectopharm                | Hydrophobic triclosan cream 1%... | 20160712-1  | 1       |
| Infectopharm                | Hydrophobic triclosan cream 1%... | S091202.1   | 7       |
| Infectopharm                | Hydrophobic triclosan cream 1%... | S091203.1   | 8       |
| InfectoPharm                | Hydrophobic triclosan cream 1%... | S091103.1   | 3       |
| InfectoPharm / 04.09...     | Hydrophobic triclosan cream 1%... | S091104.1   | 1       |
| Infectopharm,AHC            | Hydrophobic triclosan cream 1%... | S101304.1   | 1       |
| InfectoPharm/GEHE           | Hydrophobic triclosan cream 1%... | S.091203.1  | 1       |
| InfectoPharm/Phoenix        | Hydrophobic triclosan cream 1%... | S021201.1   | 4       |
| Phönix Gotha                | Hydrophobic triclosan cream 1%... | S091201.1   | 1       |
| Sanacorp, 1303.12<br>EK:... | Hydrophobic triclosan cream 1%... | S091102.1   | 1       |

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| Supplier             | Substance                            | Batch      | Spectra |
|----------------------|--------------------------------------|------------|---------|
| Spangro/Infectopharm | Hydrophobic triclosan cream 1%...    | S041301.1  | 4       |
| Anzag                | Hydrophobic triclosan cream 2%...    | S021202.1  | 5       |
| Anzag/Infectopharm   | Hydrophobic triclosan cream 2%...    | S091206.1  | 10      |
| Caelo                | Hydrophobic triclosan cream 2%...    | 2111310005 | 1       |
| Caelo                | Hydrophobic triclosan cream 2%...    | 3131-07001 | 1       |
| Caesar & Loretz GmbH | Hydrophobic triclosan cream 2%...    | S041303.1  | 3       |
| Hedinger / Stumpf    | Hydrophobic triclosan cream 2%...    | S101209.1  | 13      |
| infectopharm         | Hydrophobic triclosan cream 2%...    | S041302.1  | 3       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S021201.1  | 2       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S091109.1  | 2       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S0212041   | 1       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S101207.1  | 8       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S101208.1  | 12      |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | 5101209.1  | 1       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | s1012091   | 1       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S041301.1  | 7       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S04131011  | 1       |
| Infectopharm         | Hydrophobic triclosan cream 2%...    | S031502.1  | 1       |
| InfectoPharm / Gehe  | Hydrophobic triclosan cream 2%...    | S0413041   | 1       |
| Infectopharm, Noweda | Hydrophobic triclosan cream 2%...    | S021203.1  | 4       |
| Infectopharm, Noweda | Hydrophobic triclosan cream 2%...    | S0231204.1 | 1       |
| Infectopharm/AHD     | Hydrophobic triclosan cream 2%...    | S1012209.1 | 1       |
| InfectoPharm/Phönix  | Hydrophobic triclosan cream 2%...    | 1101410005 | 1       |
| Phönix Gotha         | Hydrophobic triclosan cream 2%...    | 561069     | 1       |
| Phönix/InfectoPharm  | Hydrophobic triclosan cream 2%...    | S021204.1  | 7       |
| Phönix/InfectoPharm  | Hydrophobic triclosan cream 2%...    | S021205.1  | 5       |
| Sanacorp             | Hydrophobic triclosan cream 2%...    | S031105.1  | 1       |
| Alliance             | Hydroxyethylcellulose gel (con. ...) | 13190401   | 10      |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 11341701   | 1       |
| apomix               | Hydroxyethylcellulose gel (con. ...) | 20B230712  | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 6B090312   | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 24B070912  | 2       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 5B150213   | 3       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 9B120413   | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 12B260413  | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 13B260413  | 4       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 11B260413  | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 16B310513  | 3       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 27B081113  | 1       |
| Apomix               | Hydroxyethylcellulose gel (con. ...) | 6D230514   | 1       |
| Apomix / Phönix      | Hydroxyethylcellulose gel (con. ...) | 21C090813  | 1       |
| apomix PKH           | Hydroxyethylcellulose gel (con. ...) | 2B270112   | 1       |
| apomix PKH           | Hydroxyethylcellulose gel (con. ...) | 9C200412   | 1       |
| apomix PKH           | Hydroxyethylcellulose gel (con. ...) | 14B080612  | 1       |
| apomix PKH           | Hydroxyethylcellulose gel (con. ...) | 17B060712  | 1       |
| Apomix/ Noweda       | Hydroxyethylcellulose gel (con. ...) | 5B090312   | 1       |
| Apomix/ Sanacorp     | Hydroxyethylcellulose gel (con. ...) | 19B080713  | 1       |
| Apomix/Anzag         | Hydroxyethylcellulose gel (con. ...) | 10C120413  | 1       |
| Apomix/Noweda        | Hydroxyethylcellulose gel (con. ...) | 18B080713  | 2       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 16061204   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 15067801   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 11341501   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 22061204   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 12071701   | 2       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 20071204   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 11363401   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 14081202   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 14081203   | 1       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 12128201   | 2       |
| Caelo                | Hydroxyethylcellulose gel (con. ...) | 11341801   | 1       |

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| Supplier | Substance                         | Batch    | Spectra |
|----------|-----------------------------------|----------|---------|
| Caelo    | Hydroxyethylcellulose gel (con... | 12128001 | 4       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12128202 | 2       |
| Caelo    | Hydroxyethylcellulose gel (con... | 25091209 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 2101201  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 2101203  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 17101201 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 17101206 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 17101207 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 26101205 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12244002 | 4       |
| Caelo    | Hydroxyethylcellulose gel (con... | 10111202 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 5121205  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 21121201 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12320601 | 3       |
| Caelo    | Hydroxyethylcellulose gel (con... | 29011301 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13021302 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13009501 | 10      |
| Caelo    | Hydroxyethylcellulose gel (con... | 1219401  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13009301 | 4       |
| Caelo    | Hydroxyethylcellulose gel (con... | 26031306 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 23041305 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 11264501 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 6051303  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13084404 | 13      |
| Caelo    | Hydroxyethylcellulose gel (con... | 6061307  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 6061308  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 29061301 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 30071301 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13190901 | 3       |
| Caelo    | Hydroxyethylcellulose gel (con... | 1319401  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 4091303  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 8101303  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 15101311 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13190701 | 4       |
| Caelo    | Hydroxyethylcellulose gel (con... | 14111307 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 14111308 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 21111304 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 3786917  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 6121301  | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13286401 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 11011402 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 24011402 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13286801 | 2       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13393301 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 14066401 | 2       |
| Caelo    | Hydroxyethylcellulose gel (con... | 14066301 | 3       |
| Caelo    | Hydroxyethylcellulose gel (con... | 14200101 | 2       |
| Caelo    | Hydroxyethylcellulose gel (con... | 15067901 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 16127002 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12219201 | 4       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12209201 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13084402 | 12      |
| Caelo    | Hydroxyethylcellulose gel (con... | 13393201 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13009303 | 3       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13286101 | 7       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13286201 | 5       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13084403 | 10      |
| Caelo    | Hydroxyethylcellulose gel (con... | 12071401 | 1       |
| Caelo    | Hydroxyethylcellulose gel (con... | 12351501 | 3       |
| Caelo    | Hydroxyethylcellulose gel (con... | 13190801 | 5       |

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| Supplier                 | Substance                            | Batch     | Spectra |
|--------------------------|--------------------------------------|-----------|---------|
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 13286301  | 3       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 3286101   | 1       |
| Fagron                   | Hydroxyethylcellulose gel (con. ...) | 13009401  | 3       |
| Fagron                   | Hydroxyethylcellulose gel (con. ...) | 12351401  | 1       |
| Gehe                     | Hydroxyethylcellulose gel (con. ...) | 22b070912 | 1       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 12351502  | 3       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 12320602  | 1       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 13286601  | 5       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 12071501  | 2       |
| Phönix                   | Hydroxyethylcellulose gel (con. ...) | 13286702  | 1       |
| Phönix Gotha             | Hydroxyethylcellulose gel (con. ...) | 12244003  | 4       |
| Phönix Gotha             | Hydroxyethylcellulose gel (con. ...) | 12320501  | 8       |
| PKH Halle                | Hydroxyethylcellulose gel (con. ...) | 3B240113  | 1       |
| Sanacorp                 | Hydroxyethylcellulose gel (con. ...) | 12127901  | 2       |
| Sanacorp                 | Hydroxyethylcellulose gel (con. ...) | 12219401  | 6       |
| Sanacorp                 | Hydroxyethylcellulose gel (con. ...) | 12309303  | 9       |
| Sanacorp                 | Hydroxyethylcellulose gel (con. ...) | 13190501  | 8       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 12219501  | 5       |
| Sanacorp/ PKH Halle      | Hydroxyethylcellulose gel (con. ...) | 8B050412  | 1       |
| Sanacorp/ PKH Halle      | Hydroxyethylcellulose gel (con. ...) | 10B200412 | 1       |
| Caelo                    | Hydroxyethylcellulose gel (con. ...) | 12219302  | 4       |
| AMH Niemann GmbH& Co.... | Hydroxyethylcellulose gel 4%         | 7B040313  | 1       |
| AMH Niemann GmbH& Co.... | Hydroxyethylcellulose gel 4%         | 13B310513 | 1       |
| AMH-Niemann GmbH & Co... | Hydroxyethylcellulose gel 4%         | 2C270112  | 1       |
| AMH-Niemann GmbH & Co... | Hydroxyethylcellulose gel 4%         | 1B270112  | 1       |
| AMH-Niemann GmbH & Co... | Hydroxyethylcellulose gel 4%         | 6C090312  | 1       |
| AMH-Niemann GmbH & Co... | Hydroxyethylcellulose gel 4%         | 10B200412 | 1       |
| apomix                   | Hydroxyethylcellulose gel 4%         | 17B080713 | 2       |
| apomix                   | Hydroxyethylcellulose gel 4%         | 14B310513 | 1       |
| apomix                   | Hydroxyethylcellulose gel 4%         | 5B060717  | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 19B141011 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 22B281011 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 5B090312  | 3       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 15B060712 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 14B080612 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 26B301112 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 6B040313  | 2       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 16B080713 | 1       |
| Apomix                   | Hydroxyethylcellulose gel 4%         | 21C060913 | 2       |
| Apomix / Phönix          | Hydroxyethylcellulose gel 4%         | 11B120413 | 1       |
| Apomix/ Phönix           | Hydroxyethylcellulose gel 4%         | 19B090813 | 1       |
| Caesar & Loretz/ Noweda  | Hydroxyethylcellulose gel 4%         | 5B150213  | 1       |
| PKH Halle/ Alliance H.   | Hydroxyethylcellulose gel 4%         | 18B090813 | 4       |

| Supplier | Substance       | Batch    | Spectra |
|----------|-----------------|----------|---------|
| Caelo    | Iodine tincture | 9356601  | 1       |
| Caelo    | Iodine tincture | 5021308  | 1       |
| Caelo    | Iodine tincture | 12285902 | 1       |
| Caelo    | Iodine tincture | 12285901 | 1       |
| Caelo    | Iodine tincture | 12285903 | 1       |
| Caelo    | Iodine tincture | 11303104 | 1       |
| Caelo    | Iodine tincture | 28061302 | 1       |

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| Supplier | Substance       | Batch    | Spectra |
|----------|-----------------|----------|---------|
| Caelo    | Iodine tincture | 1071303  | 1       |
| Caelo    | Iodine tincture | 2101302  | 1       |
| Caelo    | Iodine tincture | 13193501 | 1       |
| Caelo    | Iodine tincture | 14111309 | 1       |
| Caelo    | Iodine tincture | 13193502 | 1       |
| Caelo    | Iodine tincture | 24011405 | 1       |
| Caelo    | Iodine tincture | 5021402  | 1       |
| Caelo    | Iodine tincture | 12285906 | 3       |
| Fagron   | Iodine tincture | 11309402 | 1       |
| Caelo    | Iodine tincture | 13193503 | 1       |

| Supplier                | Substance            | Batch    | Spectra |
|-------------------------|----------------------|----------|---------|
| Otto Fische GmbH & C... | Lactic acid 80% L(+) | 20020271 | 1       |
| Phönix Gotha            | Lactic acid 80% L(+) | 2002071  | 2       |
| Caelo                   | Lard                 | 11263707 | 1       |
| Caelo                   | Lard                 | 11263714 | 1       |
| Caelo                   | Lard                 | 11379606 | 1       |
| Caelo                   | Lard                 | 11263706 | 1       |
| Caelo                   | Lard                 | 11263715 | 1       |
| Caelo                   | Lard                 | 11379605 | 2       |
| Caesar&lorenz,Phoenix   | Lard                 | 11095310 | 1       |
| Caelo                   | Lavender spirit      | 13166502 | 1       |
| Caelo                   | Lavender spirit      | 13300803 | 2       |
| dhu                     | Lavender spirit      | 1041012  | 4       |
| Caelo                   | Lime water           | 13028602 | 1       |

| Supplier  | Substance                          | Batch         | Spectra |
|-----------|------------------------------------|---------------|---------|
| Caelo     | Macadamia oil, refined             | 13012104      | 1       |
| Caelo     | Macadamia oil, refined             | 13012106      | 1       |
| Caelo     | Macadamia oil, refined             | 14179304      | 2       |
| Caelo     | Macadamia oil, refined             | 16074404      | 1       |
| Caelo     | Macadamia oil, refined             | 17176507      | 1       |
| Caelo     | Macadamia oil, refined             | 17055604      | 1       |
| Primavera | Macadamia oil, refined             | 58C24         | 1       |
| Spinnrad  | Macadamia oil, refined             | 117301241     | 1       |
| Taoasis   | Macadamia oil, refined             | 128991        | 1       |
| Taoasis   | Macadamia oil, refined             | 4976601-92844 | 1       |
| Maros     | Marian thistle fruit mother ti...  | U3762         | 2       |
| Caelo     | Marian thistle seed tincture (...) | 11061110      | 1       |
| Caelo     | Marian thistle seed tincture (...) | 12043822      | 1       |
| Caelo     | Marian thistle seed tincture (...) | 13044304      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 13044206      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 9061201       | 1       |
| Caelo     | Matricaria flower tincture (70...  | 3081201       | 1       |
| Caelo     | Matricaria flower tincture (70...  | 24091208      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 11011303      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 11011307      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 11269917      | 2       |
| Caelo     | Matricaria flower tincture (70...  | 11269920      | 4       |
| Caelo     | Matricaria flower tincture (70...  | 3051310       | 1       |
| Caelo     | Matricaria flower tincture (70...  | 11269911      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 13142803      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 13044202      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 12111305      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 14078402      | 1       |
| Caelo     | Matricaria flower tincture (70...  | 11269924      | 1       |

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| Supplier                 | Substance                                 | Batch     | Spectra |
|--------------------------|-------------------------------------------|-----------|---------|
| Caelo                    | Matricaria flower tincture (70. ...       | 11269905  | 1       |
| Caelo                    | Matricaria liquid extract                 | 11303606  | 2       |
| Caelo                    | Matricaria liquid extract                 | 12254801  | 2       |
| Caelo                    | Matricaria liquid extract                 | 12360303  | 2       |
| Caelo                    | Matricaria liquid extract                 | 12360310  | 3       |
| Caelo                    | Matricaria liquid extract                 | 10382713  | 1       |
| Caelo                    | Matricaria liquid extract                 | 12360306  | 1       |
| Maros                    | Matricaria liquid extract                 | 6990      | 3       |
| aliance healthcare       | Matricaria oil, fat                       | 13204306  | 2       |
| Caelo                    | Matricaria oil, fat                       | 11261506  | 1       |
| Caelo                    | Matricaria oil, fat                       | 12189803  | 2       |
| Caelo                    | Matricaria oil, fat                       | 12372903  | 5       |
| Caelo                    | Matricaria oil, fat                       | 1218903   | 1       |
| Caesar & Lorenz          | Matricaria oil, fat                       | 13204304  | 2       |
| Maros                    | Melissa leaf liquid extract 1:1           | 6399      | 3       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 10105412  | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12206201  | 3       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 11102812  | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12206205  | 4       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 11011305  | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 3051308   | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12206214  | 6       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 1206214   | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 27111307  | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 5121303   | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12233609  | 2       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 1233609   | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 1223612   | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12233612  | 1       |
| Caelo                    | Melissa leaf tincture (70%) 1:5           | 12206218  | 5       |
| Caelo                    | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 18D014    | 1       |
| Gehe                     | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13D004A   | 1       |
| Gehe                     | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13D004B   | 1       |
| Ichthyol                 | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 130004    | 2       |
| Ichthyol                 | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 14D001    | 1       |
| Ichthyol Gesellschaft    | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 12D011    | 5       |
| Ichthyol- Gesellschaft   | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13D013    | 7       |
| ICHTHYOL/ahp             | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13d004    | 1       |
| Ichthyol/Gehe            | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13D004    | 29      |
| Sanacorp/Ichthyol        | Methoxsalen 0.006% Cordes <sup>®</sup> RK | 13D013    | 1       |
| AMH Niemann              | Methylrosanilinium chloride so...         | 3A060612  | 1       |
| AMH Niemann GmbH & Co... | Methylrosanilinium chloride so...         | 1b140213  | 1       |
| Anzag                    | Methylrosanilinium chloride so...         | 5A200712  | 1       |
| Anzag                    | Methylrosanilinium chloride so...         | 1A140213  | 2       |
| apomix, PKH GmbH         | Methylrosanilinium chloride so...         | 2B260413  | 1       |
| apomix/ Gehe             | Methylrosanilinium chloride so...         | 2B290312  | 1       |
| Apomix/Anzag             | Methylrosanilinium chloride so...         | 1B260413  | 1       |
| Apomix/Gehe              | Methylrosanilinium chloride so...         | 4B200712  | 1       |
| Leyhs/Noweda             | Methylrosanilinium chloride so...         | 124141    | 1       |
| Phoenix (PKH Halle)      | Methylrosanilinium chloride so...         | 4A200712  | 1       |
| apomix                   | Metronidazole 10% (non-ionic, ...         | 48170413  | 1       |
| apomix                   | Metronidazole 10% (non-ionic, ...         | 5b150513  | 1       |
| apomix                   | Metronidazole 10% (non-ionic, ...         | 38110313  | 1       |
| apomix                   | Metronidazole 10% (non-ionic, ...         | 5B150513  | 1       |
| apomix                   | Metronidazole 10% (non-ionic, ...         | 3B070417  | 1       |
| Spangropharm             | Metronidazole 10% (non-ionic, ...         | 8B211013  | 3       |
| Phoenix (PKH Halle)      | Metronidazole 10% (non-ionic, ...         | 11B251012 | 1       |
| Phoenix (PKH Halle)      | Metronidazole 10% (non-ionic, ...         | 1B020113  | 1       |
| Caelo                    | Myrrh tincture (90%) 1:5                  | 11019810  | 1       |

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| Supplier           | Substance                | Batch      | Spectra |
|--------------------|--------------------------|------------|---------|
| Caelo              | Myrrh tincture (90%) 1:5 | 3101212460 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 2704212460 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11260916   | 3       |
| Caelo              | Myrrh tincture (90%) 1:5 | 24081209   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11019809   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11260918   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 1910211095 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197103   | 2       |
| Caelo              | Myrrh tincture (90%) 1:5 | 20111214   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197104   | 2       |
| Caelo              | Myrrh tincture (90%) 1:5 | 20101012-1 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197105   | 10      |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197106   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 2002312460 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197205   | 4       |
| Caelo              | Myrrh tincture (90%) 1:5 | 2913M2460  | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197303   | 15      |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197305   | 7       |
| Caelo              | Myrrh tincture (90%) 1:5 | 13273303   | 4       |
| Caelo              | Myrrh tincture (90%) 1:5 | 13273404   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 13273308   | 4       |
| Caelo              | Myrrh tincture (90%) 1:5 | 14244206   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 15110504   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11260909   | 3       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197107   | 2       |
| Caelo              | Myrrh tincture (90%) 1:5 | 12197112   | 2       |
| Caelo              | Myrrh tincture (90%) 1:5 | 13273301   | 5       |
| Caelo              | Myrrh tincture (90%) 1:5 | 13273302   | 8       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11260914   | 3       |
| Caelo              | Myrrh tincture (90%) 1:5 | 230312     | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 45132U2460 | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 614M2460   | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 11260908   | 1       |
| Caesar/Noweda      | Myrrh tincture (90%) 1:5 | 12197204   | 2       |
| Hetterich/Teofarma | Myrrh tincture (90%) 1:5 | 139101     | 1       |
| Noweda             | Myrrh tincture (90%) 1:5 | 1219104    | 1       |
| Caelo              | Myrrh tincture (90%) 1:5 | 133273301  | 1       |

| Supplier | Substance                      | Batch    | Spectra |
|----------|--------------------------------|----------|---------|
| Caelo    | Nettle root tincture (70%) 1:5 | 11187409 | 1       |
| Caelo    | Nettle root tincture (70%) 1:5 | 12341302 | 1       |
| Caelo    | Nettle tincture (70%) 1:5      | 1108810  | 1       |
| Caelo    | Nettle tincture (70%) 1:5      | 11108810 | 1       |

| Supplier | Substance                    | Batch    | Spectra |
|----------|------------------------------|----------|---------|
| Anzag    | Opium tincture, standardised | 12006212 | 17      |
| Caelo    | Opium tincture, standardised | 12162608 | 1       |
| Caelo    | Opium tincture, standardised | 12380302 | 1       |
| Caelo    | Opium tincture, standardised | 13144005 | 2       |
| Caelo    | Opium tincture, standardised | 13144004 | 1       |
| Caelo    | Opium tincture, standardised | 13394902 | 1       |
| Caelo    | Opium tincture, standardised | 5005712  | 6       |
| Caelo    | Opium tincture, standardised | 12162606 | 1       |
| Caelo    | Opium tincture, standardised | 22031302 | 1       |
| Caelo    | Opium tincture, standardised | 30031301 | 1       |
| Caelo    | Opium tincture, standardised | 8061301  | 1       |
| Caelo    | Opium tincture, standardised | 3071303  | 1       |

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| Supplier                 | Substance                     | Batch         | Spectra |
|--------------------------|-------------------------------|---------------|---------|
| Caelo                    | Opium tincture, standardised  | 25071302      | 1       |
| Caelo                    | Opium tincture, standardised  | 12121305      | 1       |
| Caelo                    | Opium tincture, standardised  | 16121304      | 1       |
| Caelo                    | Opium tincture, standardised  | 10011404      | 1       |
| Caelo                    | Opium tincture, standardised  | 24011406      | 1       |
| Caelo                    | Opium tincture, standardised  | 13260602      | 1       |
| Caelo                    | Opium tincture, standardised  | 14108504      | 1       |
| Caelo                    | Opium tincture, standardised  | 14108510      | 1       |
| Caelo                    | Opium tincture, standardised  | 6009916       | 1       |
| Caelo                    | Opium tincture, standardised  | 16330406      | 1       |
| Caelo                    | Opium tincture, standardised  | 17227201      | 1       |
| Caelo                    | Opium tincture, standardised  | 12380307      | 1       |
| Caelo                    | Opium tincture, standardised  | 13144011      | 1       |
| Caelo                    | Opium tincture, standardised  | 12162602      | 1       |
| Eigenherstellung         | Opium tincture, standardised  | 70613PML01    | 2       |
| Fagron                   | Opium tincture, standardised  | 9006012/Maros | 1       |
| Gehe                     | Opium tincture, standardised  | 6006713       | 28      |
| Gehe                     | Opium tincture, standardised  | 5007714       | 1       |
| Gehe                     | Opium tincture, standardised  | 6007814       | 2       |
| Gehe                     | Opium tincture, standardised  | 7007914       | 1       |
| Gehe/Maros               | Opium tincture, standardised  | 11006112      | 16      |
| Maros                    | Opium tincture, standardised  | 4005612       | 3       |
| Maros                    | Opium tincture, standardised  | 8005812       | 7       |
| Maros                    | Opium tincture, standardised  | 9006012       | 15      |
| Maros                    | Opium tincture, standardised  | 15031302      | 1       |
| Maros                    | Opium tincture, standardised  | 1006313       | 15      |
| Maros                    | Opium tincture, standardised  | 13071303      | 1       |
| Maros                    | Opium tincture, standardised  | 2004511       | 1       |
| Maros                    | Opium tincture, standardised  | 11007213      | 8       |
| Maros                    | Opium tincture, standardised  | 4007614       | 3       |
| Maros                    | Opium tincture, standardised  | 3007514       | 2       |
| Maros                    | Opium tincture, standardised  | 5008715       | 2       |
| Maros                    | Opium tincture, standardised  | 11008214      | 1       |
| Maros                    | Opium tincture, standardised  | 7008915       | 1       |
| Maros                    | Opium tincture, standardised  | 8009015       | 2       |
| Maros                    | Opium tincture, standardised  | 10009115      | 2       |
| Maros                    | Opium tincture, standardised  | 2009416       | 2       |
| Maros                    | Opium tincture, standardised  | 3009616       | 1       |
| Maros                    | Opium tincture, standardised  | 4009716       | 1       |
| MAROS                    | Opium tincture, standardised  | 3005512       | 1       |
| MAROS                    | Opium tincture, standardised  | 4010817       | 1       |
| Maros Arznei GmbH        | Opium tincture, standardised  | 8006913       | 25      |
| Maros Arznei GmbH        | Opium tincture, standardised  | 11007113      | 8       |
| MAROS Arznei GmbH        | Opium tincture, standardised  | 7006813       | 16      |
| Maros Arznei GmbH/Anzag  | Opium tincture, standardised  | 2005412       | 1       |
| Maros/Gehe               | Opium tincture, standardised  | 5006613       | 27      |
| Maros/Gehe               | Opium tincture, standardised  | 10007013      | 11      |
| Maros/N/010.06.13/PZN... | Opium tincture, standardised  | 4006513       | 32      |
| Maros/Phoenix            | Opium tincture, standardised  | 60066713      | 1       |
| Noweda                   | Opium tincture, standardised  | 1106112       | 2       |
| Caelo                    | Opium tincture, standardised  | 13144010      | 2       |
| Phönix                   | Opium tincture, standardised  | 2006413       | 23      |
| sanacorp                 | Opium tincture, standardised  | 9005912       | 3       |
| Sanacorp                 | Opium tincture, standardised  | 60006713      | 1       |
| Caelo                    | Orange flower oil, artificial | 11232005      | 3       |
| Caelo                    | Orange flower oil, artificial | 13154801      | 1       |
| Caelo                    | Orange flower oil, artificial | 13121302      | 1       |
| Caelo                    | Orange flower oil, artificial | 15344904      | 1       |
| Caelo                    | Orange flower oil, artificial | 13154804      | 1       |

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| Supplier               | Substance                     | Batch    | Spectra |
|------------------------|-------------------------------|----------|---------|
| Noweda                 | Orange flower oil, artificial | 10267805 | 1       |
| Caelo                  | Orange flower oil, artificial |          | 1       |
| Anzag 26.11.12 ek:3,35 | Orange flower water           | 12171703 | 1       |
| Caelo                  | Orange flower water           | 1235606  | 1       |
| Caelo                  | Orange flower water           | 11327301 | 2       |
| Caelo                  | Orange flower water           | 12119103 | 1       |
| Caelo                  | Orange flower water           | 12359606 | 3       |
| Caelo                  | Orange flower water           | 1339301  | 1       |
| Caelo                  | Orange flower water           | 13339301 | 1       |
| Caelo                  | Orange flower water           | 14156804 | 1       |
| Caelo                  | Orange flower water           | 12328604 | 2       |
| Caelo                  | Orange flower water           | 12328602 | 1       |
| Caelo                  | Orange flower water           | 13339302 | 2       |
| Caelo                  | Orange flower water           | 13057302 | 2       |
| Caelo                  | Orange flower water           | 13096605 | 3       |
| Sanacorp               | Orange flower water           | AKD34    | 1       |
| Caelo                  | Orange flower water           | 12359605 | 2       |
| AMH Niemann/G          | Oxytetracycline ointment SR   | 2C160212 | 1       |
| AMH Niemann/G          | Oxytetracycline ointment SR   | 4C300712 | 1       |
| AMH Niemann/G          | Oxytetracycline ointment SR   | 1B200313 | 1       |
| Apomix                 | Oxytetracycline ointment SR   | 1A160212 | 1       |
| Defektur               | Oxytetracycline ointment SR   | 49/12    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 55/12    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 8/13     | 1       |
| Defektur               | Oxytetracycline ointment SR   | 12/13    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 25/13    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 41/13    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 43/13    | 1       |
| Defektur               | Oxytetracycline ointment SR   | 50/13    | 1       |
| Pharmachem             | Oxytetracycline ointment SR   | 230113   | 1       |
| Pharmachem             | Oxytetracycline ointment SR   | 140212   | 2       |

| Supplier              | Substance             | Batch        | Spectra |
|-----------------------|-----------------------|--------------|---------|
| Gehrlicher            | Pansy mother tincture | RU1775       | 1       |
| ACM                   | Paraffin, liquid      | KNC2106J14   | 1       |
| ACM                   | Paraffin, liquid      | KNC2160J14   | 1       |
| AHD                   | Paraffin, liquid      | 16171010     | 1       |
| AHD                   | Paraffin, liquid      | 171707002/01 | 1       |
| AHD                   | Paraffin, liquid      | 1506005-02   | 7       |
| AHD                   | Paraffin, liquid      | 1710025-01   | 28      |
| AHD                   | Paraffin, liquid      | 1000002996   | 2       |
| AHD                   | Paraffin, liquid      | 100002996    | 1       |
| AHD                   | Paraffin, liquid      | 17321510     | 22      |
| AHD                   | Paraffin, liquid      | 181770005    | 1       |
| Euro OTC              | Paraffin, liquid      | 160703-01    | 1       |
| Caelo                 | Paraffin, liquid      | 15293204     | 16      |
| Caelo                 | Paraffin, liquid      | 17062001     | 51      |
| Allergika Pharma GmbH | Paraffin, liquid      | 12/10        | 1       |
| Allergika Pharma GmbH | Paraffin, liquid      | 8/06         | 1       |
| Allergika Pharma GmbH | Paraffin, liquid      | 18/112023    | 1       |
| Caelo                 | Paraffin, liquid      | 16082904     | 22      |
| anzag                 | Paraffin, liquid      | 1509011-01   | 9       |
| Anzag                 | Paraffin, liquid      | 1810002-01   | 27      |
| Caelo                 | Paraffin, liquid      | 14059708     | 6       |
| Caelo                 | Paraffin, liquid      | 14202507     | 9       |
| Euro OTC              | Paraffin, liquid      | 1257028      | 2       |
| Beiersdorf            | Paraffin, liquid      | 30841410     | 1       |
| Bombastus             | Paraffin, liquid      | 298396       | 2       |
| Bombastus             | Paraffin, liquid      | 300061       | 2       |

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| Supplier  | Substance        | Batch           | Spectra |
|-----------|------------------|-----------------|---------|
| Bombastus | Paraffin, liquid | 266032          | 1       |
| Bombastus | Paraffin, liquid | 260652          | 1       |
| Bombastus | Paraffin, liquid | 263350          | 1       |
| Bombastus | Paraffin, liquid | 272590          | 2       |
| Bombastus | Paraffin, liquid | 281540          | 2       |
| Bombastus | Paraffin, liquid | 14187601        | 1       |
| Bombastus | Paraffin, liquid | 288827          | 2       |
| Bombastus | Paraffin, liquid | 290824          | 2       |
| Bombastus | Paraffin, liquid | 292137          | 2       |
| Bombastus | Paraffin, liquid | 294568          | 1       |
| Bombastus | Paraffin, liquid | 295576          | 1       |
| Bombastus | Paraffin, liquid | 295576          | 4       |
| Bombastus | Paraffin, liquid | 308476          | 8       |
| Bombastus | Paraffin, liquid | 18000358        | 5       |
| Bombastus | Paraffin, liquid | 18005175        | 6       |
| Bombastus | Paraffin, liquid | 19001235        | 5       |
| Bombastus | Paraffin, liquid | 146(18000358)   | 1       |
| Bombastus | Paraffin, liquid | 147(18002494)   | 1       |
| Bombastus | Paraffin, liquid | 148(18002494)   | 1       |
| Bombastus | Paraffin, liquid | 149(18005175)   | 1       |
| Bombastus | Paraffin, liquid | 150(18005175)   | 1       |
| Bombastus | Paraffin, liquid | 151(19001235)   | 1       |
| Bombastus | Paraffin, liquid | 281540          | 1       |
| Bombastus | Paraffin, liquid | 19004134        | 1       |
| Bombastus | Paraffin, liquid | 274958          | 7       |
| Bombastus | Paraffin, liquid | 284273          | 1       |
| Bombastus | Paraffin, liquid | 284273          | 2       |
| Bombastus | Paraffin, liquid | 293385          | 2       |
| Bombastus | Paraffin, liquid | 142(308476)     | 1       |
| Bombastus | Paraffin, liquid | 144(18000358)   | 1       |
| Bombastus | Paraffin, liquid | 306312          | 4       |
| Bombastus | Paraffin, liquid | 143(310779)     | 1       |
| Bombastus | Paraffin, liquid | 17360403        | 16      |
| Bombastus | Paraffin, liquid | 301968          | 2       |
| Bombastus | Paraffin, liquid | 301958          | 1       |
| Bombastus | Paraffin, liquid | 6861849         | 1       |
| Bombastus | Paraffin, liquid | 310779          | 5       |
| Caelo     | Paraffin, liquid | 11354102        | 9       |
| Caelo     | Paraffin, liquid | 17321507        | 4       |
| Caelo     | Paraffin, liquid | 1817702         | 1       |
| Caelo     | Paraffin, liquid | 10162009        | 1       |
| Caelo     | Paraffin, liquid | 11207702        | 2       |
| Caelo     | Paraffin, liquid | 9320905         | 1       |
| Caelo     | Paraffin, liquid | 11263606        | 3       |
| Caelo     | Paraffin, liquid | 10071202        | 1       |
| Caelo     | Paraffin, liquid | 2111202         | 1       |
| Caelo     | Paraffin, liquid | 221108111F30-NO | 1       |
| Caelo     | Paraffin, liquid | 12042205        | 6       |
| Caelo     | Paraffin, liquid | 20210312-4      | 1       |
| Caelo     | Paraffin, liquid | 14011303        | 1       |
| Caelo     | Paraffin, liquid | 1601312050      | 1       |
| Caelo     | Paraffin, liquid | 12227701        | 8       |
| Caelo     | Paraffin, liquid | 11092703        | 1       |
| Caelo     | Paraffin, liquid | 715I-02050      | 1       |
| Caelo     | Paraffin, liquid | 19021302        | 1       |
| Caelo     | Paraffin, liquid | 12324304        | 2       |
| Caelo     | Paraffin, liquid | 10162002        | 1       |
| Caelo     | Paraffin, liquid | 10364703        | 1       |
| Caelo     | Paraffin, liquid | 2103312050      | 1       |
| Caelo     | Paraffin, liquid | 12227610        | 1       |

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| Supplier | Substance        | Batch       | Spectra |
|----------|------------------|-------------|---------|
| Caelo    | Paraffin, liquid | 1913Q-02050 | 1       |
| Caelo    | Paraffin, liquid | 13005805    | 15      |
| Caelo    | Paraffin, liquid | 1234307     | 1       |
| Caelo    | Paraffin, liquid | 0000000     | 1       |
| Caelo    | Paraffin, liquid | 11071302    | 1       |
| Caelo    | Paraffin, liquid | 3213Q2050   | 1       |
| Caelo    | Paraffin, liquid | 12227602    | 1       |
| Caelo    | Paraffin, liquid | 13005205    | 1       |
| Caelo    | Paraffin, liquid | 13005806    | 1       |
| Caelo    | Paraffin, liquid | 13232903    | 8       |
| Caelo    | Paraffin, liquid | 83054508    | 1       |
| Caelo    | Paraffin, liquid | 13232902    | 14      |
| Caelo    | Paraffin, liquid | 27011405    | 1       |
| Caelo    | Paraffin, liquid | 16061203    | 1       |
| Caelo    | Paraffin, liquid | 10062014A   | 1       |
| Caelo    | Paraffin, liquid | 10071403    | 1       |
| Caelo    | Paraffin, liquid | 40956810    | 1       |
| Caelo    | Paraffin, liquid | 14059701    | 8       |
| Caelo    | Paraffin, liquid | 14059708    | 4       |
| Caelo    | Paraffin, liquid | 14044504    | 2       |
| Caelo    | Paraffin, liquid | 14059703    | 2       |
| Caelo    | Paraffin, liquid | 14059703    | 5       |
| Caelo    | Paraffin, liquid | 14044507    | 3       |
| Caelo    | Paraffin, liquid | 13248006    | 2       |
| Caelo    | Paraffin, liquid | 14059701    | 1       |
| Caelo    | Paraffin, liquid | 14141408    | 1       |
| Caelo    | Paraffin, liquid | 1420509     | 2       |
| Caelo    | Paraffin, liquid | 14011514    | 1       |
| Caelo    | Paraffin, liquid | 7315971     | 1       |
| Caelo    | Paraffin, liquid | 14035904    | 1       |
| Caelo    | Paraffin, liquid | 14163804    | 2       |
| Caelo    | Paraffin, liquid | 14357203    | 12      |
| Caelo    | Paraffin, liquid | 14305904    | 1       |
| Caelo    | Paraffin, liquid | 13103308    | 1       |
| Caelo    | Paraffin, liquid | 15106101    | 7       |
| Caelo    | Paraffin, liquid | 14163807    | 3       |
| Caelo    | Paraffin, liquid | 4091515     | 1       |
| Caelo    | Paraffin, liquid | 151060104   | 1       |
| Caelo    | Paraffin, liquid | 25092015    | 1       |
| Caelo    | Paraffin, liquid | 15106109    | 2       |
| Caelo    | Paraffin, liquid | 15293203    | 17      |
| Caelo    | Paraffin, liquid | 15106107    | 16      |
| Caelo    | Paraffin, liquid | 15293205    | 29      |
| Caelo    | Paraffin, liquid | 15106107    | 1       |
| Caelo    | Paraffin, liquid | 15293201    | 12      |
| Caelo    | Paraffin, liquid | 13232902    | 1       |
| Caelo    | Paraffin, liquid | 15293202    | 14      |
| Caelo    | Paraffin, liquid | 13103309    | 3       |
| Caelo    | Paraffin, liquid | 15923205    | 1       |
| Caelo    | Paraffin, liquid | 15293202    | 1       |
| Caelo    | Paraffin, liquid | 1593205     | 1       |
| Caelo    | Paraffin, liquid | 15336702    | 2       |
| Caelo    | Paraffin, liquid | 15234506    | 5       |
| Caelo    | Paraffin, liquid | 15230601    | 1       |
| Caelo    | Paraffin, liquid | 1235465     | 1       |
| Caelo    | Paraffin, liquid | 17293204    | 1       |
| Caelo    | Paraffin, liquid | 160829      | 1       |
| Caelo    | Paraffin, liquid | 16149802    | 24      |
| Caelo    | Paraffin, liquid | 1604009-01  | 13      |
| Caelo    | Paraffin, liquid | Test1234    | 1       |

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| Supplier | Substance        | Batch                | Spectra |
|----------|------------------|----------------------|---------|
| Caelo    | Paraffin, liquid | 16149801             | 27      |
| Caelo    | Paraffin, liquid | 1608294              | 1       |
| Caelo    | Paraffin, liquid | 16171002             | 4       |
| Caelo    | Paraffin, liquid | 16171001             | 20      |
| Caelo    | Paraffin, liquid | 16238804             | 2       |
| Caelo    | Paraffin, liquid | 160822907            | 1       |
| Caelo    | Paraffin, liquid | 161710               | 1       |
| Caelo    | Paraffin, liquid | 9041705              | 1       |
| Caelo    | Paraffin, liquid | 16171009             | 2       |
| Caelo    | Paraffin, liquid | 16238808             | 24      |
| Caelo    | Paraffin, liquid | 12345                | 1       |
| Caelo    | Paraffin, liquid | 16E30-B05-325889     | 5       |
| Caelo    | Paraffin, liquid | 16238815             | 7       |
| Caelo    | Paraffin, liquid | 17062001             | 4       |
| Caelo    | Paraffin, liquid | 17047604             | 2       |
| Caelo    | Paraffin, liquid | 12312                | 1       |
| Caelo    | Paraffin, liquid | 15111739             | 1       |
| Caelo    | Paraffin, liquid | 17062005             | 27      |
| Caelo    | Paraffin, liquid | 17062007             | 41      |
| Caelo    | Paraffin, liquid | 17321501             | 77      |
| Caelo    | Paraffin, liquid | 17196001             | 17      |
| Caelo    | Paraffin, liquid | 170620055518         | 1       |
| Caelo    | Paraffin, liquid | 17D28-B01-340148     | 4       |
| Caelo    | Paraffin, liquid | 17J02-B01-343565     | 4       |
| Caelo    | Paraffin, liquid | 30041805             | 1       |
| Caelo    | Paraffin, liquid | 18048103             | 5       |
| Caelo    | Paraffin, liquid | 17321505             | 31      |
| Caelo    | Paraffin, liquid | 180718P              | 1       |
| Caelo    | Paraffin, liquid | 18048104             | 1       |
| Caelo    | Paraffin, liquid | 1000007838           | 5       |
| Caelo    | Paraffin, liquid | 15121804             | 1       |
| Caelo    | Paraffin, liquid | 18I13-B01            | 1       |
| Caelo    | Paraffin, liquid | 17360412             | 1       |
| Caelo    | Paraffin, liquid | 18080510             | 1       |
| Caelo    | Paraffin, liquid | 18177007             | 40      |
| Caelo    | Paraffin, liquid | 1817705              | 1       |
| Caelo    | Paraffin, liquid | 19010302             | 58      |
| Caelo    | Paraffin, liquid | 18177008             | 38      |
| Caelo    | Paraffin, liquid | 18177003             | 2       |
| Caelo    | Paraffin, liquid | 19010304             | 21      |
| Caelo    | Paraffin, liquid | 10910302             | 1       |
| Caelo    | Paraffin, liquid | 17360420             | 1       |
| Caelo    | Paraffin, liquid | 173600414            | 1       |
| Caelo    | Paraffin, liquid | 17360415             | 1       |
| Caelo    | Paraffin, liquid | 1901303              | 1       |
| Caelo    | Paraffin, liquid | 19010313             | 8       |
| Caelo    | Paraffin, liquid | 19010315             | 8       |
| Caelo    | Paraffin, liquid | 19010310             | 1       |
| Caelo    | Paraffin, liquid | 19120303             | 1       |
| Caelo    | Paraffin, liquid | 192559004            | 4       |
| Caelo    | Paraffin, liquid | 192559007            | 2       |
| Caelo    | Paraffin, liquid | 192559011            | 2       |
| Caelo    | Paraffin, liquid | CH-B17321401         | 1       |
| Caelo    | Paraffin, liquid | 13390606             | 1       |
| Caelo    | Paraffin, liquid | 12109603             | 2       |
| Caelo    | Paraffin, liquid | 13390604             | 1       |
| Caelo    | Paraffin, liquid | 14059705             | 1       |
| Caelo    | Paraffin, liquid | 17321401-20180206Ma7 | 1       |
| Caelo    | Paraffin, liquid | 12227609             | 3       |
| Caelo    | Paraffin, liquid | 14163807             | 21      |

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| Supplier | Substance        | Batch                | Spectra |
|----------|------------------|----------------------|---------|
| Caelo    | Paraffin, liquid | 170620008            | 1       |
| Caelo    | Paraffin, liquid | 17321509             | 42      |
| Caelo    | Paraffin, liquid | 1608204              | 1       |
| Caelo    | Paraffin, liquid | Ch.-B.:19010302      | 1       |
| Caelo    | Paraffin, liquid | B18177008            | 1       |
| Caelo    | Paraffin, liquid | 11H04-N02            | 1       |
| Caelo    | Paraffin, liquid | 15106102             | 2       |
| Caelo    | Paraffin, liquid | 18177001             | 71      |
| Caelo    | Paraffin, liquid | 1205033-01           | 1       |
| Caelo    | Paraffin, liquid | 16238808(1)          | 1       |
| Caelo    | Paraffin, liquid | 16238808(2)          | 1       |
| Caelo    | Paraffin, liquid | 16238808(3)          | 1       |
| Caelo    | Paraffin, liquid | 16238808(4)          | 1       |
| Caelo    | Paraffin, liquid | 15336704             | 16      |
| Caelo    | Paraffin, liquid | 19120301P-200602-6   | 1       |
| Caelo    | Paraffin, liquid | 13050102             | 20      |
| Caelo    | Paraffin, liquid | 16149801,20161112Ma7 | 1       |
| Caelo    | Paraffin, liquid | 18177004             | 43      |
| Caelo    | Paraffin, liquid | 1811Q-02050          | 1       |
| Caelo    | Paraffin, liquid | 15106104             | 12      |
| Caelo    | Paraffin, liquid | 18177005             | 62      |
| Caelo    | Paraffin, liquid | 15299201             | 1       |
| Caelo    | Paraffin, liquid | 14202509             | 5       |
| Caelo    | Paraffin, liquid | 13390602             | 1       |
| Caelo    | Paraffin, liquid | 12102101             | 9       |
| Caelo    | Paraffin, liquid | 13131704             | 1       |
| Caelo    | Paraffin, liquid | 14202509             | 6       |
| Caelo    | Paraffin, liquid | 14357203             | 1       |
| Caelo    | Paraffin, liquid | 1960017              | 1       |
| Caelo    | Paraffin, liquid | 17047610             | 2       |
| Caelo    | Paraffin, liquid | 113544102            | 1       |
| Caelo    | Paraffin, liquid | 1437205              | 1       |
| Caelo    | Paraffin, liquid | 19010316             | 2       |
| Caelo    | Paraffin, liquid | 17062002             | 9       |
| Caelo    | Paraffin, liquid | 1135412              | 1       |
| Caelo    | Paraffin, liquid | 17321401             | 28      |
| Caelo    | Paraffin, liquid | 191203003            | 1       |
| Caelo    | Paraffin, liquid | 14141406             | 1       |
| Caelo    | Paraffin, liquid | 14305904             | 7       |
| Caelo    | Paraffin, liquid | 3613A-02050          | 1       |
| Caelo    | Paraffin, liquid | 15429603             | 15      |
| Caelo    | Paraffin, liquid | 1721503              | 1       |
| Caelo    | Paraffin, liquid | 145(18000358)        | 1       |
| Caelo    | Paraffin, liquid | 12H27-N01            | 10      |
| Caelo    | Paraffin, liquid | 1304010-01           | 4       |
| Caelo    | Paraffin, liquid | 214U-02050           | 1       |
| Caelo    | Paraffin, liquid | 13248007             | 8       |
| Caelo    | Paraffin, liquid | 13390601             | 7       |
| Caelo    | Paraffin, liquid | 1309022-02           | 2       |
| Caelo    | Paraffin, liquid | 14134601             | 1       |
| Caelo    | Paraffin, liquid | 14357204             | 4       |
| Caelo    | Paraffin, liquid | 16/080/P             | 1       |
| Caelo    | Paraffin, liquid | 15234505             | 2       |
| Caelo    | Paraffin, liquid | 1607039-01           | 1       |
| Caelo    | Paraffin, liquid | 16238812             | 3       |
| Caelo    | Paraffin, liquid | 13321401             | 1       |
| Caelo    | Paraffin, liquid | 17321506             | 54      |
| Caelo    | Paraffin, liquid | 17360404             | 3       |
| Caelo    | Paraffin, liquid | 1817004              | 1       |
| Caelo    | Paraffin, liquid | 19271402             | 5       |

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| Supplier | Substance        | Batch            | Spectra |
|----------|------------------|------------------|---------|
| Caelo    | Paraffin, liquid | 1114U02050       | 1       |
| Caelo    | Paraffin, liquid | 19010303         | 30      |
| Caelo    | Paraffin, liquid | 17321503         | 42      |
| Caelo    | Paraffin, liquid | 14357204         | 13      |
| Caelo    | Paraffin, liquid | 150600501        | 3       |
| Caelo    | Paraffin, liquid | 1322902          | 1       |
| Caelo    | Paraffin, liquid | 14163804         | 7       |
| Caelo    | Paraffin, liquid | 1307007-01       | 1       |
| Caelo    | Paraffin, liquid | 14357201         | 1       |
| Caelo    | Paraffin, liquid | 15293209         | 1       |
| Caelo    | Paraffin, liquid | 12324307         | 1       |
| Caelo    | Paraffin, liquid | 16082905         | 18      |
| Caelo    | Paraffin, liquid | 16149806         | 2       |
| Caelo    | Paraffin, liquid | 16238803         | 18      |
| Caelo    | Paraffin, liquid | 161001701        | 1       |
| Caelo    | Paraffin, liquid | 16238809         | 1       |
| Caelo    | Paraffin, liquid | 170105185        | 1       |
| Caelo    | Paraffin, liquid | 17062009         | 1       |
| Caelo    | Paraffin, liquid | 518Q-02050       | 1       |
| Caelo    | Paraffin, liquid | 16238802         | 1       |
| Caelo    | Paraffin, liquid | 16238806         | 56      |
| Caelo    | Paraffin, liquid | 16238807         | 9       |
| Caelo    | Paraffin, liquid | 16238813         | 15      |
| Caelo    | Paraffin, liquid | 1732506          | 1       |
| Caelo    | Paraffin, liquid | 800308301        | 1       |
| Caelo    | Paraffin, liquid | 19010307         | 13      |
| Caelo    | Paraffin, liquid | 19120304         | 1       |
| Caelo    | Paraffin, liquid | 271214A          | 1       |
| Caelo    | Paraffin, liquid | 1435905          | 2       |
| Caelo    | Paraffin, liquid | 14D24-B05-295022 | 10      |
| Caelo    | Paraffin, liquid | 14357205         | 9       |
| Caelo    | Paraffin, liquid | 14D24B05-295022  | 1       |
| Caelo    | Paraffin, liquid | 16082907         | 20      |
| Caelo    | Paraffin, liquid | 160820907        | 1       |
| Caelo    | Paraffin, liquid | CH:201LEK:5,31   | 1       |
| Caelo    | Paraffin, liquid | 2316E-02050      | 1       |
| Caelo    | Paraffin, liquid | 16228808         | 1       |
| Caelo    | Paraffin, liquid | 16238860         | 1       |
| Caelo    | Paraffin, liquid | 17321506         | 1       |
| Caelo    | Paraffin, liquid | 18177002         | 24      |
| Caelo    | Paraffin, liquid | 4817M-02050      | 1       |
| Caelo    | Paraffin, liquid | 17360409         | 16      |
| Caelo    | Paraffin, liquid | 19010303         | 1       |
| Caelo    | Paraffin, liquid | 192559003        | 3       |
| Caelo    | Paraffin, liquid | 13232901         | 15      |
| Caelo    | Paraffin, liquid | 15336703         | 13      |
| Caelo    | Paraffin, liquid | 13131705         | 17      |
| Caelo    | Paraffin, liquid | 12295601         | 1       |
| Caelo    | Paraffin, liquid | 12324306         | 1       |
| Caelo    | Paraffin, liquid | 13390602         | 20      |
| Caelo    | Paraffin, liquid | 14044507         | 4       |
| Caelo    | Paraffin, liquid | 13390604         | 1       |
| Caelo    | Paraffin, liquid | 14202507         | 2       |
| Caelo    | Paraffin, liquid | 14141408         | 2       |
| Caelo    | Paraffin, liquid | 15106109         | 10      |
| Caelo    | Paraffin, liquid | 180104101        | 1       |
| Caelo    | Paraffin, liquid | 170476           | 1       |
| Caelo    | Paraffin, liquid | 417A-02050       | 1       |
| Caelo    | Paraffin, liquid | 4112M-02048      | 1       |
| Caelo    | Paraffin, liquid | 2213A-02050      | 1       |

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| Supplier                   | Substance        | Batch              | Spectra |
|----------------------------|------------------|--------------------|---------|
| Caesar & Loretz / All. ... | Paraffin, liquid | 18048102           | 31      |
| Caesar & Loretz GmbH       | Paraffin, liquid | 19010301           | 1       |
| Caesar & Loretz GmbH       | Paraffin, liquid | 17360414           | 14      |
| Caesar & Loretz GmbH       | Paraffin, liquid | 191203010          | 1       |
| Caesar & Loretz GmbH       | Paraffin, liquid | 16171008           | 6       |
| ...                        |                  |                    |         |
| Calo                       | Paraffin, liquid | 15429603           | 1       |
| Cealo                      | Paraffin, liquid | 1300805            | 1       |
| Devesa/ Phönix             | Paraffin, liquid | 14D24-B05-295022   | 1       |
| Eigenherstellung           | Paraffin, liquid | 130712HML01        | 1       |
| Eigenherstellung           | Paraffin, liquid | 291012HJK01        | 1       |
| Eigenherstellung           | Paraffin, liquid | 150413HML01        | 1       |
| Eigenherstellung           | Paraffin, liquid | Hergest.am13.05.13 | 1       |
| Eigenherstellung           | Paraffin, liquid | 261113HML01        | 1       |
| Eigenherstellung           | Paraffin, liquid | 150114HML01        | 1       |
| Eigenherstellung           | Paraffin, liquid | 60614HJK01         | 1       |
| Eigenherstellung           | Paraffin, liquid | 210714H01          | 1       |
| Eigenherstellung           | Paraffin, liquid | 11214HAS01         | 1       |
| Eigenherstellung           | Paraffin, liquid | 260115ML01         | 1       |
| Eigenherstellung           | Paraffin, liquid | 100615HJK01        | 1       |
| Eigenherstellung           | Paraffin, liquid | 240715HML01        | 1       |
| EuRho                      | Paraffin, liquid | 1207022-01         | 4       |
| EuRho                      | Paraffin, liquid | 1803023-01         | 1       |
| EuRho / Noweda             | Paraffin, liquid | 131102401          | 4       |
| EuRho/Gehe                 | Paraffin, liquid | 90901              | 1       |
| Euro OTC                   | Paraffin, liquid | 1108033-01         | 1       |
| Euro OTC                   | Paraffin, liquid | 1412010-01         | 4       |
| Euro OTC                   | Paraffin, liquid | 1509011-01         | 1       |
| Euro OTC                   | Paraffin, liquid | 1404010-01         | 3       |
| Euro OTC                   | Paraffin, liquid | 1311024/01         | 1       |
| Euro OTC                   | Paraffin, liquid | 1102009-01         | 1       |
| Euro OTC                   | Paraffin, liquid | 1203042-01         | 4       |
| Euro OTC                   | Paraffin, liquid | 1211026-01         | 7       |
| Euro OTC                   | Paraffin, liquid | 1211027-01         | 12      |
| Euro OTC                   | Paraffin, liquid | 1303031-01         | 11      |
| Euro OTC                   | Paraffin, liquid | 120802101          | 1       |
| Euro OTC                   | Paraffin, liquid | 130303101          | 1       |
| Euro OTC                   | Paraffin, liquid | 2911028-01         | 1       |
| Euro OTC                   | Paraffin, liquid | 22101402           | 1       |
| Euro OTC                   | Paraffin, liquid | 1404009-01         | 5       |
| Euro OTC                   | Paraffin, liquid | 140900701          | 1       |
| Euro OTC                   | Paraffin, liquid | 1412010-01         | 8       |
| Euro OTC                   | Paraffin, liquid | 1602026-01         | 19      |
| Euro OTC                   | Paraffin, liquid | 1511300-01         | 1       |
| Euro OTC                   | Paraffin, liquid | 1607039-01         | 14      |
| Euro OTC                   | Paraffin, liquid | 1704023-01         | 6       |
| Euro OTC                   | Paraffin, liquid | 1704023-0108598729 | 1       |
| Euro OTC                   | Paraffin, liquid | 1704023            | 1       |
| Euro OTC                   | Paraffin, liquid | 1802016-01         | 23      |
| Euro OTC                   | Paraffin, liquid | 143577             | 1       |
| Euro OTC                   | Paraffin, liquid | 18100201           | 1       |
| Euro OTC                   | Paraffin, liquid | 18100001-01        | 1       |
| Euro OTC                   | Paraffin, liquid | 144484             | 1       |
| Euro OTC                   | Paraffin, liquid | 174023-01          | 1       |
| Euro OTC                   | Paraffin, liquid | 141180             | 1       |
| Euro OTC                   | Paraffin, liquid | 160202601          | 1       |
| Euro OTC                   | Paraffin, liquid | 1311024-01         | 13      |
| Euro OTC                   | Paraffin, liquid | 170608P/1610017-01 | 1       |
| Euro OTC                   | Paraffin, liquid | 1810002_01         | 1       |
| Euro OTC                   | Paraffin, liquid | 144404             | 1       |

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| Supplier       | Substance        | Batch        | Spectra |
|----------------|------------------|--------------|---------|
| Euro OTC       | Paraffin, liquid | 1506021-01   | 1       |
| Euro OTC       | Paraffin, liquid | 17133-01     | 1       |
| Euro OTC       | Paraffin, liquid | 1707002-01   | 17      |
| Euro OTC       | Paraffin, liquid | 139845       | 2       |
| Euro OTC       | Paraffin, liquid | 1110014-01   | 4       |
| Euro OTC       | Paraffin, liquid | 121102701    | 1       |
| Euro OTC       | Paraffin, liquid | 1404009-01   | 10      |
| Euro OTC       | Paraffin, liquid | 1501016-01   | 5       |
| Euro OTC       | Paraffin, liquid | 1604009-01   | 1       |
| Euro OTC       | Paraffin, liquid | 160703901    | 1       |
| Euro OTC       | Paraffin, liquid | 1701052-01   | 9       |
| Euro OTC       | Paraffin, liquid | 150600502    | 1       |
| Euro OTC       | Paraffin, liquid | 170900201    | 2       |
| Euro OTC       | Paraffin, liquid | 1255801      | 1       |
| Euro OTC       | Paraffin, liquid | 1511030-01   | 22      |
| Euro OTC       | Paraffin, liquid | 1801041-01   | 23      |
| Euro OTC       | Paraffin, liquid | 1904026-01   | 9       |
| Euro OTC       | Paraffin, liquid | 130902201    | 1       |
| Euro OTC       | Paraffin, liquid | 1608007-01   | 8       |
| Euro OTC       | Paraffin, liquid | 1709002-01   | 9       |
| Euro OTC       | Paraffin, liquid | 190404026-01 | 1       |
| Euro OTC       | Paraffin, liquid | 1909016-01   | 1       |
| Euro OTC       | Paraffin, liquid | 1902012-01   | 4       |
| Euro OTC       | Paraffin, liquid | 1503046-01   | 12      |
| Euro OTC       | Paraffin, liquid | 171002501    | 1       |
| Euro OTC       | Paraffin, liquid | 140400901    | 1       |
| Euro OTC       | Paraffin, liquid | 1511029-01   | 8       |
| Euro OTC       | Paraffin, liquid | 1304010-01   | 3       |
| Euro OTC       | Paraffin, liquid | 170105201    | 2       |
| Euro OTC       | Paraffin, liquid | 142430       | 3       |
| Euro OTC       | Paraffin, liquid | 1309022-01   | 2       |
| Euro OTC       | Paraffin, liquid | 133888       | 1       |
| Euro OTC       | Paraffin, liquid | 1264597      | 2       |
| Euro OTC       | Paraffin, liquid | 137491       | 1       |
| Euro OTC       | Paraffin, liquid | 18110002-01  | 1       |
| Euro OTC       | Paraffin, liquid | 1901011-01   | 25      |
| Euro OTC       | Paraffin, liquid | 196310       | 1       |
| Euro OTC       | Paraffin, liquid | 1311024-01   | 1       |
| Euro OTC       | Paraffin, liquid | 1706017-01   | 6       |
| Euro OTC       | Paraffin, liquid | 1810002-02   | 1       |
| Euro OTC       | Paraffin, liquid | 1810001-01   | 17      |
| Euro OTC       | Paraffin, liquid | 1307007-01   | 14      |
| Euro Pharma    | Paraffin, liquid | 150101601    | 2       |
| Euro/ Sanacorp | Paraffin, liquid | 1409007-01   | 1       |
| Euro/Gehe      | Paraffin, liquid | 1604045-01   | 12      |
| Euro OTC       | Paraffin, liquid | 1407042-01   | 9       |
| Euro OTC       | Paraffin, liquid | 1106009-01   | 1       |
| Euro OTC       | Paraffin, liquid | 16238802     | 32      |
| Euro OTC       | Paraffin, liquid | 1606032-01   | 14      |
| Euro OTC       | Paraffin, liquid | 1701033-01   | 24      |
| Euro OTC       | Paraffin, liquid | 1610017-01   | 17      |
| Euro OTC       | Paraffin, liquid | 16020026-01  | 1       |
| Euro OTC       | Paraffin, liquid | 17044023-01  | 1       |
| Euro OTC       | Paraffin, liquid | 140401001    | 2       |
| Fagron         | Paraffin, liquid | 14D24-B05    | 3       |
| Fagron         | Paraffin, liquid | 1004C014     | 1       |
| Fagron         | Paraffin, liquid | 11L19-N01    | 1       |
| Fagron         | Paraffin, liquid | 12H27-N01    | 1       |
| Fagron         | Paraffin, liquid | 13A30-N11    | 19      |
| Fagron         | Paraffin, liquid | 11co8-no7    | 1       |

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| Supplier | Substance        | Batch            | Spectra |
|----------|------------------|------------------|---------|
| Fagron   | Paraffin, liquid | 13A3010          | 2       |
| Fagron   | Paraffin, liquid | 959561           | 5       |
| Fagron   | Paraffin, liquid | 13E28-N02        | 14      |
| Fagron   | Paraffin, liquid | 13E28-N02        | 1       |
| Fagron   | Paraffin, liquid | 13G24N12         | 1       |
| Fagron   | Paraffin, liquid | 13H02-B02        | 1       |
| Fagron   | Paraffin, liquid | 13L17-B01-289491 | 5       |
| Fagron   | Paraffin, liquid | 13L17-B01-289493 | 2       |
| Fagron   | Paraffin, liquid | 13G24N12         | 1       |
| Fagron   | Paraffin, liquid | 13L17-B01-289492 | 2       |
| Fagron   | Paraffin, liquid | 11L19-N01        | 1       |
| Fagron   | Paraffin, liquid | 14D24-B05-295014 | 3       |
| Fagron   | Paraffin, liquid | 12H27-N01        | 1       |
| Fagron   | Paraffin, liquid | 12-23-n03        | 1       |
| Fagron   | Paraffin, liquid | 1005070          | 1       |
| Fagron   | Paraffin, liquid | 14d24-b05-295022 | 1       |
| Fagron   | Paraffin, liquid | 13L17-b01-289492 | 1       |
| Fagron   | Paraffin, liquid | 13a30-n11        | 1       |
| Fagron   | Paraffin, liquid | 110816-2         | 1       |
| Fagron   | Paraffin, liquid | 16a27-b01-323777 | 1       |
| Fagron   | Paraffin, liquid | 16A27B01323777   | 1       |
| Fagron   | Paraffin, liquid | 16E30-B05        | 2       |
| Fagron   | Paraffin, liquid | 17D28-B01        | 2       |
| Fagron   | Paraffin, liquid | 17J02-B01-345372 | 4       |
| Fagron   | Paraffin, liquid | 18B19-B06        | 1       |
| Fagron   | Paraffin, liquid | 18B19-B09        | 1       |
| Fagron   | Paraffin, liquid | 18B19B09351592   | 1       |
| Fagron   | Paraffin, liquid | 12170            | 1       |
| Fagron   | Paraffin, liquid | 29137            | 1       |
| Fagron   | Paraffin, liquid | 13L17-B01-289491 | 2       |
| Fagron   | Paraffin, liquid | 18B19-B09-351592 | 1       |
| Fagron   | Paraffin, liquid | 13L17-B01        | 3       |
| Fagron   | Paraffin, liquid | 1198738          | 2       |
| Fagron   | Paraffin, liquid | 16K09-B06-332237 | 5       |
| Fagron   | Paraffin, liquid | B05-295022       | 1       |
| Fagron   | Paraffin, liquid | 16E30-B05-324041 | 2       |
| Fagron   | Paraffin, liquid | 14D24-B05-295023 | 15      |
| Fagron   | Paraffin, liquid | 18I13-B01-355278 | 1       |
| Fagron   | Paraffin, liquid | 13C19-N09        | 3       |
| Fagron   | Paraffin, liquid | 123586           | 4       |
| Fagron   | Paraffin, liquid | 14d24-b05-295023 | 2       |
| Fagron   | Paraffin, liquid | 2415-02050       | 1       |
| Fagron   | Paraffin, liquid | 14D24-B05        | 4       |
| Fagron   | Paraffin, liquid | 941435           | 1       |
| Fagron   | Paraffin, liquid | 14D24_B05_295023 | 1       |
| Fagron   | Paraffin, liquid | 1153092          | 3       |
| Fagron   | Paraffin, liquid | 1254062          | 3       |
| Fagron   | Paraffin, liquid | 18/13-B01-355278 | 1       |
| Fagron   | Paraffin, liquid | 4413M2050        | 1       |
| Fagron   | Paraffin, liquid | 13L-B01-289491   | 1       |
| Fagron   | Paraffin, liquid | 16E30-B05-327577 | 9       |
| Fagron   | Paraffin, liquid | 1806004-01       | 20      |
| Fagron   | Paraffin, liquid | 15B16-B03-304611 | 10      |
| Fagron   | Paraffin, liquid | 15234502         | 15      |
| Fagron   | Paraffin, liquid | 14D24-B05-295023 | 1       |
| Fagron   | Paraffin, liquid | 16E30B05327577   | 2       |
| Fagron   | Paraffin, liquid | 17J02B01-345372  | 1       |
| Fagron   | Paraffin, liquid | 18B19-B06-347311 | 1       |
| Fagron   | Paraffin, liquid | 18B19-B09-347311 | 1       |
| Fagron   | Paraffin, liquid | 13G24-N12        | 7       |

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| Supplier                      | Substance        | Batch             | Spectra |
|-------------------------------|------------------|-------------------|---------|
| Fagron                        | Paraffin, liquid | 13117-B01-289492  | 1       |
| Fagron                        | Paraffin, liquid | 14357205          | 1       |
| Fagron                        | Paraffin, liquid | 1179735           | 3       |
| Fagron                        | Paraffin, liquid | 13L17-B01-289493  | 2       |
| fargon                        | Paraffin, liquid | 196310            | 1       |
| Fiebig                        | Paraffin, liquid | 17010331          | 1       |
| Fagron                        | Paraffin, liquid | 196310-0004       | 1       |
| Euro OTC                      | Paraffin, liquid | 170402023-01      | 2       |
| Euro OTC                      | Paraffin, liquid | 1801041-01(143577 | 1       |
| Euro OTC                      | Paraffin, liquid | 1806004-01/145179 | 1       |
| Fagron                        | Paraffin, liquid | 1105054           | 2       |
| Fagron                        | Paraffin, liquid | 1126261           | 2       |
| fragon                        | Paraffin, liquid |                   | 2       |
| Gatt-Koller                   | Paraffin, liquid | 1802936           | 1       |
| Gatt-Koller                   | Paraffin, liquid | 1802836           | 1       |
| Gatt-Koller                   | Paraffin, liquid | 1900504           | 1       |
| Gatt-Koller                   | Paraffin, liquid | 1900893           | 1       |
| Gehe                          | Paraffin, liquid | 12227601          | 1       |
| Gehe                          | Paraffin, liquid | 13103309          | 17      |
| Gehe                          | Paraffin, liquid | 14305905          | 9       |
| Gehe                          | Paraffin, liquid | 19271401          | 6       |
| Caelo                         | Paraffin, liquid | 1313705           | 2       |
| Gehe-Henry                    | Paraffin, liquid | 1000002995        | 11      |
| Caelo                         | Paraffin, liquid | 170620078         | 1       |
| geprüft am 20.11.2013         | Paraffin, liquid | 2013-11-20        | 1       |
| H.Lamotte/Sanacorp            | Paraffin, liquid | 10526938          | 1       |
| Hansen & Rosen-<br>thal/No... | Paraffin, liquid | 16A27-B01         | 2       |
| Henry Lamotte                 | Paraffin, liquid | 123393            | 3       |
| Henry Lamotte                 | Paraffin, liquid | 5863401           | 9       |
| Henry Lamotte                 | Paraffin, liquid | 8003083001        | 25      |
| Henry Lamotte GmbH,<br>M...   | Paraffin, liquid | 79460             | 1       |
| Henry Lamotte Oels<br>GmbH    | Paraffin, liquid | 123393            | 4       |
| Henry Lamotte oils<br>GmbH    | Paraffin, liquid | 123743            | 30      |
| Henry Lamotte Oils<br>GmbH    | Paraffin, liquid | 5098101           | 1       |
| Henry Lamotte Oils<br>GmbH    | Paraffin, liquid | 5593601           | 19      |
| Henry Lamotte Oils<br>Gm...   | Paraffin, liquid | 13148606          | 1       |
| Henry Lamotte Olis            | Paraffin, liquid | 2x5367601         | 1       |
| Henry Lamotte Olis<br>Gm...   | Paraffin, liquid | 5593601           | 22      |
| Henry Lam-<br>otte/Sanacorp   | Paraffin, liquid | 1313703           | 1       |
| Ichthyol-Gesellschaft...      | Paraffin, liquid | 1542903           | 1       |
| Jenne                         | Paraffin, liquid | 181000201         | 1       |
| Euro OTC                      | Paraffin, liquid | 261113PML01       | 1       |
| Kögl                          | Paraffin, liquid | 3862511164716     | 1       |
| Kögl                          | Paraffin, liquid | 26702170717       | 1       |
| Kögl                          | Paraffin, liquid | 88903171317       | 1       |
| Kögl                          | Paraffin, liquid | 175705172217      | 1       |
| Kögl                          | Paraffin, liquid | 1700810           | 1       |
| Kögl                          | Paraffin, liquid | 11701629          | 1       |
| Kögl                          | Paraffin, liquid | 1702112           | 2       |
| Kögl                          | Paraffin, liquid | 1800712           | 1       |
| Kögl                          | Paraffin, liquid | 1801030           | 1       |

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| Supplier         | Substance            | Batch            | Spectra |
|------------------|----------------------|------------------|---------|
| Kögl             | Paraffin, liquid     | 1801918          | 1       |
| Kögl             | Paraffin, liquid     | 1802726          | 2       |
| Caelo            | Paraffin, liquid     | 16282801         | 1       |
| Caelo            | Paraffin, liquid     | 1702007          | 1       |
| Laborchemie      | Paraffin, liquid     | 12345            | 1       |
| Apolda/Je...     |                      |                  |         |
| Lamotte          | Paraffin, liquid     | 123075           | 7       |
| Lamotte/Phoenix  | Paraffin, liquid     | 8003683001       | 1       |
| Lamotte/Phoenix  | Paraffin, liquid     | 1000010844       | 1       |
| Merck            | Paraffin, liquid     | K15810032        | 1       |
| Noweda           | Paraffin, liquid     | 122875           | 5       |
| Noweda           | Paraffin, liquid     | 1208021-01       | 5       |
| Noweda           | Paraffin, liquid     | 1404009-09       | 1       |
| Noweda           | Paraffin, liquid     | 17D28-B01-353241 | 3       |
| Caelo            | Paraffin, liquid     | 16082908         | 19      |
| Caelo            | Paraffin, liquid     | 17360410         | 1       |
| Noweda/Bomnastus | Paraffin, liquid     | 303806           | 9       |
| Caelo            | Paraffin, liquid     | 17047603         | 19      |
| Euro OTC         | Paraffin, liquid     | 1407042-01       | 5       |
| Fagron           | Paraffin, liquid     | 1220239          | 1       |
| Euro OTC         | Paraffin, liquid     | 1506005-01       | 1       |
| Euro OTC         | Paraffin, liquid     | 1404010-01       | 2       |
| Euro OTC         | Paraffin, liquid     | 1511030-01       | 1       |
| Euro OTC         | Paraffin, liquid     | 18060004         | 1       |
| Euro OTC         | Paraffin, liquid     | 130401001        | 1       |
| Ph.Eur.          | Paraffin, liquid     | 6861849          | 2       |
| Phoenix          | Paraffin, liquid     | 12042202         | 17      |
| Phoenix          | Paraffin, liquid     | 16082906         | 16      |
| Phoenix          | Paraffin, liquid     | 3124             | 1       |
| Phoenix          | Paraffin, liquid     | 17j02-B01-343565 | 1       |
| Phoenix          | Paraffin, liquid     | 18002494         | 8       |
| Phoenix          | Paraffin, liquid     | 16K09-B06-331721 | 2       |
| Phoenix          | Paraffin, liquid     | 3414             | 1       |
| Fagron           | Paraffin, liquid     | 12J23-N03        | 4       |
| Euro OTC         | Paraffin, liquid     | 181002-01        | 3       |
| Phonix           | Paraffin, liquid     | 18B19-B19-347311 | 1       |
| PHÖNIX           | Paraffin, liquid     | 17062008         | 26      |
| Fagron           | Paraffin, liquid     | 959561           | 1       |
| Caelo            | Paraffin, liquid     | 17062001/2051017 | 1       |
| Caelo            | Paraffin, liquid     | 19120301         | 4       |
| Fagron           | Paraffin, liquid     | 13L17-B01-289492 | 3       |
| Phönix/Henry     | Paraffin, liquid     | 5367601          | 36      |
| Sanacorp         | Paraffin, liquid     | 12324307         | 23      |
| Sanacorp         | Paraffin, liquid     | 59/AKD4          | 1       |
| Caelo            | Paraffin, liquid     | 13232901ok       | 1       |
| Caelo            | Paraffin, liquid     | 14305905         | 3       |
| Caelo            | Paraffin, liquid     | 15293201         | 1       |
| Caelo            | Paraffin, liquid     | 57/AD1           | 1       |
| Caelo            | Paraffin, liquid     | 58/AKD55         | 1       |
| Caelo            | Paraffin, liquid     | 59/AKD2          | 1       |
| Fagron           | Paraffin, liquid     | 16A27-B01-323777 | 14      |
| Spinnrad         | Paraffin, liquid     | 13103308         | 1       |
| Euro OTC         | Paraffin, liquid     | 1506005-01       | 12      |
| Euro OTC         | Paraffin, liquid     | 125071           | 1       |
| Caelo            | Peanut oil, hydrated | 10206801         | 2       |
| Caelo            | Peanut oil, hydrated | 11266904         | 1       |
| Caelo            | Peanut oil, hydrated | 11300302         | 1       |
| Caelo            | Peanut oil, hydrated | 12298203         | 1       |
| Caelo            | Peanut oil, hydrated | 12298204         | 2       |
| Caelo            | Peanut oil, hydrated | 13172801         | 2       |

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| Supplier                    | Substance                            | Batch             | Spectra |
|-----------------------------|--------------------------------------|-------------------|---------|
| Caelo                       | Peanut oil, hydrated                 | 12298206          | 4       |
| Caelo                       | Peanut oil, hydrated                 | 12298205          | 2       |
| Caelo                       | Peanut oil, hydrated                 | 13172803          | 4       |
| Phönix Gotha                | Peanut oil, hydrated                 | 12230701          | 2       |
| Maros                       | Peppermint leaf mother tincture      | RU2432            | 2       |
| Caelo                       | Peppermint spirit 80.2%              | 11185901          | 1       |
| Caelo                       | Peppermint spirit 80.2%              | 11339501          | 1       |
| Caelo                       | Peppermint spirit 80.2%              | 11185902          | 1       |
| Caelo                       | Peppermint spirit 80.2%              | 12327202          | 2       |
| Caesar&Loretz<br>GmbH/An... | Peppermint spirit 80.2%              | 13252802          | 1       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 9089503           | 1       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 10106507          | 1       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 9089504           | 1       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 24091206          | 1       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 11207414          | 3       |
| Caelo                       | Peppermint tincture (70%) 1:5        | 12293409          | 1       |
| Maros                       | Peppermint tincture (70%) 1:5        | RU2432            | 1       |
| Caelo                       | Peru balsam, original                | 131966609         | 1       |
| Caelo                       | Peru balsam, original                | 11150808          | 2       |
| Caelo                       | Peru balsam, original                | 13196609          | 1       |
| Caelo                       | Peru balsam, original                | 11025902          | 1       |
| Caelo                       | Peru balsam, original                | 12020602          | 2       |
| Caelo                       | Peru balsam, original                | 12302411          | 5       |
| Caelo                       | Peru balsam, original                | 12302413          | 1       |
| Caelo                       | Peru balsam, original                | 13196606          | 1       |
| Caelo                       | Peru balsam, original                | 13196606          | 1       |
| Caelo                       | Peru balsam, original                | Retest            | 1       |
| Caelo                       | Peru balsam, original                | 13196609          | 1       |
| Fagron                      | Peru balsam, original                | 9G03-N09          | 1       |
| Fagron                      | Peru balsam, original                | 12K30-N02         | 2       |
| Fagron                      | Peru balsam, original                | 12H29-N010432/549 | 1       |
| Fagron                      | Peru balsam, original                | 12A20-N13         | 2       |
| Fagron                      | Peru balsam, original                | 11G22-N06         | 2       |
| Fagron                      | Peru balsam, original                | 3913E-01162       | 1       |
| Fagron                      | Peru balsam, original                | 2215I-01162       | 1       |
| Nachprüfung                 | Peru balsam, original                | 12020602          | 1       |
| Phönix Gotha                | Peru balsam, original                | 10C30-N07         | 1       |
| s.Prüfprotokoll             | Peru balsam, original                | s.Prüfprotokoll   | 1       |
| Caelo                       | Peru balsam, original                | 12020611          | 4       |
| Caelo                       | Plantain herb liquid extract (...)   | 11332621          | 1       |
| Caelo                       | Plantain herb liquid extract (...)   | 13008706          | 1       |
| Caelo                       | Plantain herb liquid extract (...)   | 13008703          | 2       |
| Caesar & Loretz             | Plantain herb liquid extract (...)   | 13008704          | 1       |
| Caesar & Loretz/<br>Noweda  | Plantain herb liquid extract (...)   | 11332620          | 1       |
| Caesar & Loretz/<br>Noweda  | Plantain herb liquid extract (...)   | 11332613          | 2       |
| Caesar & Loretz/<br>Noweda  | Plantain herb liquid extract (...)   | 11332616          | 1       |
| Caesar & Loretz/<br>Noweda  | Plantain herb liquid extract (...)   | 11332611          | 1       |
| Caesar & Loretz/<br>Noweda  | Plantain herb liquid extract (...)   | 13008708          | 2       |
| APOMIX / 11                 | Prednisolone 1% (non-ionic hyd. ...) | 3A160813          | 1       |
| Caelo                       | Propolis liquid extract 10% (i. ...) | 14377411          | 1       |
| Caelo                       | Propolis liquid extract 10% (i. ...) | 12086102          | 1       |
| Caelo                       | Propolis liquid extract 10% (i. ...) | 12086105          | 1       |
| Caelo                       | Propolis liquid extract 10% (i. ...) | 13347601          | 1       |
| Caelo                       | Propolis liquid extract 10% (i. ...) | 13347613          | 1       |

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| Supplier      | Substance                         | Batch    | Spectra |
|---------------|-----------------------------------|----------|---------|
| Caelo         | Propolis liquid extract 10% (i... | 12086101 | 1       |
| Caelo         | Propolis liquid extract 10% (i... | 12086115 | 1       |
| Caelo         | Propolis liquid extract 10% (i... | 12086113 | 1       |
| Caelo         | Propolis liquid extract 10% (i... | 14377408 | 1       |
| Caelo         | Propolis tincture (96%)           | 11269516 | 1       |
| Caelo         | Propolis tincture (96%)           | 11269511 | 1       |
| Caelo         | Propolis tincture (96%)           | 12206322 | 1       |
| Caelo         | Propolis tincture (96%)           | 11269521 | 1       |
| Caelo         | Propolis tincture (96%)           | 10305414 | 1       |
| Caesar/Lorenz | Propolis tincture (96%)           | 12206319 | 1       |
| müller        | Propolis tincture (96%)           | 131206   | 1       |
| Bomba/AHD     | Propolis tincture 20%             | 280337   | 2       |

| Supplier          | Substance                   | Batch       | Spectra |
|-------------------|-----------------------------|-------------|---------|
| Caelo             | Ratanhia tincture (70%) 1:5 | 11292802    | 4       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 12255401    | 6       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 12255403    | 2       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 14101305    | 1       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 13051205    | 1       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 13051206    | 3       |
| Caelo             | Ratanhia tincture (70%) 1:5 | CH:008/0913 | 1       |
| Caelo             | Ratanhia tincture (70%) 1:5 | 11204310    | 1       |
| Caesar/Noweda     | Ratanhia tincture (70%) 1:5 | 13051210    | 1       |
| Noweda            | Ratanhia tincture (70%) 1:5 | 12255406    | 1       |
| Caelo             | Rose water                  | 12342405    | 1       |
| Caelo             | Rose water                  | 12185405    | 3       |
| Caelo             | Rose water                  | 12288903    | 7       |
| Caelo             | Rose water                  | 12299801    | 2       |
| Caelo             | Rose water                  | 1021301     | 1       |
| Caelo             | Rose water                  | 12288902    | 2       |
| Caelo             | Rose water                  | 12342407    | 2       |
| Caelo             | Rose water                  | 13137302    | 2       |
| Caelo             | Rose water                  | 12299803    | 1       |
| Caelo             | Rose water                  | 12342406    | 2       |
| Caelo             | Rose water                  | 13137303    | 1       |
| Caelo             | Rose water                  | 31101305    | 1       |
| Caelo             | Rose water                  | 13306603    | 6       |
| Caelo             | Rose water                  | 13306604    | 8       |
| Caelo             | Rose water                  | 13137307    | 1       |
| Caelo             | Rose water                  | 15253701    | 1       |
| Caelo             | Rose water                  | 13137305    | 6       |
| Caelo             | Rose water                  | 1234201     | 1       |
| Caelo             | Rose water                  | 1317302     | 1       |
| Caelo             | Rose water                  | 12342404    | 1       |
| Caelo             | Rose water                  | 12342402    | 1       |
| Caelo             | Rose water                  | 13343604    | 2       |
| Caelo             | Rose water                  | 12K26-N10   | 4       |
| Caelo             | Rose water                  | 12C27-N05   | 1       |
| Caelo             | Rose water                  | 11355401    | 1       |
| Caelo             | Rose water                  | 12123203    | 1       |
| Caelo             | Rose water                  | 12299802    | 6       |
| Caelo             | Rose water                  | 13255902    | 4       |
| Fagron            | Rose water                  | 12H20-N09   | 3       |
| Fagron            | Rose water                  | 13B01-N01   | 3       |
| Fagron            | Rose water                  | 12H-20-N09  | 1       |
| Fagron            | Rose water                  | 737724      | 1       |
| Caelo             | Rose water                  | 12342401    | 2       |
| Otto Fischar GmbH | Rose water                  | 5354081     | 1       |
| Caelo             | Rose water                  | 11286005    | 1       |

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| Supplier | Substance                        | Batch   | Spectra |
|----------|----------------------------------|---------|---------|
| Caelo    | Rosemary leaf tincture (70%) 1:5 | 9135008 | 1       |
| Caelo    | Rosemary leaf tincture (70%) 1:5 | 140613  | 1       |
| Caelo    | Rosemary leaf tincture (70%) 1:5 | 9135005 | 1       |

| Supplier            | Substance                         | Batch         | Spectra |
|---------------------|-----------------------------------|---------------|---------|
| Caelo               | Sage leaf liquid extract (55%)... | 11372206      | 1       |
| Caelo               | Sage leaf liquid extract (55%)... | 11372217      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 9345011       | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 12196602      | 6       |
| Caelo               | Sage tincture (70%) 1:10          | 4111M-02476   | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 1120910       | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 11220910      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 11220909      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 12196607      | 3       |
| Caelo               | Sage tincture (70%) 1:10          | 11220911      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 12196611      | 8       |
| Caelo               | Sage tincture (70%) 1:10          | 1219661       | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 12196609      | 3       |
| Caelo               | Sage tincture (70%) 1:10          | 13125503      | 3       |
| Caelo               | Sage tincture (70%) 1:10          | 27111308      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 13125504      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 13125513      | 3       |
| Caelo               | Sage tincture (70%) 1:10          | 13125509      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 14078111      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 15081804      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 1120912       | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 13125505      | 1       |
| Caelo               | Sage tincture (70%) 1:10          | 12196612      | 3       |
| apomix              | Searing paste SR                  | 9B280613      | 2       |
| Apomix              | Searing paste SR                  | 3B180213      | 1       |
| Apomix              | Searing paste SR                  | 14B240913     | 3       |
| Apomix              | Searing paste SR                  | 15B211013     | 1       |
| Apomix / 20         | Searing paste SR                  | 12B150813     | 2       |
| Apomix/Noweda       | Searing paste SR                  | 11B010813     | 1       |
| Apomix/Phönix       | Searing paste SR                  | 5B110413      | 1       |
| Taoasis             | Siam benzoin                      | 541389-111081 | 1       |
| Caelo               | Siam benzoin tincture (90%) 1:5   | 1228119       | 1       |
| Phönix              | Siam benzoin tincture (90%) 1:5   | 12228107      | 1       |
| Hedinger / Sanacorp | Sodium hypochlorite solution 3%   | 46386         | 1       |
| Hedinger/ Gehe      | Sodium hypochlorite solution 3%   | 46375         | 1       |
| Hedinger/ Phönix    | Sodium hypochlorite solution 3%   | 46392         | 1       |
| Caelo               | Sodium lactate solution 60%       | 131000701     | 1       |
| Euro OTC            | Sodium lactate solution 60%       | 1310007-01    | 27      |
| Euro OTC            | Sodium lactate solution 60%       | 1212004-01    | 2       |
| Caelo               | Spearmint water                   | 13184503      | 1       |
| Bombastus           | St. John's wort oil               | 272178        | 1       |
| Bombastus           | St. John's wort oil               | 275674        | 1       |
| Bombastus           | St. John's wort oil               | 279926        | 1       |
| Bombastus           | St. John's wort oil               | 282275        | 1       |
| Bombastus           | St. John's wort oil               | 283368        | 1       |
| Bombastus           | St. John's wort oil               | 293138        | 1       |
| Caelo               | St. John's wort oil               | 2061205       | 1       |
| Caelo               | St. John's wort oil               | 10380614      | 1       |
| Caelo               | St. John's wort oil               | 11205309      | 5       |
| Caelo               | St. John's wort oil               | 2071201       | 1       |
| Caelo               | St. John's wort oil               | 11372104      | 4       |
| Caelo               | St. John's wort oil               | 28091204      | 1       |
| Caelo               | St. John's wort oil               | 12293904      | 5       |
| Caelo               | St. John's wort oil               | 1501302       | 1       |

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| Supplier              | Substance                         | Batch              | Spectra |
|-----------------------|-----------------------------------|--------------------|---------|
| Caelo                 | St. John's wort oil               | 12293911           | 8       |
| Caelo                 | St. John's wort oil               | 12293902           | 1       |
| Caelo                 | St. John's wort oil               | 12293903           | 1       |
| Caelo                 | St. John's wort oil               | 13155804           | 11      |
| Caelo                 | St. John's wort oil               | 13155802           | 3       |
| Caelo                 | St. John's wort oil               | 12292904           | 1       |
| Caelo                 | St. John's wort oil               | 5346791            | 1       |
| Caelo                 | St. John's wort oil               | 13252506           | 1       |
| Caelo                 | St. John's wort oil               | 14130405           | 1       |
| Caelo                 | St. John's wort oil               | 13389218           | 1       |
| Caelo                 | St. John's wort oil               | 15358606           | 1       |
| Caelo                 | St. John's wort oil               | 15358605           | 1       |
| Caelo                 | St. John's wort oil               | 16037003           | 1       |
| Caelo                 | St. John's wort oil               | 12076913           | 7       |
| Caelo                 | St. John's wort oil               | 12193404           | 1       |
| Caelo                 | St. John's wort oil               | 11372102           | 2       |
| Caelo                 | St. John's wort oil               | 13065106           | 3       |
| Caelo                 | St. John's wort oil               | 12076912           | 2       |
| Caelo                 | St. John's wort oil               | 12076904           | 1       |
| Caelo                 | St. John's wort oil               | 13155803           | 1       |
| Caelo                 | St. John's wort oil               | 12293919           | 2       |
| Caelo                 | St. John's wort oil               | 12293918           | 4       |
| Fagron                | St. John's wort oil               | 12L17-N15          | 1       |
| Fagron                | St. John's wort oil               | 5346701            | 4       |
| Fagron                | St. John's wort oil               | 12A30-N09          | 1       |
| Fagron                | St. John's wort oil               | 13A30-N09          | 1       |
| henry                 | St. John's wort oil               | 5803902            | 1       |
| Henry Lamotte         | St. John's wort oil               | 5442802            | 1       |
| HenryLamotte/Sanacorp | St. John's wort oil               | 5308402-3457312120 | 1       |
| Lamotte               | St. John's wort oil               | 5171601            | 6       |
| Lamotte               | St. John's wort oil               | 5346702            | 11      |
| Lamotte / Sanacorp    | St. John's wort oil               | 517601             | 1       |
| Lamotte Sanacorp      | St. John's wort oil               | 5308402            | 5       |
| Lamotte/Noweda        | St. John's wort oil               | 4959702            | 5       |
| Maros                 | St. John's wort oil               | 9758               | 1       |
| Maros                 | St. John's wort oil               | 97583x             | 1       |
| Caelo                 | St. John's wort oil               | 13065104           | 6       |
| Caelo                 | St. John's wort oil               | 12076905           | 2       |
| primavera             | St. John's wort oil               | 12106131           | 1       |
| Primavera             | St. John's wort oil               | 25508131           | 1       |
| Purren Apotheke       | St. John's wort oil               | 11205311           | 1       |
| Sanacorp              | St. John's wort oil               | 13252505           | 6       |
| Caelo                 | St. John's wort oil               | 12293917           | 4       |
| Caelo                 | St. John's wort oil               | 13065105           | 9       |
| Taoasis               | St. John's wort oil               | 145646-103095      | 1       |
| Taoasis               | St. John's wort oil               | 12312-109683       | 1       |
| Taoasis               | St. John's wort oil               | 123212-110835      | 1       |
| Taoasis               | St. John's wort oil               | 123212-111876      | 1       |
| Taoasis GmbH          | St. John's wort oil               | 150822-107470      | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 11195213           | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 11195217           | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 122377006          | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 11091303           | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 12237708           | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 12237706           | 1       |
| Caelo                 | St. John's wort tincture (70%)... | 11195216           | 2       |
| Caelo                 | St. John's wort tincture (70%)... | 12237709           | 1       |
| Caelo                 | Standardised cayenne pepper ex... | 12053902           | 2       |
| Nachprüfung           | Standardised cayenne pepper ex... | 2413M-03232        | 1       |
| Maros/direkt/07.05.13 | Strophanthus seed mother tinct... | 4029013            | 1       |

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| Supplier              | Substance                         | Batch    | Spectra |
|-----------------------|-----------------------------------|----------|---------|
| Maros/direkt/15.01.14 | Strophanthus seed mother tinct... | 1031014  | 3       |
| Maros/direkt/21.10.13 | Strophanthus seed mother tinct... | 10030413 | 2       |
| Maros/direkt/28.02.14 | Strophanthus seed mother tinct... | 2031214  | 4       |
| Maros/Maros           | Strophanthus seed mother tinct... | 6029813  | 2       |

| Supplier                 | Substance                     | Batch       | Spectra |
|--------------------------|-------------------------------|-------------|---------|
| Caelo                    | Texapon <sup>®</sup> CS paste | 12292006    | 1       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 12292007    | 1       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 1577804     | 1       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 15177804    | 2       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 16268904    | 1       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 16268903    | 1       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 16268907    | 2       |
| Caelo                    | Texapon <sup>®</sup> CS paste | 16268909    | 2       |
| Caelo                    | Theriac                       | 1121206     | 1       |
| Caelo                    | Theriac                       | 11121203    | 1       |
| Caelo                    | Theriac                       | 12067207    | 2       |
| Caelo                    | Theriac                       | 13187201    | 3       |
| Caelo                    | Theriac                       | 12067201    | 2       |
| Caelo                    | Theriac                       | 12067214    | 1       |
| Caelo                    | Theriac                       | 12067205    | 1       |
| Fiebig 23.10.12 ek:6,... | Theriac                       | 12067202    | 1       |
| Phönix                   | Theriac                       | 12067210    | 1       |
| Caelo                    | Thyme liquid extract          | 11090508    | 1       |
| Caelo                    | Thyme liquid extract          | 13036502    | 2       |
| Caelo                    | Thyme liquid extract          | 100312      | 1       |
| Caelo                    | Thyme liquid extract          | 12072102    | 2       |
| Caelo                    | Thyme liquid extract          | 13036516    | 1       |
| Caelo                    | Thyme liquid extract          | 1313M-01420 | 1       |
| Caesar & Loretz          | Thyme liquid extract          | 12197005    | 2       |
| Maros                    | Thyme liquid extract          | 1156        | 1       |
| Noweda                   | Thyme liquid extract          | 10198605    | 1       |
| Caelo                    | Thyme tincture (70%) 1:5      | 10043113    | 1       |
| Caelo                    | Thyme tincture (70%) 1:5      | 21031311    | 1       |
| Caelo                    | Thyme tincture (70%) 1:5      | 18101304    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13263004    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13263007    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 11061207    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 3101212484  | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 1910212484  | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 4212E-02484 | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 12255204    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 11278309    | 2       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 2103312484  | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003018    | 3       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13263003    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003003    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 11278310    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003010    | 2       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003012    | 5       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003009    | 3       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 3713Q2484   | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 614M2484    | 1       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003002    | 2       |
| Caelo                    | Tormentil tincture (70%) 1:5  | 13003008    | 1       |
| Caelo                    | Tretinoin solution 3.33mg/ml  | 11K09-N-03  | 1       |
| Fagron                   | Tretinoin solution 3.33mg/ml  | 12C08-N14   | 4       |
| Fagron                   | Tretinoin solution 3.33mg/ml  | 19061306    | 1       |
| Fagron                   | Tretinoin solution 3.33mg/ml  | 13C28-N01   | 10      |

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| Supplier    | Substance                         | Batch             | Spectra |
|-------------|-----------------------------------|-------------------|---------|
| Fagron      | Tretinoin solution 3.33mg/ml      | 1308D002          | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 1501D004          | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 1108D001          | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 13C25-N01         | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 1204D004          | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 1308D00213/11-N04 | 1       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 12G05-N15         | 6       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 13/11-N04         | 2       |
| Fagron      | Tretinoin solution 3.33mg/ml      | 13I11-N04         | 6       |
| Apomix / 11 | Triamcinolone acetonide 1% (no... | 9C111212          | 1       |
| Apomix / 11 | Triamcinolone acetonide 1% (no... | 6A260813          | 2       |
| Apomix / 11 | Triamcinolone acetonide 1% (no... | 5A290713          | 2       |
| Apomix / 11 | Triamcinolone acetonide 1% (no... | 10A051213         | 1       |
| Apomix / 20 | Triamcinolone acetonide 1% (no... | 8A190913          | 1       |
| Apomix / 30 | Triamcinolone acetonide 1% (no... | 7A170913          | 2       |
| APOMIX / 30 | Triamcinolone acetonide 1% (no... | 3A110613          | 1       |
| Apomix/ 11  | Triamcinolone acetonide 1% (no... | 4A040713          | 1       |
| Caelo       | Triamcinolone acetonide concen... | 12301201          | 2       |
| Caelo       | Triamcinolone acetonide concen... | 1332501           | 1       |
| Caelo       | Triamcinolone acetonide concen... | 13184701          | 6       |
| Caelo       | Triamcinolone acetonide concen... | 13275801          | 4       |
| Defektur    | Triamcinolone acetonide concen... | 3813Q             | 1       |
| Defektur    | Triamcinolone acetonide concen... | 4213E             | 1       |
| Defektur    | Triamcinolone acetonide concen... | 4713A             | 1       |
| Defektur    | Triamcinolone acetonide concen... | 4913Q             | 1       |
| Fagron      | Triamcinolone acetonide concen... | 214Q              | 1       |
| Phönix      | Triamcinolone acetonide concen... | 13029801          | 2       |

| Supplier | Substance                   | Batch      | Spectra |
|----------|-----------------------------|------------|---------|
| Caelo    | Valerian tincture (70%) 1:5 | 16030101   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 11254309   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 11379201   | 3       |
| Caelo    | Valerian tincture (70%) 1:5 | 12113002   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12030902   | 2       |
| Caelo    | Valerian tincture (70%) 1:5 | 6099.99.99 | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12113004   | 3       |
| Caelo    | Valerian tincture (70%) 1:5 | 12196203   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 11011308   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 11379204   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12030904   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12294002   | 3       |
| Caelo    | Valerian tincture (70%) 1:5 | 12294008   | 2       |
| Caelo    | Valerian tincture (70%) 1:5 | 13003206   | 6       |
| Caelo    | Valerian tincture (70%) 1:5 | 13003205   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 13094503   | 2       |
| Caelo    | Valerian tincture (70%) 1:5 | 13094506   | 2       |
| Caelo    | Valerian tincture (70%) 1:5 | 13052601   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 18101302   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 8011423    | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 14353011   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 13184905   | 4       |
| Caelo    | Valerian tincture (70%) 1:5 | 11187103   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12196204   | 4       |
| Caelo    | Valerian tincture (70%) 1:5 | 12294007   | 4       |
| Caelo    | Valerian tincture (70%) 1:5 | 1309505    | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12030908   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 12113005   | 1       |
| Caelo    | Valerian tincture (70%) 1:5 | 13094507   | 5       |
| Caelo    | Valerian tincture (70%) 1:5 | 13094505   | 7       |

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| Supplier                    | Substance                         | Batch                | Spectra |
|-----------------------------|-----------------------------------|----------------------|---------|
| Caelo                       | Valerian tincture (70%) 1:5       | 13094505-3380319003  | 1       |
| Caelo                       | Valerian tincture (70%) 1:5       | 13349203             | 1       |
| Cheplapharm<br>Arzneimit... | Valerian tincture (70%) 1:5       | 70713                | 1       |
| Euro OTC                    | Valerian tincture (70%) 1:5       | 1301003-01           | 2       |
| Euro OTC                    | Valerian tincture (70%) 1:5       | 1304041-01           | 2       |
| Noweda                      | Valerian tincture (70%) 1:5       | F1300052             | 1       |
| Noweda                      | Valerian tincture (70%) 1:5       | F1300146             | 1       |
| Caelo                       | Valerian tincture (70%) 1:5       | 11379203             | 1       |
| Phönix Gotha                | Valerian tincture (70%) 1:5       | 11254302             | 1       |
| Caelo                       | Valerian tincture (70%) 1:5       | 12196210             | 2       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 10316605             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 1117801              | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132902             | 2       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 11178109             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132904             | 3       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132906             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 1013Q-02565          | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132910             | 2       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 13057002             | 4       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 3815926              | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 130577002            | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 13296208             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 11178101             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132906             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 12132910             | 4       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 120404301            | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 13057003             | 1       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 13296206             | 1       |
| Caesar & Loretz GmbH        | Vitamin A-palmitate (ca. 1 m I... | 10316605             | 1       |
| Euro OTC                    | Vitamin A-palmitate (ca. 1 m I... | 1204043-01           | 4       |
| Euro OTC                    | Vitamin A-palmitate (ca. 1 m I... | 1310030-01           | 1       |
| EUro/AHD                    | Vitamin A-palmitate (ca. 1 m I... | 1211032-01           | 3       |
| Euro OTC                    | Vitamin A-palmitate (ca. 1 m I... | 1305003-01           | 3       |
| Fagron                      | Vitamin A-palmitate (ca. 1 m I... | UT12110078           | 1       |
| Fagron                      | Vitamin A-palmitate (ca. 1 m I... | 12J16-N03            | 1       |
| Fagron                      | Vitamin A-palmitate (ca. 1 m I... | 13F26-N08            | 5       |
| Fagron                      | Vitamin A-palmitate (ca. 1 m I... | 13C19-N12            | 5       |
| Gehe                        | Vitamin A-palmitate (ca. 1 m I... | 11178101             | 3       |
| Gehe                        | Vitamin A-palmitate (ca. 1 m I... | 1110018-01           | 1       |
| Gehe                        | Vitamin A-palmitate (ca. 1 m I... | 11178103             | 2       |
| GEHE                        | Vitamin A-palmitate (ca. 1 m I... | 12132902             | 4       |
| gehe 28.11.2013             | Vitamin A-palmitate (ca. 1 m I... | 13057007             | 2       |
| Caelo                       | Vitamin A-palmitate (ca. 1 m I... | 13057002             | 1       |
| Euro OTC                    | Vitamin A-palmitate (ca. 1 m I... | 1305003-01-342631115 | 1       |
| Phönix                      | Vitamin A-palmitate (ca. 1 m I... | 12132904             | 3       |
| Euro OTC                    | Vitamin A-palmitate (ca. 1 m I... | 1211032-01           | 3       |
| Audor Pharma                | Vitamin F liposomes               | AP207152FL           | 1       |
| Audor Pharma                | Vitamin F liposomes               | AP302038FL           | 1       |
| Eigenherstellung            | Vitamin F liposomes               | AP307176FL           | 1       |

| Supplier | Substance                         | Batch    | Spectra |
|----------|-----------------------------------|----------|---------|
| Caelo    | Witch hazel bark liquid extrac... | 13044104 | 1       |
| Caelo    | Witch hazel bark liquid extrac... | 11165602 | 1       |
| Caelo    | Witch hazel bark liquid extrac... | 13044102 | 3       |
| Caelo    | Witch hazel bark liquid extrac... | 11165605 | 1       |
| Caelo    | Witch hazel bark liquid extrac... | 13044106 | 1       |
| Caelo    | Witch hazel bark water            | 12376901 | 3       |
| Caelo    | Witch hazel bark water            | 13324411 | 1       |

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| Supplier                      | Substance                         | Batch         | Spectra |
|-------------------------------|-----------------------------------|---------------|---------|
| Caelo                         | Witch hazel bark water            | 11238904      | 1       |
| Caelo                         | Witch hazel bark water            | 11238906      | 3       |
| Caelo                         | Witch hazel bark water            | 12196906      | 4       |
| Caelo                         | Witch hazel bark water            | 11062814      | 1       |
| Caelo                         | Witch hazel bark water            | 12196905      | 4       |
| Caelo                         | Witch hazel bark water            | 11238910      | 1       |
| Caelo                         | Witch hazel bark water            | 1219608       | 1       |
| Caelo                         | Witch hazel bark water            | 12196908      | 3       |
| Caelo                         | Witch hazel bark water            | 12376907      | 9       |
| Caelo                         | Witch hazel bark water            | 12376906      | 2       |
| Caelo                         | Witch hazel bark water            | 12376905      | 2       |
| Caelo                         | Witch hazel bark water            | 12376912      | 2       |
| Caelo                         | Witch hazel bark water            | 12376918      | 3       |
| Caelo                         | Witch hazel bark water            | 13324403      | 7       |
| Caelo                         | Witch hazel bark water            | 12376912Caelo | 1       |
| Caelo                         | Witch hazel bark water            | 14093305      | 2       |
| Caelo                         | Witch hazel bark water            | 14093309      | 2       |
| Caelo                         | Witch hazel bark water            | 15430206      | 1       |
| Caelo                         | Witch hazel bark water            | 13324401      | 1       |
| Caelo                         | Witch hazel bark water            | 12376916      | 1       |
| Caelo                         | Witch hazel bark water            | 12376909      | 3       |
| Caelo                         | Witch hazel bark water            | 12359605      | 1       |
| Fiebig<br>10.08...            | ek:5.69EUR Witch hazel bark water | 11238911      | 2       |
| Hedinger                      | Witch hazel bark water            | 20153B        | 2       |
| Spinnrad/Phoenix              | Witch hazel bark water            | 413310062     | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 27081302      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 11060505      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 12095402      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 12165010      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 31031404      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 16071401      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 14112302      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 12165007      | 1       |
| Caelo                         | Witch hazel leaf liquid extrac... | 15397406      | 1       |
| Noweda                        | Witch hazel leaf liquid extrac... | 12095405      | 1       |
| Sanacorp                      | Witch hazel leaf liquid extrac... | 13112003      | 1       |
| 12370401                      | Wool alcohol cream DAB/SR         | 12370401      | 11      |
| Bombastus                     | Wool alcohol cream DAB/SR         | 1900019       | 1       |
| Bombastus                     | Wool alcohol cream DAB/SR         | 1900024       | 1       |
| 18023501                      | Wool alcohol cream DAB/SR         | 18023501      | 25      |
| A.H. 25.06.13<br>9,75EUR      | ek: Wool alcohol cream DAB/SR     | 13145501      | 7       |
| Aallianc. Healthc. / ...      | Wool alcohol cream DAB/SR         | 35A260516     | 1       |
| Caelo                         | Wool alcohol cream DAB/SR         | 18005985      | 3       |
| AHD                           | Wool alcohol cream DAB/SR         | 14356301      | 1       |
| AHD / Leyh                    | Wool alcohol cream DAB/SR         | 153711        | 1       |
| Bombastus                     | Wool alcohol cream DAB/SR         | 3020333       | 1       |
| Bombastus                     | Wool alcohol cream DAB/SR         | 288355        | 2       |
| All. Healthc. /Apomix         | Wool alcohol cream DAB/SR         | 33A150415     | 1       |
| All..Healthc./Apomix          | Wool alcohol cream DAB/SR         | 41A020513     | 2       |
| Euro OTC                      | Wool alcohol cream DAB/SR         | 39A150514     | 4       |
| Allianc. Health. / Ap...      | Wool alcohol cream DAB/SR         | 46A011116     | 3       |
| Allianc. Health. / Ap...      | Wool alcohol cream DAB/SR         | 5A220217      | 3       |
| Allianc. Health.<br>/Apo...   | Wool alcohol cream DAB/SR         | 49A031116     | 3       |
| Alliance Health 06.03...      | Wool alcohol cream DAB/SR         | 14362102      | 6       |
| Alliance Healthcare           | Wool alcohol cream DAB/SR         | 275909        | 1       |
| Alliance Health-<br>care/A... | Wool alcohol cream DAB/SR         | 69A080814     | 1       |

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| Supplier             | Substance                      | Batch       | Spectra |
|----------------------|--------------------------------|-------------|---------|
| Caelo                | Wool alcohol cream DAB/SR      | 13172103    | 11      |
| Caelo                | Wool alcohol cream DAB/SR      | 20001085001 | 1       |
| AMH<br>mann/Sanacorp | Nie- Wool alcohol cream DAB/SR | 5A040419    | 4       |
| Anzag                | Wool alcohol cream DAB/SR      | 11226402    | 1       |
| Anzag                | Wool alcohol cream DAB/SR      | 12122201    | 1       |
| Anzag                | Wool alcohol cream DAB/SR      | 13145801    | 11      |
| Anzag                | Wool alcohol cream DAB/SR      | 282749      | 2       |
| Anzag                | Wool alcohol cream DAB/SR      | 13145901    | 1       |
| Anzag                | Wool alcohol cream DAB/SR      | 151500002   | 1       |
| Anzag 30.01.2019     | Wool alcohol cream DAB/SR      | 18241501    | 20      |
| Caelo                | Wool alcohol cream DAB/SR      | 12308001    | 7       |
| apomix               | Wool alcohol cream DAB/SR      | 22A200213   | 1       |
| apomix               | Wool alcohol cream DAB/SR      | 27A180315   | 1       |
| apomix               | Wool alcohol cream DAB/SR      | 58A100615   | 1       |
| apomix               | Wool alcohol cream DAB/SR      | 96A111115   | 3       |
| apomix               | Wool alcohol cream DAB/SR      | 20A010316   | 2       |
| apomix               | Wool alcohol cream DAB/SR      | 3A270116    | 1       |
| apomix               | Wool alcohol cream DAB/SR      | 40A080816   | 5       |
| apomix               | Wool alcohol cream DAB/SR      | 14A280617   | 1       |
| apomix               | Wool alcohol cream DAB/SR      | 14A130618   | 3       |
| apomix               | Wool alcohol cream DAB/SR      | 27A211118   | 5       |
| apomix               | Wool alcohol cream DAB/SR      | 2A120219    | 4       |
| apomix               | Wool alcohol cream DAB/SR      | 7A210519    | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 20A070212   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 21A070212   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 32A070312   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 33A070312   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 51A070512   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 69A100712   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 62A200612   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 96A161012   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 104A291012  | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 103A291012  | 4       |
| Apomix               | Wool alcohol cream DAB/SR      | 101A291012  | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 3A160113    | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 90A021012   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 98A241012   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 20A120213   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 109A191112  | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 39A180413   | 3       |
| Apomix               | Wool alcohol cream DAB/SR      | 56A300713   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 19A120213   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 33A080413   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 72A270913   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 56A270613   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 101A191213  | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 1A020114    | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 41A150514   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 41A150515   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 61A080714   | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 83A290914   | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 96A181114   | 4       |
| Apomix               | Wool alcohol cream DAB/SR      | 92A281014   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 100A021214  | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 108A301214  | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 13A050215   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 64A250715   | 1       |
| Apomix               | Wool alcohol cream DAB/SR      | 74A130815   | 2       |
| Apomix               | Wool alcohol cream DAB/SR      | 92A111115   | 1       |

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| Supplier                   | Substance                 | Batch      | Spectra |
|----------------------------|---------------------------|------------|---------|
| Apomix                     | Wool alcohol cream DAB/SR | 32A120416  | 3       |
| Apomix                     | Wool alcohol cream DAB/SR | 5A280116   | 1       |
| Apomix                     | Wool alcohol cream DAB/SR | 37A040716  | 1       |
| Apomix                     | Wool alcohol cream DAB/SR | 19A010316  | 1       |
| Apomix                     | Wool alcohol cream DAB/SR | 50A011216  | 4       |
| Apomix                     | Wool alcohol cream DAB/SR | 6A230217   | 1       |
| Apomix                     | Wool alcohol cream DAB/SR | 15A280617  | 4       |
| Apomix                     | Wool alcohol cream DAB/SR | 18A070817  | 7       |
| Apomix                     | Wool alcohol cream DAB/SR | 25A231117  | 4       |
| Apomix                     | Wool alcohol cream DAB/SR | 3A110118   | 2       |
| Apomix                     | Wool alcohol cream DAB/SR | 11A050418  | 7       |
| Apomix                     | Wool alcohol cream DAB/SR | 12A070518  | 6       |
| Apomix                     | Wool alcohol cream DAB/SR | 20A240718  | 6       |
| Apomix                     | Wool alcohol cream DAB/SR | 22A200818  | 5       |
| Apomix                     | Wool alcohol cream DAB/SR | 1A150119   | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 88A231013  | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 57A300614  | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 6A220115   | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 72-A190814 | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 41A230415  | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 46A27515   | 1       |
| apomix PKH GmbH Halle      | Wool alcohol cream DAB/SR | 69A120815  | 1       |
| apomix / Alliance          | Wool alcohol cream DAB/SR | 100A191213 | 1       |
| apomix / Anzag             | Wool alcohol cream DAB/SR | 64A300714  | 1       |
| apomix / Anzag             | Wool alcohol cream DAB/SR | 4A220115   | 1       |
| apomix / Anzag             | Wool alcohol cream DAB/SR | 42A290816  | 1       |
| apomix / Anzag             | Wool alcohol cream DAB/SR | 81A100915  | 1       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 13A070518  | 7       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 8A030418   | 1       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 17A230718  | 2       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 24A091018  | 5       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 21A200818  | 1       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 25A101018  | 2       |
| Apomix / Noweda            | Wool alcohol cream DAB/SR | 3A130219   | 7       |
| Apomix / Phönix            | Wool alcohol cream DAB/SR | 21A280214  | 2       |
| Apomix / Phönix            | Wool alcohol cream DAB/SR | 33A010414  | 1       |
| Apomix / Phönix            | Wool alcohol cream DAB/SR | 48A110614  | 2       |
| Apomix / Phönix            | Wool alcohol cream DAB/SR | 85A300914  | 2       |
| Apomix /Alliance           | Wool alcohol cream DAB/SR | 13A180214  | 1       |
| Apomix /Noweda             | Wool alcohol cream DAB/SR | 25a170316  | 1       |
| Apomix /Noweda             | Wool alcohol cream DAB/SR | 6a230217   | 1       |
| apomix 004                 | Wool alcohol cream DAB/SR | 65A060715  | 1       |
| apomix AHD                 | Wool alcohol cream DAB/SR | 15A160216  | 3       |
| apomix AMH Niemann Gm. . . | Wool alcohol cream DAB/SR | 36A250516  | 2       |
| apomix AMH Niemann Gm. . . | Wool alcohol cream DAB/SR | 39A050716  | 6       |
| apomix AMH Niemann Gm. . . | Wool alcohol cream DAB/SR | 48A021116  | 3       |
| apomix AMH Niemann Gm. . . | Wool alcohol cream DAB/SR | 45A041016  | 2       |
| apomix AMH Niemann Gm. . . | Wool alcohol cream DAB/SR | 8A060317   | 3       |

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| Supplier                      | Substance                 | Batch      | Spectra |
|-------------------------------|---------------------------|------------|---------|
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 9A260417   | 2       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 24A221117  | 3       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 4A110118   | 2       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 7A130218   | 2       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 10A040418  | 10      |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 15A130618  | 7       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 18A230718  | 6       |
| apomix AMH Niemann<br>Gm. ... | Wool alcohol cream DAB/SR | 6A210519   | 5       |
| Apomix Anzag                  | Wool alcohol cream DAB/SR | 69A080814  | 1       |
| Apomix Anzag                  | Wool alcohol cream DAB/SR | 9A050215   | 1       |
| Apomix Anzag                  | Wool alcohol cream DAB/SR | 41A150514  | 1       |
| Apomix Anzag                  | Wool alcohol cream DAB/SR | 13A010617  | 5       |
| apomix PKH GmbH               | Wool alcohol cream DAB/SR | 28A191218  | 5       |
| Apomix, PKH Halle             | Wool alcohol cream DAB/SR | 11A040719  | 2       |
| Apomix/ Gehe                  | Wool alcohol cream DAB/SR | 13A150216  | 2       |
| Apomix/ Noweda                | Wool alcohol cream DAB/SR | 10A030719  | 1       |
| apomix/AHD                    | Wool alcohol cream DAB/SR | 102A091215 | 1       |
| Apomix/AHD                    | Wool alcohol cream DAB/SR | 16A130618  | 4       |
| Apomix/Alliance<br>Healt. ... | Wool alcohol cream DAB/SR | 66A060715  | 1       |
| apomix/Anzag                  | Wool alcohol cream DAB/SR | 89A041113  | 1       |
| apomix/ANZAG/04.07.2013       | Wool alcohol cream DAB/SR | 4546233    | 1       |
| apomix/Gehe                   | Wool alcohol cream DAB/SR | 104A111214 | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 50A110614  | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 15A230215  | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 37A220415  | 2       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 87A061015  | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 104A091215 | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 10A270417  | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 16A290617  | 1       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 16A070817  | 2       |
| Apomix/Gehe                   | Wool alcohol cream DAB/SR | 27a211118  | 1       |
| Apomix/GEHE                   | Wool alcohol cream DAB/SR | 6A120218   | 3       |
| apomix/GEHE/04.04.2013        | Wool alcohol cream DAB/SR | 108A191112 | 1       |
| apomix/GEHE23.04.14           | Wool alcohol cream DAB/SR | 5A200114   | 1       |
| apomix/Holdermann             | Wool alcohol cream DAB/SR | 78A160913  | 1       |
| apomix/Holdermann             | Wool alcohol cream DAB/SR | 93A111115  | 1       |
| apomix/Holdermann             | Wool alcohol cream DAB/SR | 34A250516  | 4       |
| apomix/Holdermann             | Wool alcohol cream DAB/SR | 11A270417  | 1       |
| apomix/Noweda                 | Wool alcohol cream DAB/SR | 90A221014  | 1       |
| apomix/Noweda                 | Wool alcohol cream DAB/SR | 75A130815  | 1       |
| apomix/Noweda                 | Wool alcohol cream DAB/SR | 31A110416  | 1       |
| apomix/Noweda                 | Wool alcohol cream DAB/SR | 42a290816  | 1       |
| apomix/Noweda                 | Wool alcohol cream DAB/SR | 23A200818  | 2       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 81A260913  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 20A270214  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 12A040214  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 81A290914  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 105A301214 | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 17A230215  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 62A250615  | 1       |
| Apomix/Noweda                 | Wool alcohol cream DAB/SR | 77A260815  | 1       |

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| Supplier            | Substance                 | Batch      | Spectra |
|---------------------|---------------------------|------------|---------|
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 301311     | 2       |
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 38A050716  | 1       |
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 44A041016  | 1       |
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 2A120117   | 5       |
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 20A070817  | 1       |
| Apomix/Noweda       | Wool alcohol cream DAB/SR | 3A1101118  | 1       |
| Apomix/Phoenix      | Wool alcohol cream DAB/SR | 6A21019    | 1       |
| apomix/Phönix       | Wool alcohol cream DAB/SR | 43A200515  | 1       |
| Apomix/Phönix       | Wool alcohol cream DAB/SR | 47A040613  | 3       |
| Apomix/Phönix       | Wool alcohol cream DAB/SR | 5A220115   | 1       |
| Apomix/Sana         | Wool alcohol cream DAB/SR | 14A180215  | 4       |
| Apomix/Sana         | Wool alcohol cream DAB/SR | 89A291015  | 3       |
| Apomix/Sana         | Wool alcohol cream DAB/SR | 90A291015  | 1       |
| Apotheke zum Zirkel | Wool alcohol cream DAB/SR | 519E-01371 | 3       |
| Beiersdorf/Alliance | Wool alcohol cream DAB/SR | 51630108WA | 1       |
| Spangropharm        | Wool alcohol cream DAB/SR | 83730208WA | 1       |
| Bombast/spangro     | Wool alcohol cream DAB/SR | 18000770   | 9       |
| Bombastus           | Wool alcohol cream DAB/SR | 291432     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 288354     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 291479     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 291477     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 291478     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 296133     | 3       |
| Bombastus           | Wool alcohol cream DAB/SR | 311459     | 3       |
| Bombastus           | Wool alcohol cream DAB/SR | 267043     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 265304     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 267046     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 269832     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 270038     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 270033     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 270033     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 273631     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 271811     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 270721     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 272263     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 275987     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274628     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274348     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274630     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274349     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274347     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 276219     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 275917     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 275911     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 274634     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 275990     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 276214     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 275991     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 275918     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 277096     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 278742     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 277206     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 278745     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 277855     | 2       |
| Bombastus           | Wool alcohol cream DAB/SR | 277771     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 276212     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 277097     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 27771      | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 277204     | 1       |
| Bombastus           | Wool alcohol cream DAB/SR | 278827     | 1       |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 278831   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 277208   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 278744   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 279875   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 280390   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 282239   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 280386   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 282685   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 282684   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 282750   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 282246   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284447   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 283575   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 282748   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 284577   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284951   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 284582   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 285872   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 285874   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 287093   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 285875   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 286235   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 287087   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 2846336  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 288446   | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 287176   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289384   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 288443   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 289623   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 289622   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289622   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291272   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291265   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291479   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291350   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291476   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 291352   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 291264   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 291349   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 285872   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289391   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 293067   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 294270   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | Test1234 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 293064   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 293066   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289491   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 294333   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 296127   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 296134   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 296131   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 296130   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 296132   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 297413   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 297527   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 288260   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 297412   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 295464   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 298813   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 295465   | 1       |

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| <b>Supplier</b> | <b>Substance</b>          | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------|--------------|----------------|
| Bombastus       | Wool alcohol cream DAB/SR | 297411       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 299784       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 299783       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 299226       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 299786       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 297523       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 300835       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 301312       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 298672       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 299229       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 300836       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 302030       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 299785       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 301309       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 300576       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 301883       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 303010       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 299235       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 301890       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 295532       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 302029       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 301880       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 303528       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 301887       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 301888       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 3029972      | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 30297        | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 301306       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 303525       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 6862317      | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 302967       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 304432       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 303526       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 303527       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 306211       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 304433       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 306082       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 304431       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 60089704     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 306090       | 8              |
| Bombastus       | Wool alcohol cream DAB/SR | 306214       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 306088       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 306213       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 307613       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 3068180      | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 306816       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 307284       | 7              |
| Bombastus       | Wool alcohol cream DAB/SR | 307621       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 308303       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 307623       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 307622       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 308304       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 308306       | 7              |
| Bombastus       | Wool alcohol cream DAB/SR | 60080303     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 307289       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 308316       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 310579       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 308313       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 308683       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 310582       | 5              |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 307283   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 308685   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 308309   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 308321   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 310585   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 308312   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 308315   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 311449   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 308311   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 307281   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 310584   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 311529   | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 311456   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 311451   | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 309641   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 309639   | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 311523   | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 17002210 | 11      |
| Bombastus | Wool alcohol cream DAB/SR | 311527   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 311457   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 17002209 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18000764 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 17002205 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18001373 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18002542 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 17002204 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18001378 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 230718A  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 250718A  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18002412 | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 18003998 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18004058 | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 18002408 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18004015 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18004059 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18004062 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 18006134 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 19000027 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18006647 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18006845 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 19000026 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19000021 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 6862292  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 1900020  | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19001825 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19001838 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18002535 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19002147 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 19003091 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 19004081 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289390   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000762 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 18004060 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18006646 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 270723   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 272127   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 267154   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 292695   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 299227   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 278828   | 2       |

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| <b>Supplier</b> | <b>Substance</b>          | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------|--------------|----------------|
| Bombastus       | Wool alcohol cream DAB/SR | 282242       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 284580       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 287179       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 288442       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 291348       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 295460       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 297528       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 285867       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 284450       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 295462       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 304429       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18000750     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18006642     | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004717     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 19001830     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 308302       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 307285       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18001377     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 294273       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 299780       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004719     | 7              |
| Bombastus       | Wool alcohol cream DAB/SR | 306087       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002549     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 19001832     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 311452       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 311453       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002546     | 7              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002545     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 311524       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004002     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 289393       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 310578       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18006839     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004056     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 289395       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 305256       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 306212       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002537     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 295528       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 295534       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 298815       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 300833       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 19000168     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 279020       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 281506       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 288261       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 294527       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 298679       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 299234       | 8              |
| Bombastus       | Wool alcohol cream DAB/SR | 304435       | 11             |
| Bombastus       | Wool alcohol cream DAB/SR | 294272       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18000768     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 294330       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002543     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 310573       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002540     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 301889       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18006838     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 270730       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 274849       | 1              |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 284947   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 284948   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 289632   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 273634   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 279877   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 302964   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 304421   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 300831   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284451   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 285868   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 289394   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289395   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289088   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289489   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 295529   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 18002550 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19000163 | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 286237   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 40/14    | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18002552 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 19000022 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 19001833 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284445   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 287085   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 292769   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 298678   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 19003088 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 60080302 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 294529   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 300581   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 293069   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 291352   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289487   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 294271   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 302970   | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 19001839 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19002149 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19002152 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 302969   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19001836 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 269924   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 272259   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 274629   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 278749   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284446   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 285817   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 288441   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 17002202 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000758 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000760 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19000015 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19001826 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18004061 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18002547 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18004057 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 306219   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 306822   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 17002147 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 279019   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 288259   | 2       |

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| <b>Supplier</b> | <b>Substance</b>          | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------|--------------|----------------|
| Bombastus       | Wool alcohol cream DAB/SR | 288260       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 289088       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 280988       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 289620       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 306089       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002553     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004720     | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002141     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 298817       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 298677       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 305261       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 311455       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 17002207     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 283574       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 277097       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 282754       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 278832       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 284579       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 293063       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 300583       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 301891       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 17002149     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002145     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 276216       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 277769       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 306818       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 19003089     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 302031       | 9              |
| Bombastus       | Wool alcohol cream DAB/SR | 302966       | 7              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002142     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 20000661     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 278824       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 281504       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 279870       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 47/14        | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 298674       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 295537       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 306820       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 307626       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 309636       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 307616       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 418M-03938   | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 311454       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 311447       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18000757     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002416     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004000     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 17002203     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18004722     | 8              |
| Bombastus       | Wool alcohol cream DAB/SR | 18006645     | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 19000166     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 60089702     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002148     | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002146     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18001375     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002538     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 310580       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 18000769     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 295536       | 11             |
| Bombastus       | Wool alcohol cream DAB/SR | 305257       | 6              |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 18004013 | 10      |
| Bombastus | Wool alcohol cream DAB/SR | 19001827 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 297530   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 306083   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 3083301  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 310581   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 17002208 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 19001834 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 307624   | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 306215   | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 308684   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18006644 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18006842 | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 269927   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 272257   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 273633   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 274631   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 275913   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 277770   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 285869   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 28/7175  | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 300577   | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 298814   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 301885   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 301305   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 306080   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000765 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18001374 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 18002539 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18002541 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18002536 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18004055 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18004715 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18006648 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18004714 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19000020 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19001828 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19000167 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 19001831 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19003084 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19002150 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19003085 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19004267 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19005760 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19005503 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 4a110118 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 284636   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 19000019 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 19000024 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 19000165 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 299231   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 299230   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 298668   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19000170 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 19003122 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 279021   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 286234   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 288350   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 289091   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 291347   | 1       |

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| <b>Supplier</b> | <b>Substance</b>          | <b>Batch</b> | <b>Spectra</b> |
|-----------------|---------------------------|--------------|----------------|
| Bombastus       | Wool alcohol cream DAB/SR | 292693       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 294532       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 294332       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 300578       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 306085       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 305254       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 307617       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 307618       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 308686       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 308310       | 8              |
| Bombastus       | Wool alcohol cream DAB/SR | 311448       | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 311528       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 307620       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002411     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002415     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 18003997     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 19002144     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 19004261     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 298816       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 298812       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 299782       | 8              |
| Bombastus       | Wool alcohol cream DAB/SR | 300837       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 300834       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 305260       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 306084       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 307286       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 306817       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 17002146     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 17002212     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 18003999     | 5              |
| Bombastus       | Wool alcohol cream DAB/SR | 18002406     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 191230111    | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 305255       | 6              |
| Bombastus       | Wool alcohol cream DAB/SR | 307282       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 274683       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 278829       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 281503       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 286238       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 280391       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 289087       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 288259       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 289396       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 291433       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 291479       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 292694       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 295463       | 4              |
| Bombastus       | Wool alcohol cream DAB/SR | 295218       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 297526       | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 299787       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 303529       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 303524       | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 311450       | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 18000767     | 2              |
| Bombastus       | Wool alcohol cream DAB/SR | 108002412    | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 1800762      | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 19000169     | 3              |
| Bombastus       | Wool alcohol cream DAB/SR | 19000018     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 19003092     | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 190991109    | 1              |
| Bombastus       | Wool alcohol cream DAB/SR | 289091       | 2              |

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| Supplier  | Substance                 | Batch    | Spectra |
|-----------|---------------------------|----------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 308689   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 310577   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 18002413 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 18001380 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18006843 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 19000025 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 277854   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 292697   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 301892   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 17197320 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 19001835 | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 17002150 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 265303   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 267799   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 270035   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 270037   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 273637   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 273636   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 277093   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 278833   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 297531   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 297529   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 297533   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 299233   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 299232   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 300579   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 302033   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 304437   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 304436   | 12      |
| Bombastus | Wool alcohol cream DAB/SR | 306217   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 305259   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 308301   | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 308688   | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 308687   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 308314   | 7       |
| Bombastus | Wool alcohol cream DAB/SR | 310585   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 311458   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 17002211 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18002544 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18002548 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18004014 | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 18002551 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 18004724 | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 18006840 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 19000161 | 10      |
| Bombastus | Wool alcohol cream DAB/SR | 19001841 | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 18001376 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 291267   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 277856   | 3       |
| Bombastus | Wool alcohol cream DAB/SR | 308307   | 8       |
| Bombastus | Wool alcohol cream DAB/SR | 311525   | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 18004718 | 6       |
| Bombastus | Wool alcohol cream DAB/SR | 18004725 | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 17002148 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000763 | 5       |
| Bombastus | Wool alcohol cream DAB/SR | 18004063 | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 298676   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 299228   | 2       |
| Bombastus | Wool alcohol cream DAB/SR | 307619   | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 18000766 | 2       |

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| Supplier  | Substance                 | Batch      | Spectra |
|-----------|---------------------------|------------|---------|
| Bombastus | Wool alcohol cream DAB/SR | 18004716   | 4       |
| Bombastus | Wool alcohol cream DAB/SR | 284943     | 1       |
| Bombastus | Wool alcohol cream DAB/SR | 301308     | 2       |
| Bombatus  | Wool alcohol cream DAB/SR | 18006641   | 2       |
| Bombstus  | Wool alcohol cream DAB/SR | 302032     | 4       |
| Bumbastus | Wool alcohol cream DAB/SR | 302972     | 8       |
| Caelo     | Wool alcohol cream DAB/SR | 12240502   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 13061501   | 14      |
| Caelo     | Wool alcohol cream DAB/SR | 1306804    | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 13279502   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 14046501   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 14170801   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 14246201   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 20161102-2 | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 15361601   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 16313002   | 12      |
| Caelo     | Wool alcohol cream DAB/SR | 17156102   | 7       |
| Caelo     | Wool alcohol cream DAB/SR | 18104401   | 22      |
| Caelo     | Wool alcohol cream DAB/SR | 18241401   | 47      |
| Caelo     | Wool alcohol cream DAB/SR | 18262501   | 18      |
| Caelo     | Wool alcohol cream DAB/SR | 11228001   | 2       |
| Caelo     | Wool alcohol cream DAB/SR | 11356201   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 11356501   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12001301   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12106001   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12030601   | 2       |
| Caelo     | Wool alcohol cream DAB/SR | 1117601    | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12056401   | 2       |
| Caelo     | Wool alcohol cream DAB/SR | 11226401   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12106401   | 3       |
| Caelo     | Wool alcohol cream DAB/SR | 11226301   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12036501   | 7       |
| Caelo     | Wool alcohol cream DAB/SR | 12122002   | 3       |
| Caelo     | Wool alcohol cream DAB/SR | 12122101   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 12106701   | 2       |
| Caelo     | Wool alcohol cream DAB/SR | 12000301   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 11356001   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 25091204   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 1212202    | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12205701   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 12269201   | 5       |
| Caelo     | Wool alcohol cream DAB/SR | 1226901    | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12205801   | 3       |
| Caelo     | Wool alcohol cream DAB/SR | 12036402   | 2       |
| Caelo     | Wool alcohol cream DAB/SR | 11171501   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12036601   | 6       |
| Caelo     | Wool alcohol cream DAB/SR | 12101602   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12205402   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 12205501   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12123501   | 7       |
| Caelo     | Wool alcohol cream DAB/SR | 12307401   | 8       |
| Caelo     | Wool alcohol cream DAB/SR | 2112217035 | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 20101112-1 | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12259701   | 3       |
| Caelo     | Wool alcohol cream DAB/SR | 12307103   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 12307601   | 6       |
| Caelo     | Wool alcohol cream DAB/SR | 12122001   | 4       |
| Caelo     | Wool alcohol cream DAB/SR | 23021303   | 1       |
| Caelo     | Wool alcohol cream DAB/SR | 12351901   | 5       |
| Caelo     | Wool alcohol cream DAB/SR | 13029503   | 7       |

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| Supplier | Substance                 | Batch        | Spectra |
|----------|---------------------------|--------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 12036301     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 12307102     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13068503     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13068601     | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 12259802     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 115A171212   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13061601     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 1913Q-01371  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13062201     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | E-090413-3   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13145202     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 13068701     | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 13145701     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 12370401     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 9071301      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13172001     | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 13029502     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13061401     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13081303     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13261801     | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 12101304     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 269213261801 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1327901      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13279101     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 13172105     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13369601     | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 13289403     | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 13369401     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 13280801     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 1118962      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 9011407      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13394103     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13369601     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14362201     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 13394102     | 21      |
| Caelo    | Wool alcohol cream DAB/SR | 14033202     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 13394201     | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 13172102     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 9041402      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14092601     | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 14092502     | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 14045801     | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 14046201     | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 284638       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1373801      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14092501     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 14166901     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14164201     | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 14046381     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14162503     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14162502     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 14164201     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 14246501     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14169101     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14126801     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14170801     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14216601     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14092501     | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 14246401     | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 14169101     | 10      |

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| Supplier | Substance                 | Batch    | Spectra |
|----------|---------------------------|----------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 13369401 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 289089   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 23101405 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14246101 | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14246301 | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 14216902 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14259402 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14259601 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14246201 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14259401 | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14164201 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14246501 | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 14246101 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14259801 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14092601 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14216902 | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 1426401  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15011504 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295402 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 21105102 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295901 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14296001 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14259801 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 1424501  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14362301 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14295401 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295401 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14295601 | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14356303 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295601 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15017501 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13394101 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14356501 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14295601 | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 15017601 | 21      |
| Caelo    | Wool alcohol cream DAB/SR | 14170901 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1429501  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14356501 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15017601 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14296001 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 1456302  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295801 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15132101 | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 15073601 | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 15017601 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15149801 | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 1071503  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14259701 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15017901 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15174201 | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 1515101  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15073801 | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 15149802 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15149802 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15226301 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15266001 | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 15174302 | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 15266201 | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 15259701 | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15174105 | 1       |

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| Supplier | Substance                 | Batch           | Spectra |
|----------|---------------------------|-----------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 15150101        | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15260102        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | alt:0415I-01371 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15259901        | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15266101        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15268402        | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 15259801        | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15259801        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15360901        | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 15361001        | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15268501        | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 15360901        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15361101        | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15268302        | 38      |
| Caelo    | Wool alcohol cream DAB/SR | 15268601        | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 2767            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16008103        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15361501        | 17      |
| Caelo    | Wool alcohol cream DAB/SR | 16024501        | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 16008103        | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 15361301        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16007802        | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 160245          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16024601        | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 15361201        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16008201        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16024403        | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 16024502        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 152683021       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16090501        | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 80616-10        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16089902        | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 2808            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16090401        | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 16157901        | 25      |
| Caelo    | Wool alcohol cream DAB/SR | 16008401        | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 16090601        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16024401        | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 16090101        | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 16008001        | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16177701        | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 201310          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16157901        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1608992         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16158102        | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 16340902        | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 16090001        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1609041         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 161177701       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1600841         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16157802        | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 303530          | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16177401        | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 16157801        | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 16112201        | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 160912ECA       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16158001        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16157501        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16007701        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16199101        | 12      |

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| Supplier | Substance                 | Batch            | Spectra |
|----------|---------------------------|------------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 16282301         | 34      |
| Caelo    | Wool alcohol cream DAB/SR | 16199301         | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 116282301        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16090601         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 2890             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 161776           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16278201         | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 16198401         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16312901         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16249003         | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 16340701         | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 16312902         | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 16198901         | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 16344301         | 23      |
| Caelo    | Wool alcohol cream DAB/SR | 16341001         | 19      |
| Caelo    | Wool alcohol cream DAB/SR | 16344201         | 39      |
| Caelo    | Wool alcohol cream DAB/SR | 16282301         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1634080101098277 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1709202          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 306819           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17039201         | 20      |
| Caelo    | Wool alcohol cream DAB/SR | 16344101         | 19      |
| Caelo    | Wool alcohol cream DAB/SR | 170390301        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17039202         | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 16177801         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17040001         | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 170394015292     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17039501         | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17104702         | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 17102602         | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 5081702          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 163441           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 171202701        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17148701         | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 17104703         | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17155901         | 31      |
| Caelo    | Wool alcohol cream DAB/SR | Chargeergänzen!! | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17128502         | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 17094001         | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 17102801         | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 171559015364     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 310583           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17197303         | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 17149101         | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 17228702         | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17187601         | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 171973202        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 308305           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17187902         | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 17179301         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17187901         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17016001         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17284701         | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 17284802         | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 171877015454     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18012201         | 41      |
| Caelo    | Wool alcohol cream DAB/SR | 18012301         | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 17848022x        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17264801         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18012401         | 16      |

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| Supplier | Substance                 | Batch          | Spectra |
|----------|---------------------------|----------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 17284401       | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 18012303       | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 17352401       | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 1724802        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1728402        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17264301       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18069601       | 28      |
| Caelo    | Wool alcohol cream DAB/SR | 3051810        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 181541         | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 18012701       | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 17149001       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18098201       | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 18086902       | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18104101       | 22      |
| Caelo    | Wool alcohol cream DAB/SR | 1806502        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18189602       | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18104001       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18192303       | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 18262404       | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 18241201       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18262601       | 21      |
| Caelo    | Wool alcohol cream DAB/SR | 18262301       | 44      |
| Caelo    | Wool alcohol cream DAB/SR | 18262403       | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 18006042       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18311102       | 17      |
| Caelo    | Wool alcohol cream DAB/SR | 18331901       | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 18262801       | 20      |
| Caelo    | Wool alcohol cream DAB/SR | 19011001       | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 19058004       | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 19058001       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19115501       | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 190408001      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19115701       | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 90408011       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 491780011      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19178101       | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 19000767001    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 19000768001    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 20001069001    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 20001467001    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 20001067001    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 20001461001    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12001201       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17227401       | 28      |
| Caelo    | Wool alcohol cream DAB/SR | 17039601       | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 19177801       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | CH-B: 18104302 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 11356301       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 120307010      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13369801       | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 15260001       | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 298675         | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15361301       | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15150002       | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13145601       | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 19115601       | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13289301       | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 14113201       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16007702       | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 16090301       | 12      |

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| Supplier | Substance                 | Batch                | Spectra |
|----------|---------------------------|----------------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 16090002             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17102901             | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 4718E-01371          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14046002             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17284501             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12307901             | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14126801             | 14      |
| Caelo    | Wool alcohol cream DAB/SR | 14167101             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14259701             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1416903              | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14362401             | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15259802             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16340801             | 45      |
| Caelo    | Wool alcohol cream DAB/SR | 1940601              | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15360802             | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 16340703             | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 18104002             | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 19005762             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15150001             | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 163123101            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 20170419ECA/16312902 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17039701             | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 19118801             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14045901             | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14259501             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15174103             | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 16014302             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 18170303             | 22      |
| Caelo    | Wool alcohol cream DAB/SR | 275988               | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 296128               | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 19259503             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12056402             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13280601             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295701             | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 29/AKD12             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16278301             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 17149201             | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 17197302             | 72      |
| Caelo    | Wool alcohol cream DAB/SR | 18069603             | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 15174105             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14164001             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13190203             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 273635               | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 274635               | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14216601             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 12106102             | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 12351801             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17094102             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 13068601             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1118956              | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12259702             | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 12307301             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13061701             | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13062301             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 13145301             | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 1526601              | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15266501             | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 12307701             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 13369701             | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 14167101             | 3       |

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| Supplier | Substance                 | Batch              | Spectra |
|----------|---------------------------|--------------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 14295502           | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 12260101           | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 12307501           | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 15132101           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15132301           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15149902           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18023403           | 17      |
| Caelo    | Wool alcohol cream DAB/SR | 13061901           | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 14295801           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14046401           | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 21 (19115401)      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13279201           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14092401           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15268303           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15268401           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 19212101           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14046101           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15150101           | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 12260401           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13373701           | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 14295502           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13066501           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13068501           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14216901           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13394103           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16177601           | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 13373601           | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 14167001           | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14259601           | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 13145201           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 16120801           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16345801           | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17149002           | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 171128ECA/17149002 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13172104           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14356402           | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17178402           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 1211901            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1703401            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18023401           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 3284               | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18311101           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16353902           | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16344102           | 13      |
| Caelo    | Wool alcohol cream DAB/SR | PE113              | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14107602           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 417A-01371         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19199004           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18104301           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19040701           | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 14169101           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1718A-01371        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1098277            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13029504           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 1314570            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13261701           | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 13322801           | 22      |
| Caelo    | Wool alcohol cream DAB/SR | 13369402           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13373903           | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 306086             | 3       |

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| <b>Supplier</b> | <b>Substance</b>          | <b>Batch</b>  | <b>Spectra</b> |
|-----------------|---------------------------|---------------|----------------|
| Caelo           | Wool alcohol cream DAB/SR | 1718701       | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 17197301/5580 | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 18086301      | 10             |
| Caelo           | Wool alcohol cream DAB/SR | 18086401      | 33             |
| Caelo           | Wool alcohol cream DAB/SR | 19212101      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 18192302      | 36             |
| Caelo           | Wool alcohol cream DAB/SR | 19068902      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14164101      | 3              |
| Caelo           | Wool alcohol cream DAB/SR | 1339401       | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14045602      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 13373501      | 3              |
| Caelo           | Wool alcohol cream DAB/SR | 14169201      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 14259402      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14356302      | 22             |
| Caelo           | Wool alcohol cream DAB/SR | 14356601      | 5              |
| Caelo           | Wool alcohol cream DAB/SR | 15260102      | 25             |
| Caelo           | Wool alcohol cream DAB/SR | 15360902      | 5              |
| Caelo           | Wool alcohol cream DAB/SR | 2716Q-01371   | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 4917I-01371   | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 18002414      | 7              |
| Caelo           | Wool alcohol cream DAB/SR | 18005983      | 6              |
| Caelo           | Wool alcohol cream DAB/SR | 1814002       | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 18241202      | 8              |
| Caelo           | Wool alcohol cream DAB/SR | 19118803      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 11356601      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 18241603      | 11             |
| Caelo           | Wool alcohol cream DAB/SR | 18262701      | 14             |
| Caelo           | Wool alcohol cream DAB/SR | 19057902      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 19118901      | 12             |
| Caelo           | Wool alcohol cream DAB/SR | 13061402      | 3              |
| Caelo           | Wool alcohol cream DAB/SR | 14246201      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 9115701       | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 13369501      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 15361201      | 12             |
| Caelo           | Wool alcohol cream DAB/SR | 14362201      | 13             |
| Caelo           | Wool alcohol cream DAB/SR | 12209001      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 11226201      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 13062101      | 17             |
| Caelo           | Wool alcohol cream DAB/SR | 13029502      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 13061801      | 3              |
| Caelo           | Wool alcohol cream DAB/SR | 13145201      | 3              |
| Caelo           | Wool alcohol cream DAB/SR | 13171901      | 7              |
| Caelo           | Wool alcohol cream DAB/SR | 13394101      | 9              |
| Caelo           | Wool alcohol cream DAB/SR | 13373801      | 9              |
| Caelo           | Wool alcohol cream DAB/SR | 14113201      | 6              |
| Caelo           | Wool alcohol cream DAB/SR | 37A090414     | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14246501      | 4              |
| Caelo           | Wool alcohol cream DAB/SR | 14163901      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14295901      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 14362301      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 14356301      | 8              |
| Caelo           | Wool alcohol cream DAB/SR | 14216601      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 14356402      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 15022201      | 5              |
| Caelo           | Wool alcohol cream DAB/SR | 14356401      | 2              |
| Caelo           | Wool alcohol cream DAB/SR | 15132301      | 1              |
| Caelo           | Wool alcohol cream DAB/SR | 15073701      | 6              |
| Caelo           | Wool alcohol cream DAB/SR | 15259901      | 8              |
| Caelo           | Wool alcohol cream DAB/SR | 16312901      | 9              |
| Caelo           | Wool alcohol cream DAB/SR | 1640801       | 1              |

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| Supplier | Substance                 | Batch        | Spectra |
|----------|---------------------------|--------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 19A070817    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17198302     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 17188001     | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 1728701      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 173524002    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18104302     | 54      |
| Caelo    | Wool alcohol cream DAB/SR | 18241402     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 1824202      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12260002     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 12307201     | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 614E1371     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18001379     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13279001     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17284301     | 50      |
| Caelo    | Wool alcohol cream DAB/SR | 17197301     | 22      |
| Caelo    | Wool alcohol cream DAB/SR | 1787701      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12208902     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 20(17156102) | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19212201     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14046501     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19000612003  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19000023     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 19058002     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 18104201     | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 19267302     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 1336901      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13013201     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 288265       | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14216901     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14296001     | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 14092401     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15073502     | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 15226301     | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 15259701     | 27      |
| Caelo    | Wool alcohol cream DAB/SR |              | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 16007901     | 28      |
| Caelo    | Wool alcohol cream DAB/SR | 16024301     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16120802     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 17039401     | 36      |
| Caelo    | Wool alcohol cream DAB/SR | 17102701     | 46      |
| Caelo    | Wool alcohol cream DAB/SR | 17187801     | 65      |
| Caelo    | Wool alcohol cream DAB/SR | 18012302     | 19      |
| Caelo    | Wool alcohol cream DAB/SR | 17228703     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 18096001     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18098301     | 50      |
| Caelo    | Wool alcohol cream DAB/SR | 18147502     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18258202     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 18331903     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 1826701      | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15360801     | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 12056202     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13279401     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14045702     | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 14170801     | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14362201     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15073301     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15150001     | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 16014303     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16177401     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16158101     | 1       |

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| Supplier | Substance                 | Batch       | Spectra |
|----------|---------------------------|-------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 16345802    | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 17039801    | 12      |
| Caelo    | Wool alcohol cream DAB/SR | 17039301    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17352402    | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 17352403    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18098101    | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 18086903    | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 18189603    | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 18258203    | 8       |
| Caelo    | Wool alcohol cream DAB/SR | 18241601    | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 18295604    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 19068903    | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 309640      | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 16177603    | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 15017901    | 7       |
| Caelo    | Wool alcohol cream DAB/SR | 1015E-01371 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12205401    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 12259901    | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 13013202    | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 13145401    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 13190202    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13279601    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 2x13279201  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13169401    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13280701    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 13279701    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13190201    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14046001    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14169201    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14164101    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 114163901   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14246102    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 415A-01371  | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14295301    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15022201    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15017502    | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 15017701    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 15174301    | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 15361402    | 20      |
| Caelo    | Wool alcohol cream DAB/SR | 15361601    | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 15361701    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15360901    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1608001     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16007801    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16024501    | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16199004    | 24      |
| Caelo    | Wool alcohol cream DAB/SR | 16199201    | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 16199401    | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 17039301    | 27      |
| Caelo    | Wool alcohol cream DAB/SR | 17148901    | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 17187701    | 43      |
| Caelo    | Wool alcohol cream DAB/SR | 17156101    | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 2417Q-01371 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 180235-01   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18003802    | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18098001    | 25      |
| Caelo    | Wool alcohol cream DAB/SR | 18144001    | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 171797302   | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1719730     | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18144003    | 21      |

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| Supplier | Substance                 | Batch               | Spectra |
|----------|---------------------------|---------------------|---------|
| Caelo    | Wool alcohol cream DAB/SR | 18094402            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18192401            | 25      |
| Caelo    | Wool alcohol cream DAB/SR | 18241302            | 18      |
| Caelo    | Wool alcohol cream DAB/SR | 19011002            | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 18104901            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18241301            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19058003            | 6       |
| Caelo    | Wool alcohol cream DAB/SR | 1915301             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 19040801            | 10      |
| Caelo    | Wool alcohol cream DAB/SR | 19115301            | 30      |
| Caelo    | Wool alcohol cream DAB/SR | 19177802            | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 19226301            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14259701            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14362501            | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 17284801            | 20      |
| Caelo    | Wool alcohol cream DAB/SR | 180696015657        | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 180983015714        | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13279201-3433311180 | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 13281003            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14166901ok          | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14162502            | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 14170901            | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14166901            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1416901             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14216701            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 14246301            | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 14259801            | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 14216701            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 14092501            | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 14295701            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1456601             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15017501            | 3       |
| Caelo    | Wool alcohol cream DAB/SR | 15073502            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15174104            | 21      |
| Caelo    | Wool alcohol cream DAB/SR | 15266101            | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 1529701             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 15268/601           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16007701            | 16      |
| Caelo    | Wool alcohol cream DAB/SR | 16090702            | 25      |
| Caelo    | Wool alcohol cream DAB/SR | 16090201            | 5       |
| Caelo    | Wool alcohol cream DAB/SR | 165158001           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16177502            | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 16278101            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 17102603            | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 17197903            | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 171560014           | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 17284402            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 18069602            | 9       |
| Caelo    | Wool alcohol cream DAB/SR | 18094301            | 54      |
| Caelo    | Wool alcohol cream DAB/SR | 18083603            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 18144101            | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 18241301            | 15      |
| Caelo    | Wool alcohol cream DAB/SR | 19011005            | 13      |
| Caelo    | Wool alcohol cream DAB/SR | 19040602            | 11      |
| Caelo    | Wool alcohol cream DAB/SR | 15132301            | 2       |
| Caelo    | Wool alcohol cream DAB/SR | 13394101            | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 16344202            | 4       |
| Caelo    | Wool alcohol cream DAB/SR | 5017A-07003         | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1806303             | 1       |
| Caelo    | Wool alcohol cream DAB/SR | 1904601             | 1       |

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| Supplier                 | Substance                 | Batch       | Spectra |
|--------------------------|---------------------------|-------------|---------|
| Caelo                    | Wool alcohol cream DAB/SR | 29131-01371 | 1       |
| Caelo                    | Wool alcohol cream DAB/SR | 1113E-01371 | 1       |
| Caelo                    | Wool alcohol cream DAB/SR | 16177602    | 27      |
| Caelo                    | Wool alcohol cream DAB/SR | 15260102    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 12209101    | 2       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 14295901    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 15017801    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 15073701    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 15266501    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 17094201    | 23      |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 18262402    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 182331902   | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 19115402    | 8       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 19118802    | 7       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 19115401    | 14      |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 19147201    | 1       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 19177901    | 2       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 20001065001 | 2       |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 16249002    | 1       |
| ...                      |                           |             |         |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 17104701    | 2       |
| ...                      |                           |             |         |
| Caesar & Loretz GmbH     | Wool alcohol cream DAB/SR | 13373701    | 1       |
| ...                      |                           |             |         |
| Caesar & Loretz GmbH,... | Wool alcohol cream DAB/SR | 11276102    | 5       |
| Caesar & Loretz GmbH,... | Wool alcohol cream DAB/SR | 12000201    | 2       |
| Caesar & Loretz GmbH/... | Wool alcohol cream DAB/SR | 19040601    | 25      |
| Caesar & Loretz GmbH/... | Wool alcohol cream DAB/SR | 18295602    | 3       |
| Caesar & Loretz GmbH/... | Wool alcohol cream DAB/SR | 19177601    | 2       |
| Caesar&Loretz            | Wool alcohol cream DAB/SR | 17040101    | 2       |
| Caesar&lorenz,Phoenix    | Wool alcohol cream DAB/SR | 13068504    | 17      |
| Caesar&Loretz/Caesar&... | Wool alcohol cream DAB/SR | 15266301    | 6       |
| Caeser und Loretz GmbH   | Wool alcohol cream DAB/SR | 19177701    | 11      |
| Cealo                    | Wool alcohol cream DAB/SR | 17148702    | 4       |
| Celo                     | Wool alcohol cream DAB/SR | 16008301    | 1       |
| Defektur                 | Wool alcohol cream DAB/SR | 3817I-01371 | 1       |
| Devesa                   | Wool alcohol cream DAB/SR | 12106601    | 1       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 221014      | 1       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 17284502    | 13      |
| Euro OTC                 | Wool alcohol cream DAB/SR | 19226202    | 1       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 43A041016   | 2       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 17156002    | 8       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 279873      | 1       |
| Euro OTC                 | Wool alcohol cream DAB/SR | 17284601    | 22      |
| Fagron                   | Wool alcohol cream DAB/SR | 16199003    | 2       |
| Fagron                   | Wool alcohol cream DAB/SR | 18012501    | 29      |
| Fagron                   | Wool alcohol cream DAB/SR | 18012601    | 25      |
| Fagron                   | Wool alcohol cream DAB/SR | 18002409    | 5       |
| Fagron                   | Wool alcohol cream DAB/SR | 311526      | 2       |
| Fagron                   | Wool alcohol cream DAB/SR | 12370202    | 3       |
| Fagron                   | Wool alcohol cream DAB/SR | 111114a     | 1       |
| Fiebig                   | Wool alcohol cream DAB/SR | 16008201    | 8       |
| Fiebig                   | Wool alcohol cream DAB/SR | 18094502    | 65      |
| Caelo                    | Wool alcohol cream DAB/SR | 163443/1    | 1       |

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| Supplier               | Substance                 | Batch            | Spectra |
|------------------------|---------------------------|------------------|---------|
| Gehe                   | Wool alcohol cream DAB/SR | 267155           | 2       |
| Gehe                   | Wool alcohol cream DAB/SR | 270032           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 270037           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 80A010812        | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 269933           | 2       |
| Gehe                   | Wool alcohol cream DAB/SR | 272254           | 2       |
| Gehe                   | Wool alcohol cream DAB/SR | 272253           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 95A161012        | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 274686           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 277207           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 32A080413        | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 274684           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 279876           | 3       |
| Gehe                   | Wool alcohol cream DAB/SR | 13279002         | 5       |
| Gehe                   | Wool alcohol cream DAB/SR | 72A270813        | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 282240           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 282245           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 280493           | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 47a040613        | 1       |
| Gehe                   | Wool alcohol cream DAB/SR | 16008103         | 23      |
| Gehe                   | Wool alcohol cream DAB/SR | 16313101         | 38      |
| Gehe                   | Wool alcohol cream DAB/SR | 18094302         | 2       |
| Gehe                   | Wool alcohol cream DAB/SR | 18086501         | 1       |
| GEHE                   | Wool alcohol cream DAB/SR | 305253           | 6       |
| GEHE                   | Wool alcohol cream DAB/SR | 303523           | 3       |
| GEHE                   | Wool alcohol cream DAB/SR | 308308           | 2       |
| GEHE                   | Wool alcohol cream DAB/SR | 18170401         | 33      |
| GEHE                   | Wool alcohol cream DAB/SR | 18170501         | 32      |
| Caelo                  | Wool alcohol cream DAB/SR | 14162502         | 1       |
| Bombastus              | Wool alcohol cream DAB/SR | 289490           | 1       |
| Gehe 21.08.14          | Wool alcohol cream DAB/SR | 287175           | 1       |
| GEHE 24.02.2014        | Wool alcohol cream DAB/SR | 13373801         | 1       |
| Bombastus              | Wool alcohol cream DAB/SR | 302968           | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 181439001        | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 14216801         | 5       |
| Bombastus              | Wool alcohol cream DAB/SR | 288443           | 3       |
| Gehe/Apomix            | Wool alcohol cream DAB/SR | 8A290114         | 1       |
| Gehe/Apomix            | Wool alcohol cream DAB/SR | 19A270214        | 1       |
| Gehe/Apomix            | Wool alcohol cream DAB/SR | 4A020217         | 2       |
| Gehe/Apomix            | Wool alcohol cream DAB/SR | 22A300817        | 3       |
| Gehe/Apomix            | Wool alcohol cream DAB/SR | 2A100118         | 4       |
| Gehe/apomix/17.12.2014 | Wool alcohol cream DAB/SR | 87A141014        | 1       |
| Gehe/apomix/23.09.14   | Wool alcohol cream DAB/SR | 62A090714        | 2       |
| Gehe/Apomix/25.10.2013 | Wool alcohol cream DAB/SR | 28A210313        | 2       |
| GEHE/Apomix/31.01.14   | Wool alcohol cream DAB/SR | 82A260913        | 1       |
| GEHE/B0mbastus/04.14   | Wool alcohol cream DAB/SR | 285870           | 3       |
| Bombastus              | Wool alcohol cream DAB/SR | 288351           | 1       |
| Bombastus              | Wool alcohol cream DAB/SR | 301310           | 3       |
| Bombastus              | Wool alcohol cream DAB/SR | 304428           | 5       |
| Bombastus              | Wool alcohol cream DAB/SR | 18006643         | 5       |
| Bombastus              | Wool alcohol cream DAB/SR | 19001840         | 3       |
| Bombastus              | Wool alcohol cream DAB/SR | 19003086         | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 12370601         | 9       |
| Caelo                  | Wool alcohol cream DAB/SR | 12370203         | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 14046101         | 2       |
| Caelo                  | Wool alcohol cream DAB/SR | 16157801/1041016 | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 1230317          | 1       |
| Caelo                  | Wool alcohol cream DAB/SR | 17039901         | 5       |
| Caelo                  | Wool alcohol cream DAB/SR | 17178301         | 24      |
| Caelo                  | Wool alcohol cream DAB/SR | 1241017/17155901 | 1       |

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| Supplier                  | Substance                 | Batch            | Spectra |
|---------------------------|---------------------------|------------------|---------|
| Caelo                     | Wool alcohol cream DAB/SR | 18170302         | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 18004062 1091/19 | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 19000768002      | 1       |
| GH: ...                   | Wool alcohol cream DAB/SR |                  | 1       |
| Heidinger/ Noweda         | Wool alcohol cream DAB/SR | 1804401          | 1       |
| ichthyol                  | Wool alcohol cream DAB/SR | 297414           | 1       |
| Ichthyol Gesellschaft...  | Wool alcohol cream DAB/SR | 14362501         | 1       |
| Ichthyol-Gesellschaft     | Wool alcohol cream DAB/SR | 11288302         | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 19000501         | 12      |
| Kehr                      | Wool alcohol cream DAB/SR | 18000771         | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 17094002         | 16      |
| Caelo                     | Wool alcohol cream DAB/SR | 170400001        | 1       |
| Leyh /Sanacorp            | Wool alcohol cream DAB/SR | 154421           | 1       |
| Leyh /Sanacorp            | Wool alcohol cream DAB/SR | 162631           | 3       |
| Leyh /Sanacorp            | Wool alcohol cream DAB/SR | 170231           | 1       |
| leyh Pharma               | Wool alcohol cream DAB/SR | 172411           | 6       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 170651           | 2       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 164441           | 1       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 171851           | 2       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 172821           | 1       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 173821           | 3       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 180231           | 6       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 181741           | 2       |
| Leyh Pharma               | Wool alcohol cream DAB/SR | 190921           | 2       |
| Leyh Pharma / Al-lianc... | Wool alcohol cream DAB/SR | 181011           | 2       |
| Leyh Pharma / Al-lianc... | Wool alcohol cream DAB/SR | 182851           | 3       |
| Leyh Pharma / Al-lianc... | Wool alcohol cream DAB/SR | 182241           | 2       |
| Leyh Pharma / Al-lianc... | Wool alcohol cream DAB/SR | 183641           | 3       |
| Leyh Pharma / Al-lianc... | Wool alcohol cream DAB/SR | 8004134002       | 1       |
| Leyh Pharma GmbH          | Wool alcohol cream DAB/SR | 151831           | 3       |
| Leyh Pharma GmbH          | Wool alcohol cream DAB/SR | 163741           | 1       |
| Leyh Pharma GmbH          | Wool alcohol cream DAB/SR | 171311           | 2       |
| Leyh Pharma GmbH, 15...   | Wool alcohol cream DAB/SR | 162411           | 2       |
| Leyh Pharma/Noweda        | Wool alcohol cream DAB/SR | 160551           | 2       |
| Leyh Pharma/Noweda        | Wool alcohol cream DAB/SR | 161211           | 1       |
| Leyh Pharma/Noweda        | Wool alcohol cream DAB/SR | 161531           | 1       |
| Leyh Pharma/Noweda        | Wool alcohol cream DAB/SR | 192841           | 1       |
| Leyh Pharma/Phoenix       | Wool alcohol cream DAB/SR | 191931           | 2       |
| Leyh Pharma/Sanacorp      | Wool alcohol cream DAB/SR | 142031           | 1       |
| Leyh Pharma/Sanacorp      | Wool alcohol cream DAB/SR | 144951           | 1       |
| Leyh Pharma/Sanacorp      | Wool alcohol cream DAB/SR | 150411           | 1       |
| Leyh/Noweda               | Wool alcohol cream DAB/SR | 152321           | 2       |
| Leytt Pharma / Al-lian... | Wool alcohol cream DAB/SR | 174511           | 3       |
| Midas                     | Wool alcohol cream DAB/SR | 16322301         | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 282241           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 282244           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 14295402         | 2       |
| Noweda                    | Wool alcohol cream DAB/SR | 291431           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 291478           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 294529           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 295530           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 294333           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 295530           | 1       |

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| Supplier                  | Substance                 | Batch            | Spectra |
|---------------------------|---------------------------|------------------|---------|
| Noweda                    | Wool alcohol cream DAB/SR | 298673           | 1       |
| Noweda                    | Wool alcohol cream DAB/SR | 17156001         | 31      |
| Noweda                    | Wool alcohol cream DAB/SR | 19000401         | 49      |
| Caelo                     | Wool alcohol cream DAB/SR | 13008202         | 1       |
| Bombastus                 | Wool alcohol cream DAB/SR | 271812           | 1       |
| Bombastus                 | Wool alcohol cream DAB/SR | 289620           | 1       |
| Noweda/apomix             | Wool alcohol cream DAB/SR | 5A290113         | 2       |
| Bombastus                 | Wool alcohol cream DAB/SR | 286236           | 2       |
| Caelo                     | Wool alcohol cream DAB/SR | 12260402         | 13      |
| Caelo                     | Wool alcohol cream DAB/SR | 13272601         | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 14259401         | 2       |
| Caelo                     | Wool alcohol cream DAB/SR | 14259601         | 7       |
| Caelo                     | Wool alcohol cream DAB/SR | 14200702         | 2       |
| Caelo                     | Wool alcohol cream DAB/SR | 1429501          | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 15329403         | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 16090501         | 33      |
| Caelo                     | Wool alcohol cream DAB/SR | 16158001         | 30      |
| Caelo                     | Wool alcohol cream DAB/SR | 16158101         | 16      |
| Caelo                     | Wool alcohol cream DAB/SR | 18143091         | 1       |
| Euro OTC                  | Wool alcohol cream DAB/SR | 2507217035       | 1       |
| Otto Fischar GmbH & C...  | Wool alcohol cream DAB/SR | 294533           | 10      |
| P.W.Beyvers GmbH,Phönix   | Wool alcohol cream DAB/SR | 15A230215        | 1       |
| Pharmachem                | Wool alcohol cream DAB/SR | 190816           | 13      |
| Pharmachem                | Wool alcohol cream DAB/SR | 190417           | 8       |
| Pharmachem                | Wool alcohol cream DAB/SR | 291217           | 15      |
| Pharmachem / Al-liance... | Wool alcohol cream DAB/SR | 290818           | 6       |
| Pharmachem Anzag          | Wool alcohol cream DAB/SR | 260413           | 3       |
| Pharmachem GmbH           | Wool alcohol cream DAB/SR | 110913           | 2       |
| pharmachem gmbh co kg...  | Wool alcohol cream DAB/SR | 31215            | 8       |
| Pharmachem/Noweda         | Wool alcohol cream DAB/SR | 260419           | 1       |
| Pharmachem/Phoenix        | Wool alcohol cream DAB/SR | 184511           | 3       |
| Pharmachem/Phönix         | Wool alcohol cream DAB/SR | 110614           | 1       |
| Phoenix                   | Wool alcohol cream DAB/SR | 14A180214        | 1       |
| Phoenix                   | Wool alcohol cream DAB/SR | 3025             | 1       |
| Phoenix                   | Wool alcohol cream DAB/SR | 3085             | 1       |
| Phoenix (Pharmachem P...  | Wool alcohol cream DAB/SR | 260712           | 3       |
| Phoenix Goettin           | Wool alcohol cream DAB/SR | 15017801         | 3       |
| Caelo                     | Wool alcohol cream DAB/SR | 14216903         | 2       |
| Caelo                     | Wool alcohol cream DAB/SR | 18012201/2110418 | 1       |
| Caelo                     | Wool alcohol cream DAB/SR | 13145901         | 5       |
| Phönix                    | Wool alcohol cream DAB/SR | 13279301         | 7       |
| Phönix                    | Wool alcohol cream DAB/SR | 14295502         | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 1098283          | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 307288           | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 17002145         | 5       |
| Phönix                    | Wool alcohol cream DAB/SR | 18023402         | 34      |
| Phönix                    | Wool alcohol cream DAB/SR | 3137             | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 3157             | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 6861192          | 1       |
| Phönix                    | Wool alcohol cream DAB/SR | 18086502         | 16      |
| Phönix                    | Wool alcohol cream DAB/SR | 18241602         | 41      |
| Phönix                    | Wool alcohol cream DAB/SR | 18004726         | 3       |
| Phönix                    | Wool alcohol cream DAB/SR | 18006844         | 6       |
| Phönix                    | Wool alcohol cream DAB/SR | 1900168          | 1       |
| PHÖNIX                    | Wool alcohol cream DAB/SR | 17178201         | 18      |

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| Supplier                     | Substance                 | Batch            | Spectra |
|------------------------------|---------------------------|------------------|---------|
| Bombastus                    | Wool alcohol cream DAB/SR | 17002206         | 8       |
| Bombastus                    | Wool alcohol cream DAB/SR | 18002410         | 4       |
| Bombastus                    | Wool alcohol cream DAB/SR | 19000162         | 3       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 12036403         | 2       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 12352001         | 4       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 311522           | 1       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 18001371         | 1       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 18002407         | 1       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 18006837         | 1       |
| Phönix Gotha                 | Wool alcohol cream DAB/SR | 19000158         | 2       |
| Caelo                        | Wool alcohol cream DAB/SR | 17148201         | 1       |
| Bombastus                    | Wool alcohol cream DAB/SR | 18004001         | 7       |
| Bombastus                    | Wool alcohol cream DAB/SR | 19000160         | 9       |
| Caelo                        | Wool alcohol cream DAB/SR | 13272601         | 3       |
| Caelo                        | Wool alcohol cream DAB/SR | 153671601        | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 16008301         | 12      |
| Caelo                        | Wool alcohol cream DAB/SR | 16277902         | 10      |
| Caelo                        | Wool alcohol cream DAB/SR | 2120817/17039401 | 1       |
| PKH GmbH, Ph<br>21.02.19     | Wool alcohol cream DAB/SR | 1A160119         | 7       |
| PKH GmbH, Phönix             | Wool alcohol cream DAB/SR | 57A100615        | 1       |
| PKH Halle                    | Wool alcohol cream DAB/SR | 19A240718        | 7       |
| PKH Halle/AHD                | Wool alcohol cream DAB/SR | 23A181017        | 2       |
| PKH Halle/Noweda             | Wool alcohol cream DAB/SR | 21A290817        | 6       |
| Raben-Apotheke Milde-<br>nau | Wool alcohol cream DAB/SR | 38A150514        | 1       |
| Raben-Apotheke Milde-<br>nau | Wool alcohol cream DAB/SR | 45A260514        | 3       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 12307801         | 6       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 14002801         | 12      |
| Sanacorp                     | Wool alcohol cream DAB/SR | 22/AKD2          | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 287183           | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 288264           | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 25/AKD3          | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 13172102         | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 27/AKD4          | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | ch. -B28/AKD10   | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 1529802          | 1       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 16090703         | 2       |
| Sanacorp                     | Wool alcohol cream DAB/SR | 18086302         | 33      |
| Caelo                        | Wool alcohol cream DAB/SR | 13146001         | 6       |
| Caelo                        | Wool alcohol cream DAB/SR | 14046502         | 3       |
| Caelo                        | Wool alcohol cream DAB/SR | 14246301         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 15149902         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 15266001         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 15149801         | 2       |
| Caelo                        | Wool alcohol cream DAB/SR | 15260001         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 16277903         | 12      |
| Caelo                        | Wool alcohol cream DAB/SR | 18086303         | 13      |
| Bombastus                    | Wool alcohol cream DAB/SR | 268902           | 1       |
| Bombastus                    | Wool alcohol cream DAB/SR | 270725           | 2       |
| Bombastus                    | Wool alcohol cream DAB/SR | 282751           | 4       |
| Bombastus                    | Wool alcohol cream DAB/SR | 282753           | 2       |
| Caelo                        | Wool alcohol cream DAB/SR | 12056301         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 22/AKD52         | 1       |
| Caelo                        | Wool alcohol cream DAB/SR | 18143901         | 50      |
| Caelo                        | Wool alcohol cream DAB/SR | 15266401         | 5       |
| Bombastus                    | Wool alcohol cream DAB/SR | 306218           | 5       |
| Taoasis                      | Wool alcohol cream DAB/SR | 81/12            | 1       |
| VDL 28.04;Preis:4,34         | Wool alcohol cream DAB/SR | 14033202;15R05   | 1       |

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| Supplier     | Substance                   | Batch    | Spectra |
|--------------|-----------------------------|----------|---------|
| Caelo        | Wormwood tincture (70%) 1:5 | 92780419 | 1       |
| Caelo        | Wormwood tincture (70%) 1:5 | 10260210 | 2       |
| Caelo        | Wormwood tincture (70%) 1:5 | 11145005 | 1       |
| Caelo        | Wormwood tincture (70%) 1:5 | 12237901 | 1       |
| Caelo        | Wormwood tincture (70%) 1:5 | 12237902 | 1       |
| Caelo        | Wormwood tincture (70%) 1:5 | 12237907 | 1       |
| Caelo        | Wormwood tincture (70%) 1:5 | 12237905 | 4       |
| Phönix Gotha | Wormwood tincture (70%) 1:5 | 10010909 | 1       |

| Supplier | Substance       | Batch    | Spectra |
|----------|-----------------|----------|---------|
| Caelo    | Ylang-ylang oil | 23011502 | 1       |
| Caelo    | Ylang-ylang oil | 14192905 | 1       |
| Caelo    | Ylang-ylang oil | 15101104 | 1       |

| Supplier         | Substance                         | Batch      | Spectra |
|------------------|-----------------------------------|------------|---------|
| Caelo            | Zinc ointment DAB                 | 11271001   | 1       |
| Bombastus        | Zinc ointment DAB                 | 30071602   | 1       |
| Bombastus        | Zinc ointment DAB                 | 275313     | 4       |
| Bombastus        | Zinc ointment DAB                 | 282182     | 1       |
| Bombastus        | Zinc ointment DAB                 | 277335     | 2       |
| Bombastus        | Zinc ointment DAB                 | 274127     | 1       |
| Caelo            | Zinc ointment DAB                 | 16101202   | 1       |
| Caelo            | Zinc ointment DAB                 | 12042503   | 3       |
| Caelo            | Zinc ointment DAB                 | 20270912-5 | 1       |
| Caelo            | Zinc ointment DAB                 | 12343602   | 9       |
| Caelo            | Zinc ointment DAB                 | 7031303    | 1       |
| Caelo            | Zinc ointment DAB                 | 12098402   | 4       |
| Caelo            | Zinc ointment DAB                 | 12101302   | 1       |
| Caelo            | Zinc ointment DAB                 | 13072702   | 1       |
| Caelo            | Zinc ointment DAB                 | 13257003   | 1       |
| Caelo            | Zinc ointment DAB                 | 13393903   | 1       |
| Caelo            | Zinc ointment DAB                 | 13257001   | 11      |
| Caelo            | Zinc ointment DAB                 | 11367501   | 3       |
| Caelo            | Zinc ointment DAB                 | 1234602    | 1       |
| Caelo            | Zinc ointment DAB                 | 12042502   | 1       |
| Apomix           | Zinc oxide cream 25% SR (NRF 1... | 7B270513   | 1       |
| Apomix/ Sanacorp | Zinc oxide cream 25% SR (NRF 1... | 13B230813  | 1       |
| Apomix/Noweda    | Zinc oxide cream 25% SR (NRF 1... | 4A100413   | 1       |
| apomix/Phönix    | Zinc oxide cream 25% SR (NRF 1... | 15B230913  | 1       |
| Bombastus        | Zinc oxide cream 25% SR (NRF 1... | 272491     | 1       |
| Bombastus        | Zinc oxide cream 25% SR (NRF 1... | 276966     | 3       |
| Bombastus        | Zinc oxide cream 25% SR (NRF 1... | 281755     | 3       |
| Bombastus        | Zinc oxide cream 25% SR (NRF 1... | 272490     | 1       |
| Bombastus        | Zinc oxide cream 25% SR (NRF 1... | 279248     | 1       |
| Caelo            | Zinc oxide cream 25% SR (NRF 1... | 13A040912  | 3       |
| Caelo            | Zinc oxide cream 25% SR (NRF 1... | 279250     | 2       |
| Caelo            | Zinc oxide cream 25% SR (NRF 1... | 2795250    | 1       |
| Pharmachem       | Zinc oxide cream 25% SR (NRF 1... | 110112     | 1       |
| PharmaChem       | Zinc oxide cream 25% SR (NRF 1... | 150513     | 1       |
| Phönix Gotha     | Zinc oxide cream 25% SR (NRF 1... | 276963     | 1       |
| PKH GmbH         | Zinc oxide cream 25% SR (NRF 1... | 2B080113   | 1       |
| Anzag            | Zinc oxide lotion, aqueous DAC    | 12309601   | 6       |
| Anzag 08.03.2013 | Zinc oxide lotion, aqueous DAC    | 13018401   | 16      |
| Bombastus        | Zinc oxide lotion, aqueous DAC    | 274933     | 1       |
| Bombastus        | Zinc oxide lotion, aqueous DAC    | 281537     | 1       |
| Bombastus        | Zinc oxide lotion, aqueous DAC    | 284632     | 1       |
| Caelo            | Zinc oxide lotion, aqueous DAC    | 10082601   | 1       |

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| Supplier | Substance                      | Batch       | Spectra |
|----------|--------------------------------|-------------|---------|
| Caelo    | Zinc oxide lotion, aqueous DAC | 3101217039  | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12065203    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12065401    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12211501    | 8       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 711217039   | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 4121204     | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12197103    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12211802    | 4       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 28121204    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 20310812-3  | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12307902    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12309802    | 11      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12309702    | 6       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 1230951     | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 1013I-01815 | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 19041309    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 6061301     | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 2713M1815   | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 11281301    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 11071303    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13087701    | 19      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13139402    | 12      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 24101311    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13283101    | 10      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12111306    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13282901    | 16      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 20122013F   | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 24122013A   | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13283103    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 15061201    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 14010502    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 14116701    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 14010602    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13282701    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 14275002    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 15003201    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 15154301    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 15273502    | 2       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 16003202    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 16003302    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 14010501    | 3       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12309701    | 4       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13087501    | 12      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13139301    | 16      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13018801    | 7       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13282801    | 5       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 132801      | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 11329903    | 2       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12211701    | 15      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12211401    | 6       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13018803    | 5       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 12065301    | 8       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13087601    | 23      |
| Caelo    | Zinc oxide lotion, aqueous DAC | 11184601    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 11281401    | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 1109779     | 1       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13283002    | 7       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 1319601     | 2       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13024401    | 5       |
| Caelo    | Zinc oxide lotion, aqueous DAC | 13139302    | 5       |

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| Supplier                 | Substance                      | Batch            | Spectra |
|--------------------------|--------------------------------|------------------|---------|
| Caelo                    | Zinc oxide lotion, aqueous DAC | 112814101        | 1       |
| Caelo                    | Zinc oxide lotion, aqueous DAC | 38112A-01815     | 1       |
| Caesar & Loretz GmbH     | Zinc oxide lotion, aqueous DAC | 12309501         | 32      |
| Caesar & Loretz GmbH     | Zinc oxide lotion, aqueous DAC | 13405901         | 4       |
| Calo                     | Zinc oxide lotion, aqueous DAC | 14211601         | 1       |
| Fagron                   | Zinc oxide lotion, aqueous DAC | 4213Q-01815      | 1       |
| Fagron                   | Zinc oxide lotion, aqueous DAC | 13K19-T02-014523 | 1       |
| Fagron                   | Zinc oxide lotion, aqueous DAC | 10H19-T01-000747 | 1       |
| Finze                    | Zinc oxide lotion, aqueous DAC | 12065501         | 5       |
| Gehe                     | Zinc oxide lotion, aqueous DAC | 12211402         | 8       |
| Caelo                    | Zinc oxide lotion, aqueous DAC | 13139601         | 23      |
| Henry Lamotte            | Zinc oxide lotion, aqueous DAC | 60480            | 1       |
| Henry Lamotte GmbH/Ho... | Zinc oxide lotion, aqueous DAC | 5289300          | 3       |
| henry lamotte oils gmbh  | Zinc oxide lotion, aqueous DAC | 6000083002       | 1       |
| henry lamotte oils gmbh  | Zinc oxide lotion, aqueous DAC | 90616-1          | 1       |
| Henry Lamotte Oils GmbH  | Zinc oxide lotion, aqueous DAC | 600320602        | 1       |
| Henry Lamotte Oils, A... | Zinc oxide lotion, aqueous DAC | 5375600          | 12      |
| Henry Lamotte/24.04...   | Zinc oxide lotion, aqueous DAC | 1221401          | 1       |
| Caelo                    | Zinc oxide lotion, aqueous DAC | 11329902         | 1       |
| lamotte                  | Zinc oxide lotion, aqueous DAC | 6003206002       | 2       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 5163600          | 2       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 5099300          | 1       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 5216200          | 1       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 60460            | 1       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 5651500          | 1       |
| Lamotte                  | Zinc oxide lotion, aqueous DAC | 5735500          | 3       |
| Lamotte / Gehe           | Zinc oxide lotion, aqueous DAC | 5321300          | 10      |
| Lamotte / Gehe           | Zinc oxide lotion, aqueous DAC | 5517400          | 12      |
| Lamotte/ Finze           | Zinc oxide lotion, aqueous DAC | 5563300          | 2       |
| Noweda                   | Zinc oxide lotion, aqueous DAC | 1211701          | 1       |
| Caelo                    | Zinc oxide lotion, aqueous DAC | 13283001         | 3       |
| Noweda/Lamotte           | Zinc oxide lotion, aqueous DAC | 5447800          | 9       |
| Phoenix                  | Zinc oxide lotion, aqueous DAC | 4010501          | 1       |
| Phönix                   | Zinc oxide lotion, aqueous DAC | 11329801         | 2       |
| Sanacorp                 | Zinc oxide lotion, aqueous DAC | AKD33            | 1       |
| Apomix                   | Zinc oxide oil DAC             | 26C190911        | 1       |
| Bombastus                | Zinc oxide oil DAC             | 260696           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 269651           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 273970           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 273972           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 269765           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 278159           | 6       |
| Bombastus                | Zinc oxide oil DAC             | 282083           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 286041           | 2       |
| Bombastus                | Zinc oxide oil DAC             | 301565           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 274182           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 273971           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 269650           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 263248           | 1       |
| Bombastus                | Zinc oxide oil DAC             | 279564           | 1       |
| Caelo                    | Zinc oxide oil DAC             | 2612M-02026      | 1       |
| Caelo                    | Zinc oxide oil DAC             | 12160101         | 1       |
| Caelo                    | Zinc oxide oil DAC             | 12004701         | 2       |
| Caelo                    | Zinc oxide oil DAC             | 12289801         | 1       |
| Caelo                    | Zinc oxide oil DAC             | 13307202         | 1       |
| Caelo                    | Zinc oxide oil DAC             | 14032701         | 2       |

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| Supplier                   | Substance                   | Batch     | Spectra |
|----------------------------|-----------------------------|-----------|---------|
| Caelo                      | Zinc oxide oil DAC          | 15170902  | 1       |
| Caelo                      | Zinc oxide oil DAC          | 15173002  | 1       |
| Caelo                      | Zinc oxide oil DAC          | 16093002  | 1       |
| Caelo                      | Zinc oxide oil DAC          | 12289802  | 3       |
| Caelo                      | Zinc oxide oil DAC          | 12004601  | 2       |
| Caelo                      | Zinc oxide oil DAC          | 12160002  | 1       |
| Caelo                      | Zinc oxide oil DAC          | 13069701  | 13      |
| Caelo                      | Zinc oxide oil DAC          | 13196501  | 2       |
| Gehe                       | Zinc oxide oil DAC          | 275086    | 2       |
| Gehe                       | Zinc oxide oil DAC          | 279563    | 3       |
| Gehe                       | Zinc oxide oil DAC          | 275085    | 1       |
| Gehe                       | Zinc oxide oil DAC          | 282085    | 1       |
| Gehe                       | Zinc oxide oil DAC          | 289826    | 1       |
| lamotte/Gehe               | Zinc oxide oil DAC          | 13196401  | 4       |
| pharmachem                 | Zinc oxide oil DAC          | 90512     | 1       |
| Phönix                     | Zinc oxide oil DAC          | 1C010212  | 1       |
| Phönix                     | Zinc oxide oil DAC          | 286040    | 1       |
| Sanacorp/ apomix           | Zinc oxide oil DAC          | 26B190911 | 1       |
| Caelo                      | Zinc oxide oil DAC          | 12128602  | 2       |
| vdl                        | Zinc oxide oil DAC          | 12351702  | 5       |
| Anzag                      | Zinc oxide oil SR 90        | 15B100912 | 1       |
| Apomix                     | Zinc oxide oil SR 90        | 6B150413  | 1       |
| Bombastus                  | Zinc oxide oil SR 90        | 6858379   | 1       |
| Bombastus                  | Zinc oxide oil SR 90        | 273973    | 6       |
| Bombastus                  | Zinc oxide oil SR 90        | 277647    | 1       |
| Pharmachem                 | Zinc oxide oil SR 90        | 20712     | 1       |
| Pharmachem                 | Zinc oxide oil SR 90        | 260412    | 1       |
| Pharmachem                 | Zinc oxide oil SR 90        | 150413    | 1       |
| Pharmachem                 | Zinc oxide oil SR 90        | 30712     | 1       |
| Pharmachem                 | Zinc oxide oil SR 90        | 160413    | 1       |
| Pharmachem Anzag           | Zinc oxide oil SR 90        | 140513    | 1       |
| Pharmachem GmbH            | Zinc oxide oil SR 90        | 61112     | 1       |
| pharmachen                 | Zinc oxide oil SR 90        | 30045100  | 1       |
| Pharmachern/AHD            | Zinc oxide oil SR 90        | 160122    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 273833    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 266450    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 279384    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 279387    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 276198    | 1       |
| Bombastus                  | Zinc oxide paste SR90       | 276200    | 3       |
| Bombastus                  | Zinc oxide paste SR90       | 256014    | 1       |
| Caelo                      | Zinc oxide paste SR90       | 244154    | 1       |
| Caelo                      | Zinc oxide paste SR90       | Test2     | 1       |
| Gehe                       | Zinc oxide paste SR90       | 264198    | 1       |
| Gehe                       | Zinc oxide paste SR90       | 266451    | 1       |
| Gehe                       | Zinc oxide paste SR90       | 268240    | 1       |
| Gehe                       | Zinc oxide paste SR90       | 270919    | 1       |
| Gehe                       | Zinc oxide paste SR90       | 276199    | 2       |
| Gehe                       | Zinc oxide paste SR90       | 279386    | 1       |
| Caelo                      | Zinc oxide paste SR90       | 271195    | 1       |
| AMH Niemann GmbH & Co. ... | Zinc oxide paste, soft SR90 | 25A310712 | 2       |
| AMH Niemann GmbH&Co.KG     | Zinc oxide paste, soft SR90 | 21B210612 | 1       |
| AMH/ Sanacorp              | Zinc oxide paste, soft SR90 | 43B150811 | 1       |
| Anzag                      | Zinc oxide paste, soft SR90 | 12121501  | 1       |
| apomix                     | Zinc oxide paste, soft SR90 | 34A231012 | 1       |
| Apomix                     | Zinc oxide paste, soft SR90 | 3A090113  | 1       |
| Apomix                     | Zinc oxide paste, soft SR90 | 4A090113  | 3       |
| Apomix                     | Zinc oxide paste, soft SR90 | 12B140313 | 1       |

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| Supplier                 | Substance                         | Batch       | Spectra |
|--------------------------|-----------------------------------|-------------|---------|
| apomix, Phönix           | Zinc oxide paste, soft SR90       | 6A110213    | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 265452      | 1       |
| Bombastus                | Zinc oxide paste, soft SR90       | 273330      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 271192      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 273328      | 3       |
| Bombastus                | Zinc oxide paste, soft SR90       | 275031      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 275030      | 4       |
| Bombastus                | Zinc oxide paste, soft SR90       | 273326      | 1       |
| Bombastus                | Zinc oxide paste, soft SR90       | 277663      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 279586      | 4       |
| Bombastus                | Zinc oxide paste, soft SR90       | 281586      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 271196      | 2       |
| Bombastus                | Zinc oxide paste, soft SR90       | 273329      | 4       |
| Caelo                    | Zinc oxide paste, soft SR90       | 12366801    | 1       |
| Gehe                     | Zinc oxide paste, soft SR90       | 260912      | 1       |
| Pharmachem               | Zinc oxide paste, soft SR90       | 70512       | 1       |
| Phoenix (Pharmachem P... | Zinc oxide paste, soft SR90       | 191112      | 1       |
| Bombastus                | Zinc oxide paste, soft SR90       | 277662      | 1       |
| Caelo                    | Zinc oxide shaking mixture, et... | 12261701    | 1       |
| Caelo                    | Zinc oxide shaking mixture, et... | 13080201    | 3       |
| Caelo                    | Zinc oxide shaking mixture, et... | 13244001    | 1       |
| Caelo                    | Zinc oxide shaking mixture, et... | 1308021     | 1       |
| Caelo                    | Zinc oxide shaking mixture, et... | 1324401     | 1       |
| Bombastus                | Zinc paste DAB                    | 278272      | 3       |
| Bombastus                | Zinc paste DAB                    | 27113603-15 | 1       |
| Bombastus                | Zinc paste DAB                    | 271133      | 1       |
| Bombastus                | Zinc paste DAB                    | 271136      | 1       |
| Bombastus                | Zinc paste DAB                    | 276144      | 3       |
| Bombastus                | Zinc paste DAB                    | 276143      | 1       |
| Bombastus                | Zinc paste DAB                    | 276141      | 1       |
| Bombastus                | Zinc paste DAB                    | 276145      | 1       |
| Bombastus                | Zinc paste DAB                    | 276146      | 2       |
| Bombastus                | Zinc paste DAB                    | 278861      | 1       |
| Bombastus                | Zinc paste DAB                    | 276604      | 1       |
| Bombastus                | Zinc paste DAB                    | 278865      | 1       |
| Bombastus                | Zinc paste DAB                    | 278863      | 1       |
| Bombastus                | Zinc paste DAB                    | 278270      | 1       |
| Bombastus                | Zinc paste DAB                    | 282037      | 1       |
| Bombastus                | Zinc paste DAB                    | 284662      | 1       |
| Bombastus                | Zinc paste DAB                    | 287850      | 1       |
| Bombastus                | Zinc paste DAB                    | 290176      | 1       |
| Bombastus                | Zinc paste DAB                    | 291718      | 2       |
| Bombastus                | Zinc paste DAB                    | 278273      | 3       |
| Bombastus                | Zinc paste DAB                    | 278274      | 3       |
| Bombastus                | Zinc paste DAB                    | 278864      | 3       |
| Bombastus                | Zinc paste DAB                    | 62/13       | 1       |
| Bombastus                | Zinc paste DAB                    | 273894      | 1       |
| Bombastus                | Zinc paste DAB                    | 271138      | 2       |
| Bombastus                | Zinc paste DAB                    | 280733      | 2       |
| Bombastus                | Zinc paste DAB                    | 280732      | 1       |
| Bombastus                | Zinc paste DAB                    | 271134      | 1       |
| Caelo                    | Zinc paste DAB                    | 1321903     | 1       |
| Caelo                    | Zinc paste DAB                    | 11321701    | 3       |
| Caelo                    | Zinc paste DAB                    | 11290901    | 1       |
| Caelo                    | Zinc paste DAB                    | 12206501    | 9       |
| Caelo                    | Zinc paste DAB                    | 12066102    | 1       |
| Caelo                    | Zinc paste DAB                    | 20271012-1  | 1       |
| Caelo                    | Zinc paste DAB                    | 10345201    | 3       |
| Caelo                    | Zinc paste DAB                    | 20021310    | 1       |

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| Supplier             | Substance            | Batch       | Spectra |
|----------------------|----------------------|-------------|---------|
| Caelo                | Zinc paste DAB       | 903312054   | 1       |
| Caelo                | Zinc paste DAB       | 12206401    | 3       |
| Caelo                | Zinc paste DAB       | 12271702    | 9       |
| Caelo                | Zinc paste DAB       | 13043401    | 19      |
| Caelo                | Zinc paste DAB       | 31051302    | 1       |
| Caelo                | Zinc paste DAB       | 10245901    | 2       |
| Caelo                | Zinc paste DAB       | 13201801    | 22      |
| Caelo                | Zinc paste DAB       | 11321702    | 1       |
| Caelo                | Zinc paste DAB       | 14011402    | 1       |
| Caelo                | Zinc paste DAB       | 14092301    | 1       |
| Caelo                | Zinc paste DAB       | 13201201    | 1       |
| Caelo                | Zinc paste DAB       | 14201201    | 1       |
| Caelo                | Zinc paste DAB       | 14293302    | 1       |
| Caelo                | Zinc paste DAB       | 16013302    | 1       |
| Caelo                | Zinc paste DAB       | 16068501    | 1       |
| Caelo                | Zinc paste DAB       | 12271601    | 9       |
| Caelo                | Zinc paste DAB       | 13043301    | 4       |
| Caelo                | Zinc paste DAB       | 18162502    | 1       |
| Caelo                | Zinc paste DAB       | 19030401    | 1       |
| Caelo                | Zinc paste DAB       | 19049201    | 1       |
| Caelo                | Zinc paste DAB       | 13201701    | 1       |
| Caelo                | Zinc paste DAB       | 11290801    | 2       |
| Caelo                | Zinc paste DAB       | 12147801    | 12      |
| Caelo                | Zinc paste DAB       | 19093102    | 1       |
| Caelo                | Zinc paste DAB       | 19166001    | 1       |
| Caelo                | Zinc paste DAB       | 13345301    | 1       |
| Caelo                | Zinc paste DAB       | 11364102    | 3       |
| Caelo                | Zinc paste DAB       | 12262301    | 2       |
| Caelo                | Zinc paste DAB       | 13345202    | 1       |
| Caelo                | Zinc paste DAB       | 15121-02054 | 1       |
| Caesar & Loretz GmbH | Zinc paste DAB       | 281972      | 1       |
| Bombastus            | Zinc paste DAB       | 271135      | 2       |
| Fagron               | Zinc paste DAB       | 273893      | 1       |
| Fagron               | Zinc paste DAB       | 12I06-T01   | 1       |
| Fiebig               | Zinc paste DAB       | 268489      | 1       |
| Noweda               | Zinc paste DAB       | 276606      | 1       |
| phönix               | Zinc paste DAB       | 12147903    | 1       |
| Sanacorp             | Zinc paste DAB       | 13043502    | 3       |
| Sanacorp             | Zinc paste DAB       | 13201903    | 1       |
| Sanacorp             | Zinc paste DAB       | 13345101    | 7       |
| Wasserfuhr           | Zinc paste DAB       | 12169401    | 1       |
| Alliance Health      | Zinc paste, soft DAB | 278229      | 4       |
| Alliance Healthcare  | Zinc paste, soft DAB | 281118      | 1       |
| Anzag                | Zinc paste, soft DAB | 12121501    | 1       |
| Anzag                | Zinc paste, soft DAB | 14023301    | 4       |
| Anzag 18.10.12       | Zinc paste, soft DAB | 12121401    | 3       |
| Apomix               | Zinc paste, soft DAB | 13A040912   | 1       |
| Apomix               | Zinc paste, soft DAB | 41B051212   | 1       |
| bom                  | Zinc paste, soft DAB | 286902      | 1       |
| Bombastus            | Zinc paste, soft DAB | 265457      | 1       |
| Bombastus            | Zinc paste, soft DAB | 267515      | 1       |
| Bombastus            | Zinc paste, soft DAB | 271195      | 2       |
| Bombastus            | Zinc paste, soft DAB | 270465      | 3       |
| Bombastus            | Zinc paste, soft DAB | 5216300     | 4       |
| Bombastus            | Zinc paste, soft DAB | 271194      | 1       |
| Bombastus            | Zinc paste, soft DAB | 271340      | 3       |
| Bombastus            | Zinc paste, soft DAB | 274972      | 2       |
| Bombastus            | Zinc paste, soft DAB | 273701      | 1       |
| Bombastus            | Zinc paste, soft DAB | 274971      | 1       |
| Bombastus            | Zinc paste, soft DAB | 271341      | 2       |

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| Supplier  | Substance            | Batch      | Spectra |
|-----------|----------------------|------------|---------|
| Bombastus | Zinc paste, soft DAB | 276540     | 3       |
| Bombastus | Zinc paste, soft DAB | 276536     | 1       |
| Bombastus | Zinc paste, soft DAB | 274973     | 1       |
| Bombastus | Zinc paste, soft DAB | 275948     | 1       |
| Bombastus | Zinc paste, soft DAB | 280233     | 1       |
| Bombastus | Zinc paste, soft DAB | 276538     | 2       |
| Bombastus | Zinc paste, soft DAB | 280234     | 1       |
| Bombastus | Zinc paste, soft DAB | 278226     | 1       |
| Bombastus | Zinc paste, soft DAB | 280235     | 1       |
| Bombastus | Zinc paste, soft DAB | 281117     | 1       |
| Bombastus | Zinc paste, soft DAB | 282863     | 1       |
| Bombastus | Zinc paste, soft DAB | 270516     | 2       |
| Bombastus | Zinc paste, soft DAB | 278228     | 2       |
| Bombastus | Zinc paste, soft DAB | 281116     | 2       |
| Bombastus | Zinc paste, soft DAB | 282861     | 1       |
| Bombastus | Zinc paste, soft DAB | 267590     | 1       |
| Bombastus | Zinc paste, soft DAB | 282859     | 1       |
| Bombastus | Zinc paste, soft DAB | 293485     | 1       |
| Bombastus | Zinc paste, soft DAB | 281122     | 4       |
| Bombastus | Zinc paste, soft DAB | 267591     | 1       |
| Bombastus | Zinc paste, soft DAB | 278227     | 1       |
| Bombastus | Zinc paste, soft DAB | 278223     | 1       |
| Bombastus | Zinc paste, soft DAB | 276539     | 3       |
| Bombastus | Zinc paste, soft DAB | 281121     | 2       |
| Bombastus | Zinc paste, soft DAB | 262918     | 1       |
| Bombastus | Zinc paste, soft DAB | 266383     | 1       |
| Bombastus | Zinc paste, soft DAB | 271344     | 2       |
| Bombastus | Zinc paste, soft DAB | 274978     | 3       |
| Bombastus | Zinc paste, soft DAB | 276537     | 1       |
| Caelo     | Zinc paste, soft DAB | 28031401   | 1       |
| Caelo     | Zinc paste, soft DAB | 2101212055 | 1       |
| Caelo     | Zinc paste, soft DAB | 11099003   | 1       |
| Caelo     | Zinc paste, soft DAB | 11269701   | 2       |
| Caelo     | Zinc paste, soft DAB | 1403212055 | 1       |
| Caelo     | Zinc paste, soft DAB | 11202101   | 1       |
| Caelo     | Zinc paste, soft DAB | 11338501   | 2       |
| Caelo     | Zinc paste, soft DAB | 208212055  | 1       |
| Caelo     | Zinc paste, soft DAB | 11338401   | 1       |
| Caelo     | Zinc paste, soft DAB | 12068901   | 2       |
| Caelo     | Zinc paste, soft DAB | 1212401    | 1       |
| Caelo     | Zinc paste, soft DAB | 12121302   | 2       |
| Caelo     | Zinc paste, soft DAB | 711212055  | 1       |
| Caelo     | Zinc paste, soft DAB | 17111203   | 1       |
| Caelo     | Zinc paste, soft DAB | 12207801   | 1       |
| Caelo     | Zinc paste, soft DAB | 12207901   | 8       |
| Caelo     | Zinc paste, soft DAB | 12208101   | 6       |
| Caelo     | Zinc paste, soft DAB | 213E-02055 | 1       |
| Caelo     | Zinc paste, soft DAB | 1601312055 | 1       |
| Caelo     | Zinc paste, soft DAB | 12271301   | 4       |
| Caelo     | Zinc paste, soft DAB | 6021305    | 1       |
| Caelo     | Zinc paste, soft DAB | 12271401   | 10      |
| Caelo     | Zinc paste, soft DAB | 12366801   | 12      |
| Caelo     | Zinc paste, soft DAB | 13026901   | 20      |
| Caelo     | Zinc paste, soft DAB | 13026702   | 8       |
| Caelo     | Zinc paste, soft DAB | 12366703   | 1       |
| Caelo     | Zinc paste, soft DAB | 13027001   | 8       |
| Caelo     | Zinc paste, soft DAB | 11061301   | 1       |
| Caelo     | Zinc paste, soft DAB | 13088701   | 22      |
| Caelo     | Zinc paste, soft DAB | 2713E2055  | 1       |
| Caelo     | Zinc paste, soft DAB | 12206201   | 1       |

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| Supplier             | Substance            | Batch       | Spectra |
|----------------------|----------------------|-------------|---------|
| Caelo                | Zinc paste, soft DAB | 13088901    | 12      |
| Caelo                | Zinc paste, soft DAB | 13089001    | 13      |
| Caelo                | Zinc paste, soft DAB | 8081301     | 1       |
| Caelo                | Zinc paste, soft DAB | 13203501    | 12      |
| Caelo                | Zinc paste, soft DAB | 70913WZP    | 1       |
| Caelo                | Zinc paste, soft DAB | 13203301    | 16      |
| Caelo                | Zinc paste, soft DAB | 13088/01    | 1       |
| Caelo                | Zinc paste, soft DAB | 13088602    | 1       |
| Caelo                | Zinc paste, soft DAB | 13203401    | 11      |
| Caelo                | Zinc paste, soft DAB | 13203701    | 2       |
| Caelo                | Zinc paste, soft DAB | 13316301    | 23      |
| Caelo                | Zinc paste, soft DAB | 14111313    | 1       |
| Caelo                | Zinc paste, soft DAB | 13316601    | 6       |
| Caelo                | Zinc paste, soft DAB | 13387801    | 5       |
| Caelo                | Zinc paste, soft DAB | 14023601    | 1       |
| Caelo                | Zinc paste, soft DAB | 14023801    | 1       |
| Caelo                | Zinc paste, soft DAB | 14023701    | 3       |
| Caelo                | Zinc paste, soft DAB | 14117801    | 1       |
| Caelo                | Zinc paste, soft DAB | 14173201    | 1       |
| Caelo                | Zinc paste, soft DAB | 1417601     | 1       |
| Caelo                | Zinc paste, soft DAB | 14023401    | 1       |
| Caelo                | Zinc paste, soft DAB | 14173001    | 2       |
| Caelo                | Zinc paste, soft DAB | 14181702    | 1       |
| Caelo                | Zinc paste, soft DAB | 14172901    | 1       |
| Caelo                | Zinc paste, soft DAB | 14296301    | 1       |
| Caelo                | Zinc paste, soft DAB | 15005202    | 1       |
| Caelo                | Zinc paste, soft DAB | 15072701    | 3       |
| Caelo                | Zinc paste, soft DAB | 15073001    | 1       |
| Caelo                | Zinc paste, soft DAB | 15072901    | 1       |
| Caelo                | Zinc paste, soft DAB | 16001201    | 3       |
| Caelo                | Zinc paste, soft DAB | 16042101    | 1       |
| Caelo                | Zinc paste, soft DAB | 13036901    | 1       |
| Caelo                | Zinc paste, soft DAB | 12308307    | 1       |
| Caelo                | Zinc paste, soft DAB | 12208001    | 7       |
| Caelo                | Zinc paste, soft DAB | 12366701    | 10      |
| Caelo                | Zinc paste, soft DAB | 63075606    | 1       |
| Caelo                | Zinc paste, soft DAB | 12069001    | 4       |
| Caelo                | Zinc paste, soft DAB | 13026801    | 7       |
| Caelo                | Zinc paste, soft DAB | 19007401    | 1       |
| Caelo                | Zinc paste, soft DAB | 19035701    | 1       |
| Caelo                | Zinc paste, soft DAB | 12271501    | 10      |
| Caelo                | Zinc paste, soft DAB | 13316701    | 1       |
| Caelo                | Zinc paste, soft DAB | 414U-02055  | 1       |
| Caelo                | Zinc paste, soft DAB | 16121901    | 1       |
| Caelo                | Zinc paste, soft DAB | 1212601     | 1       |
| Caelo                | Zinc paste, soft DAB | 13388001    | 3       |
| Caelo                | Zinc paste, soft DAB | 12208201    | 7       |
| Caelo                | Zinc paste, soft DAB |             | 2       |
| Caelo                | Zinc paste, soft DAB | 13089101    | 5       |
| Caelo                | Zinc paste, soft DAB | 18136601    | 1       |
| Caelo                | Zinc paste, soft DAB | 13316401    | 6       |
| Caelo                | Zinc paste, soft DAB | 3413E-02055 | 1       |
| Caesar & Loretz GmbH | Zinc paste, soft DAB | 11269601    | 2       |
| ...                  |                      |             |         |
| Defektur             | Zinc paste, soft DAB | 54/12       | 1       |
| Defektur             | Zinc paste, soft DAB | 11/13       | 1       |
| Defektur             | Zinc paste, soft DAB | 32/13       | 1       |
| Defektur             | Zinc paste, soft DAB | 56/13       | 1       |
| Euro OTC             | Zinc paste, soft DAB | 1211014-01  | 7       |
| Euro OTC             | Zinc paste, soft DAB | 214I-02055  | 1       |

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| Supplier                | Substance                         | Batch            | Spectra |
|-------------------------|-----------------------------------|------------------|---------|
| Euro OTC                | Zinc paste, soft DAB              | 13211014-01      | 1       |
| Euro OTC                | Zinc paste, soft DAB              | 1310019-01       | 2       |
| Euro OTC                | Zinc paste, soft DAB              | 121014-01        | 1       |
| Euro OTC                | Zinc paste, soft DAB              | 1009043-01       | 3       |
| Euro OTC                | Zinc paste, soft DAB              | 1108059-01       | 4       |
| Fagron                  | Zinc paste, soft DAB              | 12/26-T03        | 1       |
| Fagron                  | Zinc paste, soft DAB              | 12J26-T03        | 6       |
| Fagron                  | Zinc paste, soft DAB              | 4113A-02055      | 1       |
| Fagron                  | Zinc paste, soft DAB              | 10D15-T01        | 1       |
| Fagron                  | Zinc paste, soft DAB              | 13H13-T05-006158 | 1       |
| Gehe                    | Zinc paste, soft DAB              | 11338801         | 4       |
| Gehe                    | Zinc paste, soft DAB              | 12068801         | 6       |
| Gehe                    | Zinc paste, soft DAB              | 11338601         | 2       |
| Gehe                    | Zinc paste, soft DAB              | 130112           | 1       |
| Gehe                    | Zinc paste, soft DAB              | 12A250412        | 1       |
| Bombastus               | Zinc paste, soft DAB              | 271343           | 2       |
| Bombastus               | Zinc paste, soft DAB              | 270463           | 2       |
| Henry Lamotte           | Zinc paste, soft DAB              | 5375700          | 3       |
| Henry Lamotte Oils GmbH | Zinc paste, soft DAB              | 5374900          | 5       |
| Caelo                   | Zinc paste, soft DAB              | 5316600          | 4       |
| Lamotte                 | Zinc paste, soft DAB              | 5517500          | 1       |
| lamotte/Noweda          | Zinc paste, soft DAB              | 5447900          | 4       |
| Pharmachem Anzag        | Zinc paste, soft DAB              | 191112           | 1       |
| Phoenix                 | Zinc paste, soft DAB              | 281120           | 1       |
| Phönix                  | Zinc paste, soft DAB              | 13040201         | 10      |
| Phönix                  | Zinc paste, soft DAB              | 278225           | 1       |
| Phönix                  | Zinc paste, soft DAB              | 13316501         | 8       |
| Phönix Gotha            | Zinc paste, soft DAB              | 12069101         | 3       |
| Phönix Gotha            | Zinc paste, soft DAB              | 12271502         | 4       |
| Phönix Gotha            | Zinc paste, soft DAB              | 13088801         | 9       |
| Caelo                   | Zinc paste, soft DAB              | 12121601         | 9       |
| Caelo                   | Zinc paste, soft DAB              | 1268901          | 1       |
| Sanacorp                | Zinc paste, soft DAB              | 273704           | 2       |
| Sanacorp                | Zinc paste, soft DAB              | 274979           | 1       |
| Caelo                   | Zinc paste, soft DAB              | 11338001         | 1       |
| Caelo                   | Zinc paste, soft DAB              | 12068701         | 4       |
| Bombastus               | Zinc paste, soft DAB              | 278671           | 1       |
| Caelo                   | Zinc paste, soft DAB              | 13004101         | 1       |
| Caelo                   | Zinc paste, soft DRF (stabilis... | 13094201         | 2       |
| Caelo                   | Zinc paste, soft DRF (stabilis... | 12160302         | 1       |
| Caelo                   | Zinc paste, soft DRF (stabilis... | 12378402         | 1       |



## Appendix D: Requirements of validation

In order to ensure adherence to the safe scientific status, the individual methods for manufacturing and testing must be validated under certain circumstances (compare § 34 para. 1 no. 3, § 35 para. 1 no. 4 and para. 4 sentence 1 no. 2 b, para. 6 sentence 3 *ApoBetrO* [Pharmacies Rules and Regulations]). The *ApoBetrO* [Pharmacies Rules and Regulations] incorporates a legal definition in § 1 a para. 16 (quotation translated):

*“Validation is the provision of documented proof which with a high degree of safety documents that, via a specific process or standard work process, a medicinal product is manufactured and tested, which is in accordance with previously determined quality features.”*

Validation documentation can be used to prove that methods or devices which are not described in the Pharmacopoeia within the meaning of § 6 para. 1 sentence 3 *ApBetrO* [Pharmacies Rules and Regulations] achieve the same results as those in the Pharmacopoeia. On the other hand, with the requirements of the demanded validation it must be observed whether the respective testing method is already incorporated in the Pharmacopoeia.

NIR spectroscopy as a general testing method need not be validated in accordance with the express ruling in the *Ph. Eur. Section 1.1* [3], as it is already described in *Section 2.2.40* of the *Ph. Eur.* as an area of application for the identification of raw materials.

However, a special validation requirement exists for the reference database. This requirement is met with the existing document. Further requirements or rules as to how this proof must be furnished do not exist. It is required that the processes guarantee the same results as the methods and devices in the Pharmacopoeia [17].

Carrying out identity tests with *Apo-Ident* is therefore also possible if the NIR spectroscopy process is not required in the Pharmacopoeia monograph of the substance for identity testing. All NIR analyses with *Apo-Ident* prove several, often all molecule groups and are therefore comparable with a series of individual, targeted chemical proofs [4]. Therefore, the identity proof with *Apo-Ident* replaces the monograph test series (with two or more test combinations).

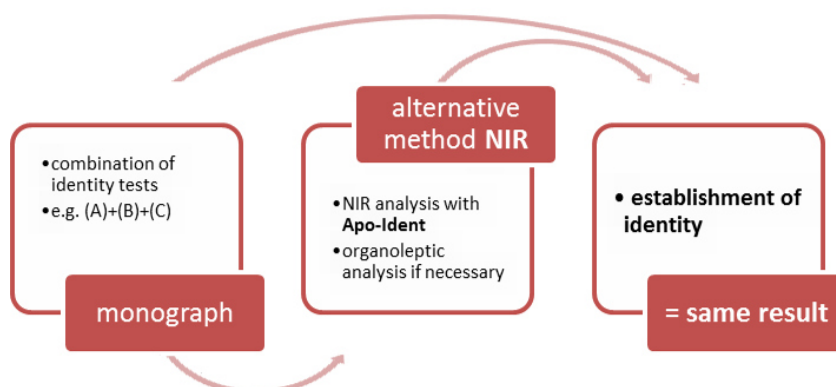


**Figure 2:** The combination of tests of the monograph is replaced by the alternative method NIR spectroscopy using *Apo-Ident*. This is permissible because both test procedures result in the establishment of the identity of the raw material.

With this validation documentation, proof is furnished that identical results are achieved with *Apo-Ident* and Pharmacopoeia methods, i.e. confirmation of the identity of the raw material [2].

## ***Appendix E: Conformity of Apo-Ident with the European pharmacopeia***

According to *Ph. Eur. Section 2.2.40*, NIR spectroscopy is basically suitable for: “Identification of agents, excipients, dosage forms, intermediate manufacturing products, chemical raw materials and packaging materials” ([3], quotation translated).

The fact that *Apo-Ident* meets the further criteria of the European Pharmacopoeia under the headings in *Section 2.2.40*

- Apparatus
- Measurement methods
- Sample preparation and presentation
- Testing the functionality of the instrument
- Identification and characterisation (qualitative analysis)
- Quantitative analysis
- Ongoing model evaluation
- Transfer of databases
- Data storage

can be proven based on the *HiperScan GmbH* documentation of “Meeting 2.2.40 *Ph. Eur.* by *Apo-Ident*” [4].



## ***Appendix F: Addition to the second-stage models***

As described in the general part of the *Apo-Ident* validation documentation, in the section [Model creation procedure and validation runs](#), under 2. *Generating the chemometric models (calibration)* in *f*), it is possible to create a further chemometric model for certain substances (second-stage model) and to undertake the assessment in several steps.

### **Substances in second-stage models**

In the substance class *APIs & excipients, liquid/semi-solid (with analysis certificate)*, a distinction is made between the following substances in the listed second-stage models:

#### **Submodell - Submodel 06**

2-ethylhexyl laurate  
Base cream DAC  
Eucerin® cum Aqua  
Lanette® ointment (conserved)  
Non-ionic hydrophil ointment  
Squalane  
Wool alcohol cream DAB  
Wool alcohol cream SR

#### **Submodell - Submodel 10**

Lauromacrogol 400  
Macrogol 20 glycerol monostearate type II  
Macrogol 4 lauryl ether  
Macrogol 8 stearate type I  
Macrogolglycerol hydroxystearate 40  
Macrogolglycerol ricinoleate  
Polysorbate 20  
Polysorbate 60  
Polysorbate 80

#### **Submodell - Submodel 16**

Cinnamon bark oil, artificial  
Cinnamon bark oil, Ceylon



## References

- [1] ABDA – BUNDESVEREINIGUNG DEUTSCHER APOTHEKERVERBÄNDE: Verordnung über den Betrieb von Apotheken (Apothekenbetriebsordnung – ApBetrO), 2012
- [2] REIMANN, B. ; REGIERUNGSPRÄSIDIUM DARMSTADT: Hinweise zur ordnungsgemäßen Prüfung von Arzneimitteln und Ausgangsstoffen (§§ 6 und 11 *ApBetrO*), 2007
- [3] *Europäisches Arzneibuch, Grundwerk 2020*. 10. Ausgabe. Deutscher Apotheker Verlag (978-3-7692-7517-9)
- [4] HIPERSCAN GMBH: Erfüllung von 2.2.40 Ph. Eur. durch Apo-Ident, 2013
- [5] ARBEITSGEMEINSCHAFT DER PHARMAZIERÄTE DEUTSCHLANDS (APD): Resolution in Verbindung mit §§ 6 und 11 *ApBetrO* Verwendung eines Nah-Infrarot-Spektrometers (NIR) zur Identitätsprüfung, 16. 10. 2013, DAZ 48, November 2013
- [6] ARBEITSGEMEINSCHAFT DER PHARMAZIERÄTE DEUTSCHLANDS (APD): Resolution 2014, Arbeitsgemeinschaft der Pharmazieräte Deutschlands (APD), Oktober 2014
- [7] *DAC/NRF*. Govi-Verlag (978-3-7741-0044-2)
- [8] KESSLER, W.: *Multivariate Datenanalyse*. WILEY-VCH Verlag, 2007 (978-3-527-31262-7)
- [9] NÆS, T. ; ISAKSSON, T. ; FEARN, T. ; DAVIES, T.: *Multivariate Calibration and Classification*. NIR Publications, 2002 (978 0 9528666 2 6)
- [10] HANLEY, J. A. ; LIPPMAN-HAND, A.: If nothing goes wrong, is everything all right? In: *Journal of the American Medical Association* 249 (1983), S. 1743–1745
- [11] JOVANOVIĆ, B. D. ; LEVY, P. S.: A Look at the Rule of Three. In: *The American Statistician* 51 (1997), S. 137–139
- [12] BRONSTEIN, I. N. ; SEMENDJAJEW, K. A. ; MUSIOL, G. ; MÜHLIG, H.: *Taschenbuch der Mathematik*. 5. überarbeitete und erweiterte Auflage. Verlag Harri Deutsch, 2000 (3-8171-2015-2)
- [13] MAHALANOBIS, P.: On the generalized distance in statistics. In: *Proc. Nat. Inst. Sci. India (Calcutta)* 2 (1936), S. 49–55
- [14] YAMBOR, B. ; DRAPER, W. ; BEVERIDGE, R.: Analyzing PCA-based face recognition algorithms: Eigenvector selection and distance measures. In: *Second Workshop Empirical Evaluation in Computer Vision* (2000)
- [15] HIPERSCAN GMBH: Identifikationsmethodik Apo-Ident, 2012
- [16] HIPERSCAN GMBH: Datenvorbehandlung des Identifikationssystems Apo-Ident, 2012
- [17] CYRAN ; RÖTTA: Apothekenbetriebsordnung, Kommentar § 6 Rn. 10, 2010



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